

Annual Report

2010-2011

CEE

Centre for Environment Education

Nehru Foundation for Development, Ahmedabad
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Contents

Introduction	1
1. Education for Children	5
2. Higher Education	34
3. Education for Youth	39
4. Experiencing Nature	49
5. Communicating Environment Through the Media	51
6. EE Through Interpretation	54
7. Knowledge Management for Sustainability (GCS)	58
8. Industry Initiatives	59
9. Sustainable Rural Development	62
10. Water and Sanitation	77
11. Sustainable Urban Development	81
12. Waste Management	87
13. Biodiversity Conservation	99
14. Disaster Preparedness and Rehabilitation	111
15. Facilitating NGO and Community Initiatives	117
16. Training Capacity Building and Networking	130
17. Initiatives for Undesd	142
18. Material Development and Publications	146
19. Institutional Development and Support	150
20. Events	152
21. Facilitation Networking and Participation	162
22. CEE Governing Council	170

Introduction

CEE has been organizing international conferences focusing on Education for Sustainable Development. In 2005, we had international conference on “Education for a Sustainable Future” and in 2007 we had “International Conference on Environmental Education”. This year we had an international conference on “Ethical Framework for a Sustainable World” which was held at the CEE campus in Ahmedabad from 1 to 3 November, 2010. The Conference was held to commemorate 10 years of the Earth Charter (EC). Various plenary sessions and workshops were conducted on different themes like climate change; education for sustainable development; higher education; school education and teacher training; non formal education; information and communication technologies; business and CSR in a green economy; the Earth Charter and religion; spirituality and ethics; cities, communities and urbanization; sustainable livelihoods; global governance; biodiversity; and youth.

Paryavaran Mitra, a sustainability and climate change education programme for schools, launched in May 2010, have 101242 schools enrolled in this programme so far. An initiative this year is to reach out to tribal schools in the tribal areas in Madhya Pradesh and Jharkhand in the NGOs covered under the Small Grants Programme (SGP) Global Environment Facility (GEF). A Teachers’ Handbook is being developed and will be disseminated to all the schools.

CEE, with support from the National River Conservation Directorate of Ministry of Environment and Forest, initiated the project titled *Ganges River Dolphin – Conservation Education Programme* in July 2010 in the major riverside areas viz. in the Ganges and Brahmaputra river systems of northern, eastern and northeastern India. The first year

of the project was mainly focused on the identification of project locations, development of Information Education Communication (IEC) material, identification of partner agencies in each project location and selection of schools.

CEE Himalaya has implemented *Anandshala* programme in three schools of Kashmir Valley. Construction work is in progress in these schools which were damaged by earthquake. The construction work is being supervised by CEE, Education Department and the SSA Engineer.

CEE North joined hands with District Science Club (DSC) - which is run by the Council of Science and Technology, Uttar Pradesh under the guidance of Department of Science and Technology (DST) - to organize environmental education programmes in the rural schools of Lucknow in January 2011. The programme focused on creating awareness in children about water and its conservation practices.

CEE Andhra Pradesh (AP) State Office, with support from United Nations Children’s Fund (UNICEF), Hyderabad, has implemented the Student Amateurs in School Yard Agriculture (SASYA) project in 300 schools, spread over 21 mandals in Medak district. The objective was to develop bio intensive gardens (vegetable) in the selected schools with support from the community. The project was implemented up to December 2010. Other projects like ‘Herbal Garden in Schools of Andhra Pradesh’ and ‘Developing and popularising Amla Plantations in Schools’ are being implemented in over 10-13 districts of Andhra Pradesh.

Rebuilding Trust, CEE’s Kashmir Earthquake Response programme being implemented since 2005, has now shifted its focus from response to preparedness. Now Disaster Risk

Reduction Education programme is being implemented in schools of five project districts, viz., Ganderbal, Bandipora, Srinagar, Kupwara and Baramulla. Workshops and trainings are being conducted for teachers. The Village Contingency Plan (VCP) has been prepared through a participatory process highlighting the capacities and vulnerabilities; needs for risk minimization; safe routes and evacuation plans; and the roles and responsibilities of stakeholders in case of emergency.

CEE South has initiated a 40 hours credit course on Forest Ecosystems and Climate Change with a focus on conservation for undergraduate students.

In 2010-2011, Sundarvan organized 66 batches for camping under the programme *Experiencing Nature* at 11 campsites representing different ecosystems. CEE South conducted nature education camps for school children and college students from Bangalore at Dandeli Anshi Tiger Reserve from April 2010 to December 2010. The camps aimed at sensitizing students to issues related to nature, forests and wildlife conservation.

Children's Media Unit (CMU) continued to develop and maintain the monthly e-magazine www.kidsrgreen.org for the eleventh successive year. For second year, some selected activities and games from this website are being used as part of the Kuder Galaxy System of Kuder Inc (supplier of online education and career planning solutions) in the USA which is being implemented in more than 10,000 school systems.

Jagruti and *Jigyasa*, two mobile environment exhibition buses of CEE which is funded by the Maharashtra Pollution Control Board are under pilot testing in Pune district. Both the buses aim to highlight major concerns,

options and solutions regarding the general environment in the state of Maharashtra.

The Environment Department, Government of Maharashtra collaborated with CEE to coordinate and manage *Srushti Mitra* award programme at the state level in the year 2010, the Golden Jubilee Year of Maharashtra State.

"Earth Care Awards" is an initiative of JSW Foundation with CEE as knowledge partner and the Times of India as media partner. During the year, CEE redesigned the evaluation criteria for shortlisting projects on climate change mitigation and adaptation.

CEE has developed core strength on greenhouse gas accounting, and is working with organizations to carry out carbon proofing of initiatives and conduct carbon footprint assessment. As part of this, carbon footprint assessment for the operations of Aga Khan Rural Support Programme (AKRSP) is currently under way. It also involves providing training to the people operating in field and project levels to understand and assist in data collection.

CEE organized a workshop on Strengthening Low Carbon Development Strategy in collaboration with Worldwatch Institute. CEE partnered with Worldwatch Institute to carry out the study and validate its findings.

Gramshilpi is a project initiated in 2007 in collaboration with Gujarat Vidyapith, that aims to provide extensive capacity building inputs and initial financial support to selected students of Gujarat Vidyapith, mainly postgraduates, to work towards holistic rural development. In year 2010-11, six students/ Gramshilpis have been trained to make solar lanterns and they will pass this skill to women in the villages to make solar equipments.

The aims of Rural Knowledge Centre (RKC) constructed in Halvad in May 2010 are to serve as a node for networking and information sharing and to provide human and institutional support leading community to sustainable development. RKC continued providing demonstrations and conduct training programmes for practicing sustainable agriculture/using renewable energy, saving credit for livelihood support and development.

Dakshina Kannada is one of the districts in Karnataka which has achieved the distinction of Open Defecation Free district status with the successful implementation of the Total Sanitation Campaign (TSC). CEE South initiated a project with the Zilla Panchayat, Dakshina Kannada to do a process document on the successful implementation of TSC.

CEE is participating in a professional development programme *Supporting Urban Sustainability – Collaborative learning for ecosystem services governance in the context of poverty alleviation*, the Swedish International Centre of Education for Sustainable Development (SWEDES) programme at Gotland University. A team of five professionals from Ahmedabad Municipal Corporation (AMC), Centre for Environment Planning and Technology (CEPT), Self Employed Women's Association (SEWA), Environmental Planning Collaborative (EPC) and CEE has been selected to participate in the programme.

In Pune, CEE continued facilitation of civil society inputs into the strategic environment assessment which is feeding into the process for the revision of the master plan of the city's old municipal limits.

The Times of India and Garnier along with CEE as Knowledge Partner launched the campaign "Take Care, Take Charge" on

April 21, 2010. Under this campaign, readers, especially youth, were invited to send ideas on green and sustainable solutions to environmental issues under different broad themes.

State level Training cum Orientation Workshop on Biomedical Waste Management workshop, supported by Uttar Pradesh Pollution Control Board (UPPCB), was organized by CEE North on April 19-20, 2010. It aimed to make the participants understand the legal implications in dealing with wastes, anticipate future legislative requirements and develop familiarity with the present techniques to reduce use of hazardous substances and generation of waste, thereby saving money too.

CEE East, and Waste and Resource Management (WaRM) are developing a Knowledge and Information Centre (KIC) on Municipal Solid Waste Management (MSWM) in association with Orissa Renewable Energy Development Agency (OREDA) and Housing and Urban Development (H&UD), Government of Orissa at the Biju Pattnaik Energy Park (BPEP), Bhubaneswar. The main objective of the KIC is to disseminate knowledge and awareness on Waste Management to the varied stakeholders in the society.

Solid Waste Awareness and Management Programme (SWAMP) is a project undertaken for the Coimbatore Corporation, funded by Jawaharlal Nehru National Urban Renewal Mission (JnNURM), with the objective of providing IEC and awareness among the general public on Solid Waste Management.

The meetings of the expert group, consisting of academics, CEE, other NGOs, industry and pollution control agencies, held at Indira Gandhi National Open University (IGNOU) have identified two awareness-cum-training

educational programmes as certificate programmes for municipal sanitary workers. CEE is involved in the overall conceptualization, design, writing and editing of the course material.

To address the issues related to the conservation of Hoolock Gibbon in northeast India, CEE Meghalaya State Office is implementing the project on Hoolock Gibbon Conservation Awareness and Education Programme with the support of the United States Fish and Wildlife Service (USFWS) under its Great Ape Conservation Fund (GACF). The project duration is two years and involves site specific school conservation education programme, community campaign, training and capacity building programmes and local educational resource material development.

CEE North has been working in Dudhwa Tiger Reserve with the Tharu tribal community since 2005 with the objective of conserving the rich biodiversity of the area. Under this project activities are focused on the promotion of sustainable energy and livelihood options along with community awareness and school education programmes, with the ultimate aim of minimizing the pressure on forest resources.

CEE is setting up interpretation centers at Nandurmadhameshwar Wildlife Sanctuary in Maharashtra, Mahatma Gandhi Marine National Park (MGMNP), Wandoor, located in the Bay of Bengal, Kanha Tiger Reserve in Madhya Pradesh and Nandankanan Zoo in Orissa. CEE has developed an interpretation centre as well a handbook for the Pench Tiger Reserve in Maharashtra.

Kartikeya V. Sarabhai
Director.

Education for Children

1.1 National Green Corps (NGC) Programme

National Green Corps (NGC), a programme launched by the Ministry of Environment and Forests, Government of India, during 2001-2002, aims at creating awareness among school children throughout the country on issues related to sustainable development keeping environmental issues as the major focus. Working through eco-club networks, NGC has established nearly 1,20,000 eco-clubs involving more than four million students and one million teachers, making it one of the largest networks in the country. These clubs provide school children with opportunities to observe and learn more about nature, its diversity and other aspects of their immediate environment, thus motivating them to become environmentally literate and responsible citizens. NGC activities are executed through the State Nodal Agencies at the state level, and District Implementation and Monitoring Committees at the district level.

The Centre for Environment Education (CEE) facilitates NGC activities in 15 states and two Union Territories (UTs) as resource agency. CEE thus facilitates the implementation of NGC in 347 districts in the states of Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Uttar Pradesh, Bihar, Jharkhand, Assam, Tripura, Arunachal Pradesh, Sikkim, Meghalaya, Manipur, Mizoram, Nagaland, and in 2 UTs: Daman and Diu, Dadra and Nagar Haveli. CEE also facilitates development of resource material, training modules, meetings, case study compilation and other related activities.

Details of region wise NGC and other activities are described below.

1.1.1 NGC in the Northern Region

Uttar Pradesh: The NGC programme in Uttar Pradesh has identified around 9722 schools in which around 8373 eco-clubs were formed. CEE North, as resource agency in the state, has trained 118 master trainers, has organized 19 district training programmes for Teachers in Charge (TiC), and provided its technical expertise in other district level TiC training programmes. CEE has also worked on the compilation of a school database, which comprises the names and addresses of the TiCs, the schools and the districts where they are located.

CEE North had several rounds of meetings with the nodal agency Uttar Pradesh Pollution Control Board (UPPCB) to reinstate the programme in the state and plan for the yearlong activities. Meetings were held with the Member Secretary, UPPCB to resolve issues related to submission of activity report, fund release from Ministry and action plan. CEE North is providing support for planning of activities and also their documentation for report preparation and submission.

CEE North developed a package on biodiversity conservation in Hindi, which included a poster and booklet, for NGC schools. During the year, CEE North also trans-adapted the national case study manual in Hindi covering 100 success stories throughout the country, and the *Paryavaran Mitra* educational material including posters and booklet was prepared in Hindi. (*Paryavaran Mitra* is a new programme for schools, detailed in the next section of this chapter.)

CEE organized series of environment related events with NGC schools in the state during the year 2010-11.

In April 2010, CEE North organized an inter-school competition on “*Waste is Resource*” on World Heritage Day. The competition was organized in two parts – the first one was on making products out of waste and the second on examples and/or ideas on reusing things. Sixteen NGC schools of Lucknow participated in the competition. Each school team consisted of 4-5 students and an eco-club teacher. Experts from the field of environment, arts, waste management and science were present to interact with the groups. Each team was asked to also write the method they used to make the product with details of the material used. The teams prepared eight utility products, six decorative products and two utility cum decorative products. Ten categories of prizes were awarded to different schools for best team efforts, creativity, decorative product and others. The film *Story of Stuff* in English was screened which was followed by a discussion to reinforce the message of optimum utilization of waste and sensitivity towards natural resources.

In June 2010, a *pariyavaran mela* was organized on World Environment Day at Regional Science City, Lucknow, where more than 250 children and visitors participated in the programme. The mela had nine sections – Creative Art and Craft, Games Corner, Biodiversity Hunt, Films on Biodiversity, Biodiversity Quiz, Puppet Show, Creative Self Expression, Adopt a Tree Corner and Message Corner. The *mela* as a whole was focused on the theme of the year and all the corners and activities were designed on the theme.

CEE North joined hands with District Science Club, Lucknow to organize Water Conservation and Science Awareness Month from September 22 – October 7, 2010 at various locations (Lucknow, Malihabad and Itaunja) by involving NGC Schools of the district. A skit was prepared by the eco-club students which was presented in NGC schools. In all, 17 Schools participated in the events. During the event, the participants were provided an orientation about NGC as well as *Paryavaran Mitra* programme, its background, objectives and how the schools can actively become a part of this initiative. Around 575 students participated in this programme.

The CEE team visited 46 NGC schools in five districts of Uttar Pradesh, viz. Allahabad, Etawah, Bulandshahar, Bahraich and Lucknow, to interact with the eco-club Teachers in Charge and the Principals, to understand the status of eco-club activities and also to discuss the *Paryavaran Mitra* programme.

Bihar: The NGC programme in Bihar reaches out to around 8971 schools where eco-clubs have been formed. The nodal agency Bihar State Pollution Control Board (BSPCB) with CEE North as the resource agency is implementing the programme in the State since 2001. The officials from CEE North had several rounds of meetings with BSPCB to discuss effective implementation of the programme in the State.

These meetings between the nodal and resource agencies held at regular intervals focused on the following issues – organizing NGC State Steering Committee meeting, refresher training for master trainers, organizing a state and district level event for

the eco-clubs, bringing out a state level quarterly newsletter for the NGC schools, development of locale specific resource material, discussion on *Paryavaran Mitra* programme, monitoring of eco-clubs' activities at school, and others. Based on the discussions, CEE North organized various activities in the States.

CEE North organized a day long eco-cycle yatra on April 29, 2010 with NGC schools in Patna. Around 40 eco-club students with their TiCs participated in this cycle rally and covered a distance of around 30 kms, communicating action to be taken for climate change mitigation and environment conservation. During their journey, the participating students visited three schools where they were enthusiastically welcomed and where they shared their experiences with the students.

In September 2010, an inter-district quiz competition was organized to mark the celebration of the International Day for the Preservation of Ozone Layer. This programme was organized to create awareness and understanding about the environment and issues related to Ozone Layer Depletion. Around 120 students and 18 teachers of 12 NGC schools from five districts of the State (Patna, Vaishali, Saran, Nalanda, Siwan) participated in this competition. Several rounds of quiz were conducted before the final five teams were selected and the winning school team identified. With an overwhelming response from NGC schools, teachers, District Education Officers (DEOs) and the nodal agency, the quiz is now planned to be conducted annually in different zones of the State.

A State level master trainer's refresher training programme was organized in Patna on January 11-12, 2011. The workshop was organized in association with the NGC nodal agency Bihar State Pollution Control Board (BSPCB), Patna and Tarumitra Organization, with the active involvement of the District Education Officers (DEO) of the different districts. The Teachers Handbook on ESD, *Disha* was used as the base for preparing the thematic annual action plan by teachers. In all, 41 master trainers from 20 districts participated in the training programme and drew up yearlong activity schedules by choosing a theme from the *Disha* Handbook.

Monitoring visits to 50 NGC schools were undertaken in six districts of Bihar, viz. Patna, Bhagalpur, Vaishali, Bhojpur, Saharsa and Gopalganj. During these visits, NGC Schools were also briefed on the *Paryavaran Mitra* programme, as well as the Ganges River Dolphin Conservation Education programme in both of which CEE North will work closely with these schools.

1.1.2 NGC in the North Eastern Region

CEE's North Eastern Regional Cell coordinates the NGC programme in the eight north eastern states, working with various stakeholders from nodal agencies to government departments to schools and the community. The following activities were undertaken in the region.

Assam: As the resource agency in the state, CEE North East (NE) had several meetings with the nodal agency Assam Science, Technology and State Environment Council during the year, to discuss ways to strengthen the programme and plan future events. The NGC programme reaches out to 5207 schools

in the state. A series of meetings and telephonic discussions were also held with the nodal agency throughout the year on the following issues – training of master trainers, organizing an event for the eco-clubs, finalization and submission of UC, *Paryavaran Mitra* programme, monitoring of eco-club activities in schools and annual action plans.

CEE NE organized several interactive programmes with eco-clubs, while educational games and interactive sessions were conducted during school visits.

An eco club event was organized in Guwahati on the occasion of Earth Day in April 2010. The CEE NE team interacted with teachers and eco-club members and conducted a session on *Paryavaran Mitra* programme. In the daylong event, the team conducted several Environmental Education (EE) activities with students related to biodiversity. A rally as well as the plantation drive was also organized in which around 600 eco-club students participated.

An interactive session was organized in Guwahati on June 5, 2010 in association with Dakshin Guwahati High School, in which **around 200 eco-club students participated.**

An interactive session was also organized in a school in Guwahati in December 2010, to mark the celebration of National Pollution Prevention Day, in partnership with Maharishi Vidya Mandir School. During this event, CEE NE conducted several EE activities related to pollution and individual actions with the participating students, who numbered **around 100.**

CEE NE, in collaboration with the Social and Youth Development Organization (SAYDO),

also organized a student interaction programme in a school of Goalpara district on February 2, 2011 to mark the celebration of World Wetlands Day. The programme aimed to create awareness about biodiversity with special reference to Assam and also emphasised the dangers to biodiversity due to human activities. It focused on the importance and sustainable utilization of these natural resources. The programme saw the participation of around 300 NGC eco-club students.

An interactive eco-club session was organized in two schools of Kamrup district on the occasion of World Water Day in March 2011, jointly by CEE NE and Public Health Engineering Department (PHED). The representative from PHED shared the state government's Pilot Water Security programme and also conducted a quiz competition for the participants. The CEE NE representative facilitated an interactive session with the students, focusing on water, sanitation and hygiene.

The CEE NE team attended a teachers training workshop which was organized by *Sarva Shiksha Abhiyan* in Guwahati, in which around 46 TiCs actively participated. The training programme was organized as a 15 day summer camp in all the schools of Assam district. Officials of CEE NE attended the training programmes as resource persons and interacted with the teachers on various issues related to the environment and also introduced the *Paryavaran Mitra* programme.

A teacher's training cum orientation workshop for eco-club TiCs along with the Heads of institutes was organized at Golaghat B Ed College in October 2010 by CEE NE, in collaboration with the Society for

Environment Education of North East (SEENE) and the District Institute of Education and Training (DIET). The teachers were briefed about the NGC Eco-club programme, its objectives, and roles and responsibilities of the stakeholders. Representatives from CEE NE briefed the participants about the *Paryavaran Mitra* programme and also discussed the synergies that can be built between NGC and the *Paryavaran Mitra* programme. About 100 TiCs and heads of schools participated in this programme.

Under the auspices of the NGC school eco-club programme, a one day master trainer refresher workshop was organized by CEE NE on behalf of Assam Science Technology and Environment Council (ASTEC) in November 2010. This workshop focused on orienting master trainers on NGC and *Paryavaran Mitra* programmes. Around 15 master trainers participated in the workshop.

The second phase of the master trainers refresher cum orientation workshop was held at the Society for Socio Economic Awareness and Environment Protection (SSEAEP) office, Nagaon in December 2010. The workshop was organized jointly by CEE NE, ASTEC and SSEAEP and was attended by 16 master trainers from different schools.

SEENE, in association with CEE NE, organized the teachers orientation workshop on the *Paryavaran Mitra* programme at Sibsagar District, Assam in December 2010. During the workshop, teachers were briefed about five themes of the *Paryavaran Mitra* programme, its background, roles of different agencies in the programme, various ways of conducting environmental activities, role of

principals, headmasters and teachers in charge. Around 50 teachers, principals and headmasters across the district participated in the workshop. At the end of the programme, a package of resource materials containing booklets, brochure, guidebook, manuals and wall and oath poster was distributed.

In Sibsagar district, another teacher training workshop was jointly organized in February 2011 by SEENE and CEE NE, in which 32 eco-club TiCs participated. The CEE NE representative discussed with the teachers TiCs' role in the programme and activities to be conducted by the eco clubs. Participants were also briefed about the *Paryavaran Mitra* programme.

The CEE North East team visited 12 schools during the year and interacted with eco-club TiCs and school principals about the NGC activities conducted and on how to strengthen the NGC activities.

Arunachal Pradesh: The NGC state nodal agency Arunachal Pradesh State Pollution Control Board (APSTPCB) implements the programme in the State, while CEE NE is the resource agency supporting the former with technical inputs for the implementation of the programme. The state nodal agency has not received funds for NGC activities since 2007-08. The CEE NE team held meetings with the nodal agency to discuss submission of required documents to the Ministry for release of the eco-club grant.

Manipur: Follow up meetings and telephonic discussions were held at regular intervals with the nodal agency Manipur Pollution Control Board to facilitate the submission of documents to MoEF, to discuss the proposal

for the year 2011-12 as well as submission of corrected and pending utilization certificate.

A CEE NE representative visited three schools to provide technical support for better implementation of the programme and monitor the activities undertaken by them. During the visit, discussions were held with TiCs and school principals about NGC activities conducted and ways to strengthening them.

Meghalaya: The Forests & Environment Department in Meghalaya is the nodal agency of the NGC programme. CEE NE had regular follow up meetings with the nodal agency to discuss the submission of utilization certificate and also to develop a new proposal for the year 2011-12 to be submitted to the Ministry. Along with this, discussions on strengthening NGC were held based on which a future plan of action has been prepared.

The CEE North East team visited four schools to provide support and guidance for implementation of eco-club activities and also to monitor the activities undertaken by the schools. The CEE team interacted with the TiCs and principals during the visit and the discussions focused on strengthening NGC activities and introducing the **Paryavaran Mitra** programme in the schools.

Mizoram: The Mizoram Pollution Control Board (MPCB) is the NGC state nodal agency which received financial support from the Ministry for carrying out NGC activities in the State. There are 1225 eco-club schools in the state. The CEE NE team met the nodal agency to discuss submission of proposal for Master Trainers training programme and Teachers Training programme to the

Ministry. Apart from the proposal, discussions were also held on planning the overall activities in the state and ways to ensure effective implementation of the programme. The CEE NE representative visited two NGC schools and interacted with the eco-club TiCs and students to discuss the implementation of *Paryavaran Mitra* programme in their schools. The state has received funds for NGC activities due to the continuous follow up of the nodal agency and CEE with the Ministry.

Nagaland: CEE NE had several rounds of meetings with the NGC nodal agency Nagaland Pollution Control Board to plan NGC activities and to strengthen the programme. The nodal agency has already received funds for NGC activities in the state and the NGC programme reaches out to 2227 eco-club schools in the State. The CEE team also discussed expediting the submission of relevant reports and documents to the Ministry to enable the implementation of NGC action plan.

Sikkim: In Sikkim, the nodal agencies are the State Pollution Control Board and the Department of Forests, Environment & Wildlife. CEE NE had various meetings during the year to discuss the status of the programme and ways to strengthen it in future. CEE also regularly followed up with the nodal agency for submission of necessary documents to MoEF.

Tripura: Follow up meetings and telephonic discussions were held at regular interval with the nodal agency, Tripura State Pollution Control Board, to disburse/release the funds to the schools. Discussions were also held to strengthen the NGC activities via the

Paryavaran Mitra programme. The CEE NE representative visited NGC schools during the year to interact with eco-club TiCs and students and also discussed the implementation of the *Paryavaran Mitra* programme in their schools. In all, 600 schools are covered under NGC programme in the State.

1.1.3 NGC in the Eastern Region

In the eastern region, CEE East with its office in Ranchi coordinates the NGC activities in the states. The following activities were undertaken during the year.

Jharkhand: The Jharkhand State Pollution Control Board (JSPCB) is the state nodal agency for the NGC programme. Around 2842 eco-clubs have been formed in 24 districts and master trainers training programme conducted. Since its establishment in January 2010, CEE Ranchi Field Office is looking after the NGC activities in the state as the resource agency.

Several rounds of meetings were held with the nodal officer and other officials of the JSPCB to re-initiate the NGC activity in the state. CEE provided all help to the nodal agency in this and facilitated meetings and follow up communication at the state and Ministry levels. For instance, CEE coordinated meetings between nodal agency and MoEF to resolve issues of fund release. With continual efforts, NGC funds were released by the Ministry in March 2011. Subsequently, the CEE Ranchi office representative had a meeting with the nodal agency to plan out the NGC activities of the next year in the state.

In April, CEE Ranchi Field Office and WWF Bihar jointly organized an Earth Day

programme at Jawahar Vidya Mandir School, Ranchi. The objective of this event was to create awareness among students, teachers and parents about the environment and to encourage the exploration and expression of new ideas and concerns. The event offered a platform for students to voice their concerns about the water scarcity prevalent in various regions of Jharkhand. Many spoke about “Rain Water Harvesting System in Urban/Rural Areas”. Participants visited the rain water harvesting system on the school campus. Mr. B. Nijalingappa, Senior IFS Officer, Jharkhand Govt; the Chairman of Mecon Ltd; and the Executive Director of SAIL who were present as distinguished guests, strongly advocated the conservative use of resources. The programme saw participation of 15 NGC schools with around 200 students and 25 teachers attending the programme.

A month long event *Creating Green Citizen* was organized from July 28 to August 12, 2010 under the “Low Carbon Campaign for the Commonwealth Games 2010”. The programme was organized in four different districts, viz. Dhanbad, Bokaro Steel City, Ranchi and Jamshedpur, of Jharkhand state, in which almost 3000 students from 50 schools participated. The programme included a massive tree plantation as well as talks by experts from environment and wildlife.

1.1.4 NGC in the Central Region

CEE’s Central Regional Office, with its state offices in Madhya Pradesh and Chhattisgarh, facilitates the implementation of the NGC programme in both the states as the resource agency.

Chhattisgarh: The Chhattisgarh Environment Conservation Board (CECB) is the nodal agency for the NGC programme in the State, which reaches out to 3932 schools in the state. CEE, as a resource agency, had several rounds of meetings with the nodal agency to discuss the action plan and activities to be conducted during the year. These discussions were focused on developing local resource material, updating district wise NGC school list, organizing refresher Master Trainers training programme, implementation of *Paryavaran Mitra* programme and monitoring visits to schools. During the meeting, it was decided that NGC eco-clubs and *Paryavaran Mitra* programme should be showcased in the *Rajyotsava* Programme. CEE also submitted the yearlong plan of NGC programmes to the nodal agency.

CEE Chhattisgarh State Office developed resource materials such as posters on “*Plastic jhilli ka istemal na karen, kapde tatha kagaj ki thailly ka istemal karen*”, “*Paani ke hain seemit strot*” and “*Prithvi par paani to teen chauthai hai phir rona kyon*” in Hindi.

The Master Trainers training programme was organized by the nodal agency CECB for teachers in Raipur district. The training was conducted in January 2011. CEE facilitated the technical sessions in the training programme. The teachers were oriented to the NGC structure and function and eco-club formation in schools. The training programme focused on the topics of global warming and climate change, using a combination of hands on approaches and lecture, to give teachers an idea of the activities that can be conducted as part of eco-clubs. During the training programme, participants were also briefed about the

Paryavaran Mitra programme. Participants involved themselves in group work on various themes and developed district wise action plan for conducting activities. About 58 teachers from 16 districts of the state were oriented through this programme. CEE facilitated hands on activities, group work and development of action plan.

CECB in association with CEE organized a two day training programme for Teachers in Charge in February at Sarguja district of the State. Along with the Master Trainers of the district, CEE facilitated the training programme. The main objective of the workshop was to orient the teachers about NGC and *Paryavaran Mitra*. The training sessions were focused on water, biodiversity conservation and climate change among other topics. At the end of the programme, participants developed school level action plans. Around 53 teachers from the Sarguja district attended the programme.

CECB joined hands with CEE Chhattisgarh to organize an exhibition as part of *Rajyotsava*, the state festival of Chhattisgarh in November 2010, to showcase the NGC and *Paryavaran Mitra* programmes. The exhibition showcased NGC activities and ‘Act Now’ to conserve and protect environment. The exhibition also highlighted the *Paryavaran Mitra* programme where students and visitors could know more about the programme. During the exhibition, about 186 children, youth and general visitors have taken an oath to become *Paryavaran Mitras* and conserve nature at the individual level. Around 200 persons visited the stalls and appreciated the work undertaken through the NGC programme.

Monitoring visits were undertaken to 30 NGC schools in Sarguja district, during which the *Paryavaran Mitra* programme was also introduced to them.

Madhya Pradesh: In Madhya Pradesh, the Environment Planning and Coordination Organization (EPCO) is the state nodal agency which covers around 12500 schools. CEE as a resource agency held several rounds of meetings with the nodal agency to discuss the action plan and activities to be conducted during the year. These discussions were focused on the reprinting and dissemination of *DiShA* manual, organizing World Environment Day programme and *Mowgli Bal Utsav*, updating NGC school list, organizing refresher training programme for Master Trainers, implementation of *Paryavaran Mitra* programme and monitoring visits to schools.

CEE submitted the yearlong plan of NGC programmes to the nodal agency. CEE MP also developed resource materials such as a poster on *Safe Festival Campaign –Diwali* in Hindi.

A two days Master Trainers workshop was organized in April 2010 at Bhopal by the nodal agency where CEE MP SO was invited to conduct a technical session on climate change and to introduce the Pick Right Campaign. The workshop was attended by 75 teachers from 50 districts of the state.

In May, the CEE MP representative was invited as a resource person to conduct a session on climate change and environment education related activities for the cadets of three MP Battalions at Rewa. Around 300 cadets were introduced to the programmes

implemented by CEE in the state with a focus on NGC and *Paryavaran Mitra*.

EPCO organized a two day teachers training workshop at Bhopal with around 130 teachers participating. The representative from CEE MP was invited as a resource person to conduct a technical session on climate change.

A two day teachers training programme was organized for the TiCs of Bhind district in September 2010, attended by 220 participants. This too was organized by EPCO with the representative from CEE as a resource person. Participants were oriented to the NGC and *Paryavaran Mitra* programmes. In the technical session, participants were provided inputs on climate change and sustainable development. The workshop was attended by 220 participants.

EPCO, in association with the State Biodiversity Board, organized a two day Master Trainers training programme in October 2010. The representative from CEE MP facilitated a technical session on climate change and also introduced the *Paryavaran Mitra* programme. He also shared information about the *mowgli bal utsav* and on how to conduct a quiz. This workshop saw the participation of 80 teachers.

In December 2010, the representative from CEE MP Office was the resource person for a two day teacher training workshop for eco-club TiCs of Sajapur district organized by EPCO. Besides introducing NGC and *Paryavaran Mitra* Programme, games and activities were also conducted during the workshop which around 225 participants attended.

A Teacher's training cum orientation workshop for TiCs along with heads of institutions was held in Vidisha district in December 2010 by EPCO in collaboration with CEE MP. Key points discussed during the workshop were NGC Eco- club programme, its objectives, and the roles and responsibilities of the stakeholders. Representatives from CEE MP also shared the *Paryavaran Mitra* programme and discussed the synergies which can be built between NGC and *Paryavaran Mitra*. About 210 TiCs and heads of schools participated in this programme.

A two day teachers training programme was organized for TiCs in December 2010 in Damoh district, jointly by EPCO and CEE for an orientation on the NGC programme for about 230 participants.

In December 2010, another teacher orientation workshop was organized by EPCO and CEE for the TiCs in Sagar district. CEE introduced the NGC structure and function, and eco-club formation in schools, as well as the *Paryavaran Mitra* programme. Participants involved themselves in group work on various themes and developed district wise action plan for conducting the activities under NGC. About 200 teachers of the district were oriented through this programme in which CEE facilitated hands on activities, group work and development of action plan.

A similar one was organized for the TiCs of Jhabua district in January 2011, in which CEE with the help of Master Trainers of the district facilitated the training programme. The participants numbering about 200 developed school level action plans.

Winrock International, Delhi and Forest Development Agency (FDA), Jabalpur, in partnership with CEE MP, organized a three day Nature Camp in April 2010. The representative from CEE MP was invited as a resource person to conduct nature based activities for the students. Around 52 students, six teachers and 30 forest officials including rangers from different blocks of Katni participated in the camp.

Mowgli Bal Utsav is an important annual event in the Madhya Pradesh government calendar. The *utsav* this year was organized jointly by different departments such as School Education, Forest, Tribal Welfare, Tourism, *Rajya Siksha Kendra*, Directorate of Public Education, State Biodiversity Board, EPCO and CEE in April 2010. In the programme, the representative from CEE MPSO was invited as a technical resource person to conduct the quiz competition for master trainers. The event saw the presence of 200 students and 50 master trainers from across the state.

CEE, in association with Government Higher Secondary School, Bhopal, organized a lecture, quiz and slogan writing competition to mark the celebration of Earth Day and also conducted various environment games. The event was attended by 65 students and teachers.

In May 2010, Indira Gandhi *Rahstriya Manav Sangrahalaya* (IGRMS) organized an event on the occasion of International Museum Day (May 18), in which CEE MP also participated. The main theme of the event, which had 30 participants, was Conservation of Heritage Sites.

Capital Project Authority (CPA), Bhopal and CEE MP Office jointly organized an event on the occasion of the International Day for Biological Diversity (May 22). The programme included an interactive technical session on Biological Diversity followed by a quiz competition, and was attended by 60 participants including children, park visitors, workers and CPA officials.

In June, CEE MP in association with several other departments such as the Regional Museum of Natural History, Archeological Survey of India, Regional Science Centre, EPCO and the Central Pollution Control Board, organized a weeklong celebration on World Environment Day for NGC schools, which was attended by around 600 participants.

CEE MPSO conducted a technical session on Climate Change in a programme organized for three MP Battalion NCC Rewa, in August. The session was attended by around 400 cadets.

In September, CEE MP observed Ozone day with the nodal agency and organized a lecture and quiz for the students of Navin High School in Bhopal.

CEE MP organized the wildlife week celebrations in October with the support of various institutions. In October, the CEE representative also participated in a campaign on Eco Diwali festival campaign, organized by CPCB. Nearly 500 students from five schools conducted this campaign.

1.1.5 NGC in the Western Region

CEE's West Regional Office coordinates two states - Gujarat and Rajasthan - and also the two Union Territories (UT) of Daman and

Diu (DD) and Dadra Nagar Haveli (DNH). In Rajasthan, CEE coordinates NGC activities in the state from its Jaipur office while the Ahmedabad office coordinates the same in Gujarat and the UTs.

Gujarat and UTs of DD & DNH: The government of Gujarat has nominated Gujarat Ecological Education and Research (GEER) Foundation as the nodal agency NGC. CEE has been working as resource agency since 2002-03 for the NGC programme here and has been actively collaborating with GEER foundation to implement the NGC programme in Gujarat. The programme reaches out to around 6730 schools in the state.

During the year, meetings were held with the nodal agency at regular intervals to strengthen the programme and plan future events. The need to conduct trainings for the eco-club TiCs and the *Paryavaran Mitra* programme was also discussed. Ways of strengthening communication of the nodal and resource agencies with schools were explored.

CEE in association with GEER foundation organized a one day State level Master Trainers training cum orientation programme in November 2010. The main objective of the workshop was to showcase the current status of the district level activities in Gujarat and orientation to the *Paryavaran Mitra* programme. Around 30 participants across the State participated in this workshop.

In December, the District Coordinator, Dahod, District Education Office, GEER Foundation and CEE West organized a one day eco-club TiCs' meeting in Dahod district. The key points discussed during the meeting

were introduction of *Paryavaran Mitra* programme in NGC schools of the state, methods of synergizing *Paryavaran Mitra* with NGC and also to discuss the strategy of implementing the programme in the state. This was attended by 200 teachers.

From January to March 2011, GEER Foundation, in association with CEE, organized five zonal workshops in five different locations, viz. Rajkot, Mehsana, Surat, Vadodara and Ahmedabad, for the teachers in-charge and students of these zones. Around 960 teachers, students and district coordinators attended the workshops. The focus of the workshops was orientation of participants to *Paryavaran Mitra* programme, methods of synergizing *Paryavaran Mitra* with NGC and to discuss the strategy of implementing the programme in the state with the participating teachers. During the workshop, CEE had organized various environmental games for participating students and teachers. CEE's *Prakriti* bus was also brought to the workshop to introduce various environment related issues.

Monitoring visits to 15 NGC schools in three different districts, viz. Ahmedabad, Bhavnagar and Dahod, were undertaken, during which NGC Schools were also briefed about *Paryavaran Mitra* programme.

CEE West also translated and trans-adapted the *Paryavaran Mitra Programme Package – Information Brochure, Booklet (Shodhavu, Jaanvu, Vicharvu karya karvu) and Oath Poster* into Gujarati.

The District Coordinator of Narmada district, with the help of CEE West, organized two *Eco-melas* at Rajpipla and Dediapada

region in November 2010. About 55 students from these two regions showcased the activities carried out by their eco-clubs. During the mela, participants were given an orientation to the *Paryavaran Mitra* programme. Around 55 participants participated in this district level event.

In December, Ahmedabad Municipal Corporation and CEE jointly participated in the Kankaria Carnival, an event being organized by the Gujarat Government since the last two years. Around 123 teachers and students of NGC and non NGC schools from five districts participated in this. *Paryavaran Mitra* was showcased at this event where students and teachers from five schools worked together with the CEE West team and Fine Arts volunteers to prepare colourful tableaux representing the five *Paryavaran Mitra* themes.

The Pollution Control Committee is the nodal agency in both the UTs - Daman and Diu and Dadra Nagar Haveli. On the occasion of Earth Day, CEE West, along with Balbhavan, Diu organized a painting workshop for 12 students and three teachers on the theme of Biodiversity.

A meeting was also held with the Member Secretary, Pollution Control Committee, DD & DNH to strengthen the NGC programme in the UT. The discussions in this meeting focused on reviving the programme in both the UTs and subsequently, CEE provided support in following up the matter with the Ministry.

Rajasthan: In Rajasthan, under the NGC programme, there are around 8250 eco-clubs/schools, facilitated by the Rajasthan State Bharat Scouts & Guides (RSBSG) and CEE's

office in Jaipur. During the year several meetings were held at regular intervals to discuss the implementation of *Paryavaran Mitra* programme and strengthening of the NGC programme, besides organizing teachers training programme and planning future events in the state.

From September 2010 to February 2011, CEE Jaipur organized five training programmes for eco-club teachers in-charge of five districts, viz. Jodhpur, Karauli, Jaisalmer, Madhopur and Jaipur. The programmes were organized by RSBSG and CEE's office in Jaipur, and were attended by 490 eco-club TiCs. The key points discussed during the workshops were NGC Eco club programme, its objectives, and roles and responsibilities of the stakeholders. Representatives from CEE Jaipur Office also shared the *Paryavaran Mitra* programme and discussed the synergies which can be built between NGC and *Paryavaran Mitra*.

CEE Jaipur organized a two day event to respond to the UN call for 'Many Species, One Planet, One Future' on World Environment Day 2010 in which RSBSG was the key partner. Essay, drawing and quiz competitions were organized at Bani Park, Govt. Girls Senior Secondary School, Gandhinagar, Jaipur, on the themes of biodiversity conservation and combating climate change. Around 250 students of different NGC Schools participated in the competitions, after which prizes and certificates were awarded to the winners.

CEE Jaipur, in collaboration with Jaipur Zoo and Rajasthan State Pollution Control Board, celebrated the Wildlife Week at Jaipur Zoo in October 2010. As a state resource agency,

CEE supported the five day event whose objectives were to generate interest about wildlife amongst the younger generation, develop better understanding about the role and importance of wildlife in balancing human life and to reach out to the schools with a message on conservation message in a nontraditional and pleasant way.

During the Wildlife Week celebrations at Jaipur Zoo, CEE facilitated quiz, poster making, essay writing, photo identification and elocution competitions. About 10,000 students from 10 NGC schools and 25 other schools of Jaipur visited the Zoo and participated in the activities. The valedictory function was organized on October 7 at Jaipur Zoo, during which CEE conducted various environmental activities and fun games like Face Panting, Canvas, Wishing Tree, Treasure Hunt and Foot Print Tattoos. The Hon'ble Minister for Environment and Forests was the Chief Guest of this session, which also had the prize distribution ceremony.

To strengthen environment education and to bring school children, youth and teachers on an interactive forum to promote environmental awareness, CEE and the Regional Institute of Education (RIE), Ajmer conducted a four day regional level event - *Prakriti Mela* - in January-February 2011 by involving schools from Rajasthan, Punjab, Haryana, Delhi, Uttar Pradesh, Uttarakhand, Himachal Pradesh, Madhya Pradesh, Gujarat, Jammu & Kashmir, Chhattisgarh, Chandigarh and Bihar. The programme aimed to involve the network of eco-club schools from these states. Teacher training on implementation of the *Paryavaran Mitra* programme, children's group discussion, quiz competition, treasure hunt, poster making

competition for teachers and bird watching were the major activities conducted during the *Prakriti Mela*. The major attraction of this year's event was the inter-state quiz competition titled ***Kaun Banega Paryavaran Mitra Quiz Champion -2011*** for school students and the Low Carbon quiz for RIE students. Around 150 participants took part in the quiz competitions while about 1200 visitors from local schools participated in activities like face painting, drawing competition, web of life, break the pyramid, bird identification and others.

In all, 25 stalls were set up by the participating schools and students of RIE which showcased their best practices through models, demonstrations and exhibits on various themes like handmade paper, air purification, biodiversity, rain water harvesting system, energy, water conservation, solid waste management, effect of global warming, eco friendly desert refrigerator. During the valedictory session held on the last day, participants shared their learnings and experiences, and prizes were distributed to the winners of all the competitions.

CEE Jaipur helped in developing two booklets in Hindi - *Paryavaran Jan Chetna* and *Paryavaran Chetna* – covering the themes of climate change, waste management, vermicomposting, water conservation & management, biodiversity and energy namely.

1.1.6 NGC in the Southern Region

National Conference of Nodal Officers and Resource Agencies of NGC

The conference was held in Bangalore on July 13-14, 2010, with the objectives of

reviewing the implementation status of the programme during the decade (2001 – 2010), sharing experiences and exchanging learnings, and suggesting recommendations for the effective implementation of NGC for the year 2010–2011 integrating the concepts of sustainable development and climate change. This two day conference was organized by CEE South and around 42 participants representing the Ministry of Environment and Forests, 16 States, two Union Territories and seven Resource Agencies attended. At the end of the conference five groups presented their recommendations.

During this conference, the book *Young in Green Action* which presents 100 case studies from across the country documenting the impacts of NGC activities in a range of geographical situations, climates and cultures, compiled by CEE South, was released by Mr. R. Mehta, Mrs. Rita Khanna and Mr. Kartikeya Sarabhai, commemorating 10 years of NGC in the country. Grouped under 10 themes, the publication showcases diverse actions by the young green corps. The aim of this publication is to broaden the outlook of students and teachers and inspire them to plan actions that promote sustainable practices.

1.2 The Paryavaran Mitra Programme

Paryavaran Mitra - A Sustainability and Climate Change Education Project aimed at creating 20 million Friends of the Environment in schools across India who would undertake action towards sustainability and climate change, was launched in May 2010. The project aims to guide, facilitate and capacity build students

through curriculum-linked activities and co-curricular action projects to take positive environmental action at the individual, community, national and global level. The project seeks to reach students in classes from standards 6–9 (age group 11–15). The first phase of the programme is for a period of three years from 2010–2013.

he project will build on the first phase of *Kaun Banega Bharat ka Paryavaran Ambassador* campaign and progressively build up to 200000 schools and two crore school students supported by a network of NGOs over the three years 2010/11, 11/12 and 12/13.

Paryavaran Mitra students will be from schools in every state and every district of India. It is envisaged that the programme will be built on a variety of networks and partnerships. The goal is to create *Paryavaran Mitras* in all schools in India. A *Paryavaran Mitra* student will demonstrate environmental leadership qualities through positive change in behaviour and action at the individual, school, family and community levels. Thus every *Paryavaran Mitra* student becomes a change agent for sustainability.

Specifically, the students will:

- Become aware, sensitized, and be helped to understand the underlying science, social and economic issues, as well as the ethical issues relating to sustainability and Climate Change;
- Acquire information and knowledge about national and international issues regarding sustainability and Climate Change, and understand these better with reference to their own context;

- Build skills through hands-on experience and projects about their immediate environment - their school, neighbourhood, village or city;
- Be motivated and capacity-built to become agents of change through involvement in action projects related to sustainability and Climate Change;
- Imbibe values that are consistent with a sustainable way of life.

Paryavaran Mitra is the Centre's flagship ESD school programme bringing together 25 years of experience of working with school systems. The programme synergizes several national level initiatives like the National Green Corps, *Sarva Shiksha Abhiyaan* and National Environment Awareness Campaign, and builds on partnerships at the national and international level. The programme was launched at Ahmedabad on July 24 by Dr. APJ Abdul Kalam as the *Paryavaran Ambassador* chosen through a nationwide campaign *Kaun Banega Bharat Ka Paryavaran Ambassador*.

This is a joint initiative of the CEE with the Ministry of Environment and Forests, Government of India and ArcelorMittal. Other collaborating partners include the UNEP, UNESCO, Earth Charter International, Science Express, Indian Society for Remote Sensing, SGP, Earth Day Network and others. The programme works with more than 40 agencies at the state level.

To reach the target number of schools, the different strategies developed include:

- National Green Corps network of schools
- NGO partnership under which NGOs take the onus for a specific number of

schools - anywhere from 30 to 100 schools per district - to enroll, monitor and report the activities. Sixty eight NGOs have agreed and 32 have signed MoUs.

- Letter of support from Education Departments which has been achieved in states like West Bengal, Uttarakhand, Jammu & Kashmir, Himachal Pradesh, Maharashtra, Andhra Pradesh, Chhattisgarh, Bihar, Assam and Karnataka.
- Partnership with *Sarva Shiksha Abhiyan* which has been achieved in Himachal Pradesh and Assam, and is being explored in Meghalaya
- SCERT support finalised in Himachal Pradesh and MoU under process in Uttar Pradesh
- Other agencies with which partnerships have been forged include Tribal Research and Training Institute, West Bengal Council of Vocational Education and Training, *Navodaya Vidyalaya Samiti*, UNESCO Club, DPS Society in Delhi and similar organisations

About 101242 schools have enrolled in the programme so far and 4039 schools have carried out *Paryavaran Mitra* activities in the five themes. About 12941 teachers, 674 master trainers, 120 NGOs, and 162063 children and community members have been oriented so far across the country.

The first set of material comprising *Explore, Discover, Think, Act* - a menu of 51 action ideas on the themes - went out to 67351 schools in English along with the *Paryavaran Mitra* Themes poster and the *Paryavaran* Ambassador Dr A.P.J Abdul Kalam's

Environmental Oath Poster. The material was translated in 12 languages, viz., Telugu, Kannada, Malayalam, Tamil, Assamese, Hindi, Punjabi, Marathi, Gujarati, Urdu, Oriya and Bengali, and trans-adapted in four states (Bihar, Chhattisgarh, Rajasthan, Madhya Pradesh).

National, state and local level events have helped to garner interest in the programme, to celebrate and recognize the milestones of the programme and recognize schools for doing exemplar activities in the five themes. Three National and six Regional and various state and district level events have been held. The national events include the national launch, the Earth Day Network Campaign and the World Environment Day celebrations across the country. Regional and state wise events mostly comprised of the regional/state launch and events like the *Prakriti Mela* in Ajmer and Kankaria Carnival in Ahmedabad. District level events include celebrating environmental days in the schools.

Paryavaran Mitra's presence on online platforms like the website, Facebook, YouTube and the listserv have helped to create interest about the programme and the response has been overwhelming. The website has 10470 visits ever since its inception in August 2010, and 62.48% of those visits have been new visitors. The Facebook profile has 8000+ people following it and the listserv has more than 3400 email ids of people who get weekly updates on the programme. A seven minute short film was produced about the programme and uploaded on YouTube and is being used in orientations and events across the country, dubbed in the respective languages.

To guide the process, a National Steering Committee with Shri Jairam Ramesh, Minister of State (I/C) has been constituted. The committee has representatives from the MoEF, MHRD, Planning Commission, School Networks, School Boards, ArcelorMittal India, teacher trainers, curriculum developers, leading NGOs, UNESCO and UNICEF as members. The first meeting was organized on March 9, 2011.

In second year of the implementation, the programme will reach the target of two lakh schools. An initiative this year is to reach out to tribal schools in the tribal areas of Madhya Pradesh and Jharkhand in association with the SGP GEF NGOs.

Research and evaluation is an area that would be strengthened as part of this programme. Indicators for the same are being crystallized and would involve both quantitative and qualitative methods to bring out the achievements and learnings of the project in terms of numbers and subjective perceptions, including the diversity of experiences, views and opinions of the programme's audience and the implementers.

A Teacher's Handbook is being developed and will be disseminated to all the schools. The publication focuses on the whole school and is based on the relevant curriculum.

Updates on the programme can be had at www.paryavaranmitra.in

1.2.1 Paryavaran Mitra in CEE Himalaya

Paryavaran Mitra, the national programme on sustainability and climate change education is being implemented in the

Himalayan states of Jammu & Kashmir, Himachal Pradesh and Uttarakhand by CEE Himalaya. The programme was shared with State NGC Nodal and Resource agencies, Education Departments, SSA, SCERTs, DIETs, CEE's partner NGOs and other institutions in all the three states. A common strategy of covering 250 NGC schools and 25 non-NGC schools in partnership with NGOs was adopted for all the states.

Jammu & Kashmir: The state of Jammu & Kashmir has 22 districts falling in three administrative regions – Jammu, Kashmir and Ladakh. There is a total of 14938 government middle, high and higher secondary schools in the state of which 5486 are NGC schools. On January 22, 2011, a state level launch of the programme was held at Jammu, with the Minister of Education, J&K as the Chief Guest; he pledged full support to the programme in the state. Letters of support have been provided by the Commissioner/Secretary, and the two Directors of Education, Jammu and Kashmir for state and district level support. Nodal and Resource agencies are also providing full support for covering NGC schools. WWF India (J&K Chapter), Centre for Environment Education and Training (CEET) and Arjun Youth Club are three NGO partners for Jammu province. The NGO partner teams were oriented and introduced to the concerned authorities. A total of 2065 schools including 1900 NGC and 165 non-NGC schools have been enrolled in 10 districts falling in the Jammu region. The programme kit has been distributed to around 900 schools. CEE Himalaya team approached around 25 schools each in Baramulla,

Bandipora, Srinagar, Ganderbal and Kupwara districts and distributed the kits. Around hundred twenty teachers and resource persons were oriented on the implementation of *Paryavarn Mitra* programme through two training programmes.

The *Paryavarn Mitra* kit was translated into Urdu for use in the schools in Kashmir Valley.

Himachal Pradesh: There are 5682 middle, high and higher secondary schools in 12 districts in Himachal Pradesh of which 1904 are registered as NGC schools. The State Education Department and NGC Nodal and Resource Agencies were contacted for support and letters of support have been received from the Department of Education. *Sarva Shiksha Abhyas* in HP is also taking a keen interest in the programme and helping in the dissemination of the *Paryavarn Mitra* kit. NGO partners have been identified for programme implementation.

Uttarakhand: There are total 7165 Schools in the state with 1950 of them being NGC schools. The *Paryavarn Mitra* programme was shared with the State Education Department, *Sabhi Ke Liye Shiksha Parishad*, and NGC Nodal and Resource Agencies. SSA's jurisdiction is limited to standards 1-8 whereas, *Rashtriya Madhyamic Shiksha Abhiyan* (RAMSA) controls High Schools and Intermediate Colleges. RAMSA has a cell to coordinate environment related programmes like U-Probe, GLOBE and *Sparsh Ganga*. NGO partners were also identified for programme implementation.

CEE also approached G B Pant Institute of Himalayan Environment and Development, Kosi, Almora for support which has been

promised by the institute centrally as well as through its regional cells at Srinagar, Garhwal (Uttarakhand), Kullu (HP), Gangtok (Sikkim) and Itanagar (Arunachal Pradesh). The institute is also working with selected schools.

1.2.2 Paryavarn Mitra in CEE East

West Bengal: WaRM group at CEE Kolkata is facilitating the *Paryavarn Mitra* programme across the state. An alternative strategy had been worked out to reach all the secondary school of West Bengal through the education department. In West Bengal, *Paryavarn Mitra* would be implemented in partnership with the Directorate of School Education, where the respective District Inspector, SSA and DIET Centres would facilitate obtaining maximum reach for the programme in the schools. An orientation programme of teachers would be conducted where on the spot registration and distribution of IEC materials would be carried out. The partner NGOs who would be helping in the process and monitoring the schools are Rani Lokamata Rashmoni Mission, PUPA, School of Fundamental Research, *Dishari Sankolpo* and *Bigyan Chetana* Forum and Teachers Centre. The programme aims to cover 9013 secondary schools across the state in next two years. The training and sensitization for the schools are provided directly by CEE Kolkata. In the reporting year, many forums and platforms have been utilized to propagate the programme objective and strategy to various schools, teachers and other stakeholders. All the education materials of the programme are trans-adapted, reviewed and printed in Bangla for dissemination. Almost 143 teachers, 365 students and 25 others have been trained in the reporting period. About 1465 sets of educational

material in Bangla have been distributed as of date.

1.2.3 *Paryavaran Mitra* in CEE Central

Launch of *Paryavaran Mitra* in Central Region: *Paryavaran* Ambassador Dr. APJ Abdul Kalam released the Environment Oath in Braille and inaugurated an evolving exhibition on the biodiversity of the Sahyadris, in Pune, at the launch of *Paryavaran Mitra* for the central region in December 2010. Students, teachers and NGOs from Chhattisgarh, MP, Maharashtra and Goa participated in the event. Dr DC Deshmukh, Director Education (Secondary and Higher Secondary), Government of Maharashtra and Dr AK Jha, Commissioner, Tribal Research and Training Institute, were also present and committed to support *Paryavaran Mitra* in Maharashtra.

Maharashtra: CEE Urban conducted ESD sessions in the schools in Pune and facilitated school projects on the given environmental themes of *Paryavaran Mitra* programme – water, traffic and transportation, and others. The Shamrao Kalmadi High School, Pune conducted a survey to study the water supply facility in different areas of Pune in collaboration with the Globala School, Stockholm, Sweden. CEE helps them in designing the project and guiding the students in conducting it.

1.2.4 *Paryavaran Mitra* in CEE South

Kerala: The *Paryavaran Mitra* - a sustainability and climate change education programme, to cover two lakh schools across India, was initiated in Kerala covering 14 districts. Around 250 schools are targeted per district in the first phase. All the schools belong to

the National Green Corps (NGC). The Kerala State Council for Science Technology and Environment (KSCSTE) is the partner for implementing the programme. A meeting of NGC coordinators was held at CEE Kannur during which issues with implementing the programme were discussed. Since the academic year was nearing completion, it was felt that the distribution of materials and orientation of school teachers could be undertaken in the coming academic year. Around 3500 schools have been targeted and materials sent to the district NGC coordinators. In March 2011, school teachers, students and NGC coordinators from different districts in Kerala and a representative from the NGC Nodal agency, attended the *Paryavaran Mitra* regional event held at Bangalore.

Andhra Pradesh: CEE AP has implemented the *Paryavaran Mitra* programme with the objective of orienting all Government Upper Primary Schools (UPS) and Zilla Parishad High Schools (ZPHS) to the theme of environmental sustainability and climate change and to initiate school level actions towards Sustainability and Climate Change during 2010-2013.

During the year 2010-11, a state level competition was announced with support from the Department of Education, Government of Andhra Pradesh in 24000 Government UPS and ZPHSs. The information materials (wall poster with information about the competition, registration and reporting formats, guidelines for conducting activities on the five selected themes) were disseminated to the 24000 schools through the District Education Officers (DEOs), Department of Education.

About 1000 schools have registered with CEE and 650 schools have sent their reports. Based on the activities undertaken, 22 schools were awarded certificates and Rs. 10,000 in cash to conduct projects related to activities to mitigate climate impact or overall sustainable development of school campuses.

Karnataka: CEE partnered with the state Education department for implementing *Paryavaran Mitra* activities. The programme material has been translated and printed in the Kannada language. CEE Karnataka also participated in the material development workshop organized by the *Paryavaran Mitra* Secretariat. The programme was implemented through Block Resource Centres (BRCs) spread across Karnataka as this was identified as the point of implementation. There are 202 BRCs in Karnataka organized under 33 educational districts. The programme aimed to orient at least one block resource coordinator or person in each educational block. As of now the programme has reached 202 blocks across the state covering 6060 schools.

Initially the programme has been introduced to all the BRCs through orientation programmes organized at the educational division level. Each block has then been assigned to carry out the teacher training programme at the block level. A Lead BRC has also been identified in each educational district to monitor and to bring innovations in the programme implementation. The BRCs will now train teachers who will ultimately reach out to the students at the school level. Each Block Resource Centre has been assigned to enroll 30 schools to be covered under the programme this academic year.

CEE will provide each BRC with programme support in terms of preparing a budget for teacher orientation, monitoring the Lead BRC activities and providing educational materials for carrying out the programme.

Schedule of Orientation Programmes carried out for *Paryavaran Mitra*

Educational Division	Date	Participants
Gulbarga	January 8, 2011	Block Resource Coordinators
Dharwad	January 16, 2011	
Bengaluru	March 25, 2011	
Mysore	March 26, 2011	
Southern Regional Event	March 30, 2011	Teachers & Students from states in South India

Regional Event at Bengaluru: The southern regional event was organized at Bengaluru on March 30, 2011 at Sir Puttanna Chetty Town Hall. School teachers and students representing the districts in all the states of South India, viz. Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Pondicherry, participated in the event. Organisations like the Karnataka Renewable Energy Resources Agency, Karnataka State Pollution Control Board, and NGOs such as Green Foundation (GF) and Agriculture Man Ecology (AME), Bengaluru, put up stalls in the venue on various themes, like biodiversity and climate change, renewable energy and other

environmental and development related issues. Dignitaries who attended the event included Dr. Ravindranath N H, Climate Change Scientist, CST, Bengaluru; Shri Narasimha Hegde; and Mr Ritesh Sinha, ArcelorMittal India. CEE Karnataka was represented by Mr Ishwa Poojar.

Tamil Nadu: In Tamil Nadu, *Paryavaran Mitra*, the climate change and sustainability education programme is being implemented in over 9000 schools. As part of this year's activity, competition was used as a strategy to encourage participation and to garner support. CEE Tamil Nadu developed the Tamil language version of the educational booklet and also designed a special poster for the state to spread the message of the competition in the schools. As a part of this, two workshops, one each for the National Green Corps District Coordinators and one for the State District Eco-Club Coordinators of the Tamil Nadu Education Boards were conducted for the teachers and teacher trainers in Chennai.

1.3 Ganges River Dolphin - Conservation Education Programme

CEE, with the support of the Ministry of Environment and Forests (MoEF), has initiated a two year conservation education programme on Ganges river dolphin. Ganges river dolphin (*Platanista gangetica gangetica*) is listed as a Schedule-1 species in the Wildlife Protection Act 1972 and recognized as "Endangered" by IUCN. In order to focus public attention on the conservation of Ganges river dolphin, Shri Jairam Ramesh, Minister for Environment and Forests, has declared the Ganges river dolphin as a National Aquatic Animal on October 5, 2009.

CEE North, since its inception, has been working on the species as part of its river conservation initiatives. Having now been declared as a national aquatic animal, the CEE team felt that there should be a strong emphasis in the way we present this shy and endangered species to school children and other stakeholders, and more importantly, to our nation. CEE, with support from the National River Conservation Directorate of MoEF, initiated the project titled **Ganges river dolphin – Conservation Education Programme** in July 2010. The programme is being implemented in the major riverside areas where these dolphins are found, viz. in the Ganges and Brahmaputra river systems of northern, eastern and northeastern India.

The project activities were initiated with the setting up of the project secretariat in Lucknow at CEE's Northern Regional Office. Activities related to the project in various states will be taken up by the respective regional or state offices – activities in the north eastern region are being coordinated by CEE's North Eastern Regional Office while those in the eastern region are being handled by CEE Kolkata State Office. A core group has been formed at CEE to develop the project strategy and implementation.

The first year of the project was mainly focused on the identification of project locations, development of IEC material, identification of partner agencies in each project location and selection of schools.

1.3.1 Research and Documentation

Research papers, study reports, books, news articles and other publications on Ganges river dolphin were referred and collected. These referencing was done to find out the

studies done on Ganges river dolphin in various locations of the north, east and north east region and also to know the key people or scientist working on the species. These references helped to identify the project locations, current status of the species, recent research work, and institutions in India working on the species, etc. Based on this a core group of experts was formed in each region who agreed to provide technical inputs in the IEC material and implementation of the programme.

1.3.2 Identification of Project Cluster

A total of 20 locations were identified in four states (Assam, Bihar, Uttar Pradesh and West Bengal). Out of the 20 project areas, seven locations are in Uttar Pradesh, six in Bihar, five in the North East and two in West Bengal. In each project cluster, 25 schools will be selected for the dolphin conservation education awareness activities. The identification of the project cluster was based on the status of Ganges river dolphins, the status of the habitat in that region and the scope for conservation activities.

1.3.3 Identification of Partner Agencies

The programme will be implemented in each project location through a partner agency, for which local NGOs in each location were identified through several sources including CEE's earlier experience of working with NGOs in those areas. Identification of NGOs was based on criteria like their experience in the field of environment, wildlife conservation and also working with schools in their area. Based on the identified list, CEE team visited the project locations and held meetings with such NGOs to understand their experience, capability and interest.

1.3.4 Identification of Schools

The CEE teams visited schools in the project areas to assess their interest in the Ganges river dolphin and its conservation. Such school visits were conducted in four districts of Uttar Pradesh (Bahraich, Allahabad, Bulandshahr and Etawah) and five districts of Bihar (Patna, Bhagalpur, Bhojpur, Gopalganj and Saharsa) for this programme. In the North Eastern region, schools of Goalpara and Guwahati were visited. The schools thus visited were from the NGC eco-club network. Two types of schools are being given priority - (i) schools located around the dolphin habitat, and (ii) schools where the students come from dolphin areas.

During the visit, the CEE team met eco-club teachers in charge to understand the type of activities being conducted by their eco-clubs, and whether any of their activities have involved the Ganges river dolphin and its habitat conservation. The overall response from schools to the project idea was quite positive and they expressed their keenness to join the programme. Based on these preliminary interactions, guidelines will be provided to the partner agencies regarding the selection of schools for the cluster formation in each project location.

1.3.5 Meeting with Experts and Key Stakeholders

Officials from departments like Forests, Education and Pollution Control Board play a crucial role in district level education awareness activities. Before visiting schools, CEE wrote to the respective District Inspector of Schools (DIOS) provide us suggestions on which schools would have the potential to be roped in for the programme. The DIOS, on

CEE's request, also issued a letter to schools directing them to provide information and cooperate. Similarly at most of the locations, the Divisional Forest Officer (DFO) was contacted to get information on the status of the dolphin sighting in the area, any case reported, any conflict, programmes conducted for schools or the community and others. A meeting was also held with the Chief Wildlife Warden, Uttar Pradesh, in which the CEE team briefed him on the programme. In order to know the current status of the Ganges river dolphin and ongoing research work, several rounds of meetings were held with professors and scientists working on this species across India.

1.3.6 Development of IEC Materials

It was decided, after extensive discussions, to develop the Information, Education and Communication (IEC) material for the programme in four categories

- Material for various stakeholders
- Material for classroom display
- Training support material for NGOs
- Teachers booklet for carrying out educational activities

A project brochure was developed in Hindi, English, Bengali and Assamese to provide information about the Ganges river dolphin and the conservation education programme to different stakeholders in each location. A bilingual poster (Hindi and English) on the Ganges river dolphin has also been developed and is being trans-adapted into Bengali and Assamese. A poster on the species with sketches developed by the artists of CEE, and content derived from technical

inputs, photos and references from experts, has been developed for mass awareness and interest creation. A film in English on the Ganges river dolphin developed by a dolphin expert has been identified for converting to Hindi, which will be useful for teacher training programmes. A NGO module is being developed for providing guidelines to partner agencies in conducting activities in each project location. A booklet on the dolphin is being developed for teachers to help them carry out classroom and extracurricular activities that are focused on understanding the species, its habitat, threats and ways to help conserve it.

1.3.7 Review Workshop

A two day review workshop was organized by CEE in March 2011 at Narora Atomic Power Station, Narora, Bulandshahr, Uttar Pradesh, with the objective of getting comments and suggestions from experts on the draft of the teachers' manual and other IEC materials developed by CEE for the programme. In all, 29 participants attended the workshop including officials from the forest and education departments, pollution control board and professors from different universities in India. The workshop also provided an opportunity to visit the WWF Narora Dolphin Monitoring site to see firsthand, the work being done by them in this area.

Based on the inputs received from the experts and participants, the CEE team is finalizing the teachers' material for the programme. With the IEC material developed, CEE plans to take up the school based yearlong activities on Ganges river dolphin conservation education during the next year.

1.4 Children Forest Programme (CFP)

CEE North was selected as one of the implementing agency for the Children Forest Programme (CFP) in Lucknow district of Uttar Pradesh. In Uttar Pradesh, CFP is being introduced in five districts under Uttar Pradesh Participatory Forest Management and Poverty Alleviation Project (UP-PFMPAP) of the UP Forest Department supported by Japan International Cooperation Agency (JICA). CFP is a five year long programme to develop green campuses and to introduce environmental education in schools with the active participation of students, teachers and community members.

CFP was originally initiated in 1991 by an international NGO from Japan known as OISCA. The programme had reached out to 27 developing countries, and its India office implemented the programme in various parts of the country. As part of the JICA funded component under UP-PFMPAP, CFP was initiated in five districts of UP.

CEE is the implementing agency for the CFP programme in 100 schools in Lucknow district where the focus is on creating mini forests in schools by promoting tree plantation, making schools green, and also providing an opportunity to students to learn about forest ecology and its importance. The programme also addresses several aspects linked to ecosystem services, like climate change concerns, consumption and lifestyle, and others. This is achieved by encouraging students to plant and conserve trees with differing purposes like creating a resource base, carbon sink and nutritional and economic resource.

Initially CFP did not have a programme logo of its own; CEE North initiated and got a logo designed with the help of the Children Media Unit team. This logo was appreciated and adopted by UP-PFMPAP and is now being used by all the implementing agencies. The CEE North team also visited CEE's similar project sites in Andhra Pradesh and Gujarat, with the objective of interacting with schools that have greening campus experiences.

1.4.1 Selection of Schools

The programme began in September 2010 with the identification and selection of the first batch of schools. For the selection process, the CEE team met the District Inspector of Schools (DIOS), Basic *Shiksha Adhikari* (BSA), District Science Club (DSC) Lucknow and the CFP Nodal Officer, to identify zones and prospective schools with interest in the project and space to provide. The CEE team then visited schools from various zones and met the respective Principal and/or school manager. After visiting about 71 school, 42 were shortlisted to comprise the first batch. This list was submitted to the CFP Nodal officer for further verification and inputs.

1.4.2 Enrollment and Orientation of Schools

The selected schools were enrolled with details of the school profile and name of the teacher in charge for the programme, which process also gathered details of the area available for plantation, their preferred saplings for plantation and facilities for irrigation. The CEE team then conducted orientation sessions in the schools to brief students about the programme, and focusing

on why mini forests in their campus and their role in the programme. The orientation also ensured that students understood their environment, the importance of trees in their lives and individual steps that could be taken to conserve these natural resources.

1.4.3 Nature Tours

As part of the programme, schools were invited for a nature tour programme in which more than 500 students along with 50 teachers from **10 Schools participated i. The tour was organized in the Kukrail Forest Reserve which also has a breeding centre for crocodiles and other freshwater species. The objective of these nature tours was to provide a unique experiential learning opportunity to the students of the CFP Action Team where they were exposed to the splendid variety of nature and its through activities, educational games and a nature trail. The participating students were also encouraged to complete short assignments that would put their experiences on paper.**

1.4.4 Plantation

CEE North compiled a list of indigenous trees of the region with varied properties such as medicinal, ornamental, fruits and others, based on which the team began pilot plantation in schools. The first plantation ceremony was conducted in the government school *Purva Madhyamik Vidhyalya*, Gulam Hussainpurva, Gomtinagar on October 2, 2010 as part of Gandhi Jayanti observances. The ceremony included educational activities, plantation of saplings, a discussion on ways to take care of these plants and adoption of the saplings by the students.

CEE is planning the next round of activities for the programme and has begun the selection process for the second batch of schools. A teachers' training module and environment awareness material is also being developed by CEE for the CFP schools.

1.5 Programme on Science Awareness and Biodiversity Conservation in Schools in Lucknow

CEE North facilitated interactive sessions on biodiversity conservation in the NGC schools of Lucknow by joining hands with the District Science Club who organized a series of programmes in the district, as as part of the International Year of Biodiversity celebrations. The programme was held in three schools of Lucknow district between September 22 and October 7, 2010, where 17 NGC schools participated bringing in around 550 students and 50 teachers.

CEE's interactive sessions for students focused on the importance of biodiversity and steps they can take to conserve the biodiversity in and around their school. Students and teachers were also briefed about *Paryavaran Mitra* programme and how the schools can actively become a part of this initiative. All the schools showed keen interest in joining the programme.

1.6 Saving every drop of water

CEE North joined hands with District Science Club (DSC) - which is run by the Council of Science and Technology, Uttar Pradesh under the guidance of DST - to organize environmental education programmes in the rural schools of Lucknow in January 2011.

The programme focused on creating awareness in children about water and its conservation practices. Various experts conducted sessions during the programme. CEE partnered in three programmes and facilitated an open quiz for the group on the theme and conducted an interactive session. Along with this, the schools were also introduced to the *Paryavaran Mitra* programme. Each programme had about 300 to 350 students from three to four schools participating, besides representation from community members.

1.7 Environmental Education in Schools of Andhra Pradesh

1.7.1 Student Amateurs in School Yard Agriculture (SASYA)

CEE Andhra Pradesh (AP) State Office, with support from UNICEF, Hyderabad, has implemented the SASYA project in 300 schools spread over 21 mandals in Medak district. The objective was to develop bio intensive gardens (vegetable) in the selected schools with support from the community. The project was implemented up to December 2010. The following tasks were accomplished during the period.

- District level training programme for training the master teachers - one from each mandal - and field coordinators from selected NGOs
- Supervising mandal level training programmes in 21 mandals which were organised by the master trainers and field coordinators from selected NGOs
- Distribution of kits with seed, samples of organic fertilizers and pesticides and technical manual to the schools

- Initiating gardens with the help of NGO coordinators and the community in 300 schools
- Monitoring the garden maintenance, harvest of produce and utilization of the same for midday meals for the students in the school

1.7.2 Student Amateurs in School Yard Agriculture (SASYA) In Warangal

CEE AP State Office has the SASYA project in 17 schools of Warangal district spread over eight mandals, with support from UNICEF Warangal. The main objectives of this project were:

- To improve the quality of the school environment through development of bio intensive gardens
- To provide an opportunity to students to 'learn by doing'
- To improve nutrition standards by providing organically grown vegetables for mid day meals

The activities undertaken as part of the SASYA programme were:

- Orienting teachers to the concept and technical details of initiating bio intensive gardens in schools
- Facilitating initiation of vegetable gardens in the school by providing required technical and material support
- Monitoring support

The training programme was organized during September 2010 for selected teachers and Mandal Coordinators who are the

facilitators of the programme. A manual for the teachers and a poster for the students were developed and distributed. Subsequently, gardens were initiated in all the 17 schools. The produce utilization started from the month of October.

1.7.3 Herbal Gardens in Schools of Andhra Pradesh

CEE AP is implementing the project 'Development of Herbal garden in EESAP schools' with the support of National Medicinal Plants Board (NMPB) and Andhra Pradesh Medicinal & Aromatic Plants Board (APMAB). CEE is working with 101 schools spread over 10 districts in partnership with 13 NGOs. The objectives of the project are:

- To sensitize the students to the importance of medicinal plants in daily life
- To develop skills in students to develop and maintain herbal gardens
- To involve the community in herbal garden development in schools in order to make this process a learning and sharing experience

During the year 2010-11, re-plantation was undertaken in 12 schools in three districts.

1.7.4 Developing and Propagating *Amla* Plantations in Schools

CEE AP is implementing the project 'Developing and Propagating *Amla* Plantations in Schools' with support from APMAB (Andhra Pradesh Medicinal and Aromatic Plants Board) Hyderabad in 80 schools in 13 districts (Kurnool, Kadapa, Chittoor, Guntur, Vishakapatnam, Vizianagaram, Srikakulam, Medak,

Mahabubnagar, Nalgonda, Prakasham, Nellore, Hyderabad) with support from partner NGOs.

The main objectives of this project are:

- To sensitize the students to the importance of *Amla* in daily life
- To sensitize the community members with the support of students and partner NGOs about the importance of *Amla*
- To motivate/facilitate the community to take up *Amla* plantations on farm lands, bunds, backyards and other places

During the year 2010-11, *Amla* plantations were initiated in all 30 schools at the rate of 50 saplings per school. A monitoring visit to these schools was also undertaken to check the survival rate. Community meetings were organized with the support of the NGO to promote *Amla* plantation in open lands and on filed bunds. CEE has completed one round of monitoring visits to all the schools.

1.7.5 Awareness Programme on Clay Ganesh Idols as part of *Vinayaka Chathurthi*

With the help of Andhra Pradesh Pollution Control Board, CEE AP has conducted Awareness Programmes for school children in 30 schools - 20 in Hyderabad and 10 in Medak district. The programmes were conducted on the eve of *Vinayaka Chathurthi* and included activities to make the students understand the environmental benefits of clay idols and the harmful effects of plaster of Paris.

With the support of Hyderabad Metropolitan Development Authority (HMDA), CEE also

distributed clay idols through two outlets in selected locations of Hyderabad at nominal prices, to encourage the use of clay idols for immersion.

1.8 CEE South - Nature Education Programme on Wildlife Conservation

CEE South, in association Dandeli - Anshi Tiger Reserve, conducted a two day teacher training programme for rural school teachers on nature and wildlife conservation in the first week of October 2010. The 18 teachers who participated were sensitized on issues related to forests, wildlife and conservation of nature and natural resources.

1.9 School Programmes in Chhattisgarh

1.9.1 *Anandshala*

Anandshala literally means 'school of joy' where the children are provided a congenial environment for their overall development. The *Anandshala* approach to working with schools was developed by CEE's Rural Programmes Group in partnership with UNICEF in 2003 and since then has been used as a model and methodology for education in partnership with village communities, state governments, local institutions, individuals, teachers and children.

The *Anandshala* approach has been adapted by CEE Chhattisgarh in its work with 19 schools in Arang in peri-urban Raipur, with support from WaterAid India and the Rajiv Gandhi Shiksha Mission of Chhattisgarh state. The project aimed at improving the infrastructure of the existing schools and the

quality of the teaching-learning process. The activities included capacity building efforts, development of school master plans and implementation of these plans in three schools on a pilot mode.

Currently, in the second year of the project, *Anandshala* is being implemented in 19 Government schools of Farfaud Cluster, Arang Block of Raipur. The Rajiv Gandhi Shiksha Mission through its District Project Office, Raipur and CEO Zilla Panchayat, has agreed to support hardware improvement for the remaining 16 schools.

Activities in the past year have included:

- Orientation programme for engineers looking after civil works in Farfaud cluster on the *Anandshala* approach and their role in facilitating implementation of the civil works with the school Committees
- Meeting with the new Block Resource Centre Coordinator to brief him about the approach and activities

In order to bridge the gap between the school textbooks and curriculum on one side and the external world on the other, a few school activities were carried, which also enabled the school to connect with the community as well as enhance learning:

- Greening School Campuses – In July, a plantation drive was undertaken in the three schools where infrastructure had already been improved through *Anandshala* project. The plantation included selection of trees that provide shade, provide fencing on the school boundary and plants for a kitchen garden including vegetables. Teachers and

students were involved in the plantation drive. All stakeholders including students and the management were exhorted to take care of the physical infrastructure of the schools. The school committees were briefed on the operation and maintenance required with the help of engineers in the Cluster.

- Visit to carpenter – A visit to a carpenter was organized for students of Standard V as part of the learning for the chapter on Livelihood in their textbook. The visit gave the students an insight into the use of wood, which type of wood is used for what purpose, its availability, how the products are made, different types of instruments used for different requirements. Students also got to know the difficulties of making a product earlier with the kind of instruments available earlier and how new instruments have made the process easier and faster.
- Directions and Map - The Standard IV textbook has the topic Directions. The usual teaching method is to explain the concept on paper or black board, with maps of the state or world used for

explanation. In order to provide the students of Standard IV a hands-on experience in understanding directions, they were formed into groups and asked to go around their village, note the landmarks and important places and then map the village as well as the school on paper. This also ensured they knew their village and school well along with gaining directional knowledge.

1.10 Green Ganesh Festival - Pune

The Red Cell, Times of India organized a campaign in Pune in collaboration with the Vilas Javdekar Foundation to promote environmentally friendly practices in the Ganesh Festival. CEE Central was requested to organise educational sessions at ten schools focusing on the issue of waste in the Ganesh Festival and promoting the idea of using idols made from soil/clay instead of Plaster of Paris and using decoration material made of biodegradable material instead of plastic and thermocol. The session in the schools highlighted the issue of pollution in rivers and other water bodies, generation of wastes. A demonstration was organised where an idol maker showed students how to make idols from soil/clay.



2.1 Journal of Education for Sustainable Development

The two annual issues, Volume 4, Numbers 1 and 2, of the peer-reviewed international Journal of Education for Sustainable Development appeared right on time during the year 2010. The timely publication is one of the criteria for putting the journal on track for becoming an internationally rated one. The second issue of the year was a special issue to mark ten years of the signing of the Earth Charter, and was launched at the Earth Charter plus 10 conference “Ethical Framework for a Sustainable Future”, held at CEE Ahmedabad in November 2010.

The user traffic to the journal home page and table of contents in 2010 through the various search engines was 8000, up from 5400 last year. As JESD is also available as an online journal, the number of full text downloads also went up between 2009 and 2010, from 8248 to 11,867.

2.2 Regional Centres of Expertise (RCEs) on ESD

CEE has been leading the establishment of RCEs in India for the past five years, and five of the six RCEs in India were initiated by CEE. In addition to coordinating the activities of the Indian RCEs and representing them at international fora, CEE reviewed and helped improve some of the applications from potential RCE candidates, and also organized a teleconference with the RCE Secretariat at the United Nations University – Institute of Advanced Studies to discuss the challenges faced by Indian RCEs and strategies to overcome them.

2.2.1 RCE Lucknow

RCE Lucknow, in partnership with eight other organizations established a network of RCEs on ESD in Lucknow. The key areas identified by RCE Lucknow were focused on Natural Resource Management (NRM) in Dudhwa National Park and school education activities based on sustainable health and environment protection. The target groups for these activities are students, teachers, NGOs, communities, youth and others.

CEE North, as the nodal point for RCE Lucknow, initiated the ESD activities with its RCE partners in the region. The activities undertaken during the year are as follows:

- School events based on various environment related themes were organized in which students and teachers from several schools of Lucknow participated.
- For NRM in Dudhwa National Park, various activities were undertaken in partnership with the Forest Department, WWF-India, TRIFED and local NGOs. These activities include training programmes on sustainable livelihood options and a school programme based on biodiversity conservation education.
- RCE Lucknow also developed and guided projects for post graduate students from various universities on the key themes of the RCE.

2.2.1.1 Interns at CEE North

An intern from Gandhinagar joined CEE North for one and a half months to study the school programme of CEE North and to

develop various formats for maintaining school based database. The intern was also selected as the RCE Lucknow representative for participation in Yuva meet.

2.2.1.2 Yuva meet

Youth representatives of RCE Lucknow participated in the 3rd YUVA Meet 2010, organized by TERI (The Energy and Resources Institute) in partnership with the Ministry of Youth Affairs and Sports, Government of India and the British Council, in February 2011 at Delhi. YUVA stands for 'Youth Unite for Voluntary Action' on Climate Change. Approximately 200 youth from all over the country and various RCEs participated in this meet. RCE Lucknow was represented by three participants at this meet.

2.2.1.3 5th International RCE Conference in Curitiba

The Fifth International Conference of RCEs was held in Curitiba, Brazil. The conference, which was held in May 2010, was organized by RCE Curitiba. This year too, as in the past, the annual conference brought together RCEs from various parts of the world in order to strengthen the RCE global network by sharing experiences with and learning from each other, and building relationships, communication and collaborative projects, and to enable the diverse RCE community to develop common actions for the second half of the DESD.

There are now 76 RCEs around the world, of which six are in India, the largest number in any country other than Japan. Five of these RCEs namely, Guwahati, Kodagu, Lucknow, Pune and Bangalore were initiated by CEE, whereas RCE Delhi was initiated by TERI.

From CEE, Dr. Kiran Chhokar, the India focal point for RCEs, Ms. Preeti R. Kanaujia (RCE Lucknow) and Mr. Simanta Kalita (RCE Guwahati) represented the Indian RCEs at the conference.

During the RCE Conference, the discussions were organized in both thematic groups and continental groups. In the Asia Pacific group, a committee was set up for taking up continental and thematic discussions. Mr. Kalita is part of the biodiversity panel and Ms. Kanaujia is a school group facilitator. Dr. Chhokar and Ms. Kanaujia facilitated the world café sessions on the RCEs' research and communication needs respectively, and Dr. Chhokar also moderated a panel discussion with some of the keynote speakers.

It has now been decided to set up "task forces" or "working groups" for the respective issues that were identified at the conference, where the interested representatives of the RCEs, especially those who were unable to attend the conference, can take over and continue the discussions that were already held at the conference, and further elaborate on concrete action plans and put them into practice.

2.3 Launch of *State of the World 2011* Indian Edition

The Indian edition of the *State of the World 2011 : Innovations that Nourish the Planet* was launched by CEE in Ahmedabad and New Delhi in February 2011. This was the first international launch of the year of Worldwatch Institute's flagship annual publication which is brought out in several languages in countries across the world. The

Indian edition, though in English, carries a foreword by Kartikeya V. Sarabhai, the Director of CEE, which provides an Indian perspective on the issue of food security. Danielle Nierenberg, Senior Researcher at the Worldwatch Institute and the co-director of the project, was in India for the two events.

A panel discussion was organized at each location. Ms Nierneberg presented the main findings of the book. She described four broad approaches that hold untapped potential to transform world economies in Africa, India and all over the world. These include

- (a) Better use of food we already produce;
- (b) Large scale government programmes for feeding children;
- (c) As the world rapidly urbanizes, plan for more farmers in cities; and
- (d) Recognize that farmers deserve to be compensated for the ecosystem services they provide on farms, that have widespread benefits.

Some of the arguments of the panellists in the two cities included: we do not need any more varieties of seeds to increase yields as there are already enough around the world, which we need to examine for their potential. The focus should be on soil health and water conservation, and on agriculturally sustainable practices which will have an enormous impact on productivity, but at the same time agricultural strategy must change from maximising yield to minimising risks. We need to look at whole systems, which mean looking at the related issue of livelihood security, which encompasses food security as an important component, but also includes

issues of financial security, education security, health security, nutritional security and others. The panellists also stressed the role of participatory democracy where each village should have the right to decide on its food security.

In Ahmedabad, Prof. Sudarashan Iyengar, Vice Chancellor of Gujarat Vidyapith stressed that the major concern was not seeds or the technology but agriculturally sustainable practices. Prof. Hiremath from Dhirubhai Ambani Institute of Information and Communication Technology expressed concern about the recent trend of decline in per capita availability of food and its consumption. Ms Rita Teotia, Principal Secretary Rural Development, Government of Gujarat, discussed how National Rural Employment Guarantee Act (NREGA) schemes should be focused on improving soil and soil moisture, and water availability. She also spoke of the efforts being made in Gujarat to use GIS, internet and other technologies to help improve agriculture and livelihoods of small farmers.

In Delhi, Dr. Suman Sahai, Chairperson of the Gene Campaign, expressed concern about India's Food Security Bill and also about the practice of acquiring land in other countries to produce food, for which regulations must be drawn up by the UN. Mr. Kartikeya V. Sarabhai, Director, CEE, emphasized the role of participatory democracy where each village should have the right to decide on its food security. He concluded by saying that agricultural strategy must change from maximising yield to minimising risks. Mr Farooqui, Additional Secretary, Ministry of Environment and Forests, said that all the examples from Africa

presented in the book were very relevant for India as well. Speaking on what drives innovation, he believed that we need to tap the inner urge to do things better — the innate need of people to innovate—and hoped that the 21st century should be the century of innovation.

Ahmedabad Book Launch (from left to right) - Ms. Madhavi Joshi, Programme Director, CEE; Professor Hiremath, DAIICT; Ms. Danielle Nierenberg, Senior Researcher, Worldwatch Institute; Ms. Rita Teotia, Principal Secretary Rural Development, Government of Gujarat; Professor Sudarshan Iyengar, Vice Chancellor, Gujarat Vidyapith; Mr. Kartikeya V. Sarabhai, Director, CEE

2.4 Earth Charter Plus Ten (EC+10) International Conference, Ahmedabad

2.4.1 Higher Education Working Group at EC+10

CEE Karnataka coordinated the Higher Education Working Group under the EC+10 Conference, playing a vital role in inviting international and national participants for the programme. The Higher Education Group drew attention from many of the participants during the conference. College students, educators, researchers, scientists, development practitioners (NGOs/CBOs), government officials and university professors from all over the globe took part in this working group. The daily reports and the final report of the programme have been submitted to the EC+10 Secretariat.

2.4.2 Workshop on Religion, Spirituality and Ethics at EC+10

As the organizer, CEE was responsible for the workshop on Earth Charter and Religion, Spirituality and Ethics. The workshop focused on the work and activities of the Earth Charter Task Force which is bringing the Earth Charter into inter-religious and intercultural dialogues and is mobilizing religious and spiritual communities in the quest for sustainable development. It brought together the Task Force's leadership team including its two co-chairs; representatives of religious and spiritual communities from across the world who are working with the Earth Charter in their local contexts, as well as conference participants who were interested in the Earth Charter Initiative's engagement with religious, spiritual and ethical traditions and institutions. Several Earth Charter Commissioners and Councillors attending the conference also frequented the workshop meetings.

The workshop pursued three main objectives:

- To review the achievements of the Task Force
- To collect case studies of how religious, spiritual and ethical organizations are perceiving and using the Earth Charter
- To develop a set of recommendations for the second decade of the Earth Charter Initiative

In its final session, the group discussed the way forward and agreed on the following strategic priorities:

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- Promote interregional, intercultural and intergenerational dialogues using the Earth Charter, particularly emphasizing appreciation of diversity and the oneness and interconnectedness of all.
 - Identify and develop existing Earth Charter resources, (e.g., statements and writings on the Earth Charter and Religion, Spirituality and Ethics; best cases of how religious and spiritual groups are using the Earth Charter) as listing of books, articles and others on the website.
 - Focus on sustainable and mindful consumptions and the ethics of climate change.
 - Develop a strong statement by religious and spiritual leaders - aimed at preparations for Rio+20 - on the importance of spirituality and ethics as a

central pillar (the fourth P) for sustainable development.

- Strengthen the Task Force on Religion, Spirituality and Ethics.

2.5 Planning for Mahatma Gandhi Institute of Education for Peace and Development

During the period, CEE also contributed to the conceptualization of the role and curriculum of the proposed Mahatma Gandhi Institute of Education for Peace and Development, a Category 1 UNESCO institution being set up in India by the Government of India in New Delhi.

2.6 Other Projects

The Higher Education group edited the report of the National Mission on Green India.

Education for Youth

We cannot always build the future for our youth, but we can build our youth for the future.

- Franklin D. Roosevelt

CEE initiated the Education for Youth programmes in 1994 to make the youth aware of environmental concerns and promote their involvement in improving the environment, through formal and non-formal programmes. Activities include networking and information servicing, capacity building of youth, involving youth in documenting case studies on environment and sustainable development, developing resource materials and awareness activities in schools, colleges and communities.

3.1 South Asia Youth Environment Network (SAYEN)

The youth environment networks are the key youth activity under the Tunza strategy in Asia and the Pacific. The networks aim to promote, enhance and support youth participation in environmental activities, broaden the participatory process for sustainable development by inclusion of youth, and inculcate environmental awareness among the youth.

The Centre for Environment Education (CEE), in Ahmedabad, India, hosts the Secretariat for SAYEN, which has membership from Bangladesh, Bhutan, Sri Lanka, Pakistan, India, Maldives, Nepal, Afghanistan and Iran. An organization in Bangladesh, Bhutan, Sri Lanka, Pakistan, India, Maldives, Nepal. The number of SAYEN members in each country ranges from 20 to 100 with over 1500 youth organizations, individual, national and

international agencies including Government in the region associated with SAYEN. National Focal Points facilitate SAYEN activities in their respective countries.

3.1.1 SAYEN in 2010-11

SAYEN completed eight years in July 2010. The first SAYEN five year plan (2003-08) was discussed and developed at the second SAYEN regional meet held in 2003 in Dhaka, Bangladesh. A number of initiatives identified under the first five year plan were successfully implemented by SAYEN. In order to implement the second five year work plan - 2009-2014 - and to study the success of the first five year plan, a review of activities being undertaken at both National and South Asia level was conducted. SAYEN'S six year plan for 2009-2014 includes:

- Strengthening SAYEN/ Membership Drive
- Climate Change Education among South Asian Children and Youth
- Initiatives on "Disasters and Conflicts"
- Natural Resources Management – Youth Actions in South Asia
- Green Curriculum Initiatives
- Advocacy and Governance by Youth to promote Sustainable Development in South Asia

3.1.2 International Day of Mother Earth Event in Ahmedabad: April 22, 2010

SAYEN Secretariat at CEE, together with Hotel Courtyard Marriott and Earth Day

Network, organized a series of activities on April 22, 2010 at the hotel premises from 10 am to 1 pm. These included screening of film *HOME* produced by Yann Arthus Bertrand, which shows the genius of human beings and their ability to adapt to their environment or get the environment adapted to human lifestyle. The film was followed by a lively discussion and a poster making competition for the 100 children and youth participants.

3.1.3 *Prakriti*: Environment Education Bus - Refurbished and Updated

Prakriti: Environment Education Bus, a mobile resource centre, is a joint initiative of CEE and Gujarat Gas Company Limited (GGCL). *Prakriti* creates awareness among school children, youth and the general community about the emerging environmental concerns in their immediate environment. *Prakriti* Environmental Education Bus, which was first developed in 2005 by CEE, British Gas (BG) India and Gujarat Gas Company Limited (GGCL), was donated to CEE in 2010, by the GGCL in addition to support provided for conducting activities. *Prakriti* has a multimedia approach to environmental education and is equipped with a panel exhibition, interactive models, films and slide shows, games and activities and some take away communication material such as posters, wallpapers, and brochures. The bus broadly focuses on five thematic areas, viz. Land, Water, Energy, Biodiversity and Climate Change, in the context of Gujarat. The bus was refurbished and updated with information and material during the initial phase of planning for its school visits. Furthermore, it created awareness about the *Paryavaran Mitra* programme, in which schools are encouraged to take action based

projects on themes similar to the ones promoted by *Prakriti*.

In 2010, between June and December, the team conducted 112 visits in more than 86 schools and villages in three different districts and reached out to around 16000 students, teachers, and other visitors. Nature Club Surat, Gram Vikas Trust and Vikas Centre for Development were the local partners for activities in Surat and Bharuch respectively.

Districts visited	No of visits	Total no of visitors
Ahmedabad	39	7895
Bharuch	27	1377
Surat	46	6661
Total	112	15923

The team conducted a variety of activities along with displaying and explaining the exhibition panels. These included explaining and demonstrating the science behind the themes through models, demonstration and discussion, conducting quiz around the themes, involving children in activities and games and showing films. The team involved the students in conducting water and energy audits and biodiversity surveys on their school campuses, to keep them connected as well as for them to continue action in their schools. GGCL conducted Traffic Safety demonstrations and presentations in the schools as a part of their commitment to a safe environment.

In 2011, *Prakriti* will be starting the visits in July and aims to complete 150 visits targeting 80 in Surat, 50 in Bharuch and 20 in Dangs. This year too, short projects like water

auditing, energy auditing and naming trees within the school campus, will be conducted and the documented to be followed up later. This will enable students and school authorities to gain awareness about resource management and thereby motivate them to implement and encourage actions for conservation of environment.

3.1.4 “We Pledge, You Promise, Climate Change” Campaign, - October 13, 2010

“We Pledge, You Promise, Climate Change” Campaign was undertaken by SAYEN with Oxfam India in Hyderabad, Bangalore; Global Citizens for Sustainable Development (GCSD), as a SAYEN member in Bangalore, between October 10-18, 2010.

Oxfam is a rights based organization that fights poverty and injustice by linking grassroots programming (through partner NGOs) to local, national and global advocacy and policy making. Oxfam India’s vision is to create a more equal, just and sustainable world. The overarching vision of Oxfam India is “right to life with dignity for all”.

Global Citizens for Sustainable Development (GCSD) is a registered not-for-profit NGO based in Bangalore, India, whose mission is to engage and empower children, youth, men and women to sustain communities, cultures and societies while promoting improvement in their social, economic and environmental conditions through the notion of human responsibilities.

The following five activities were conducted as part of the campaign in Bangalore and Hyderabad:

- Online orientation to youth about the campaign and its objectives; concepts of sustainable consumption and the activities to be undertaken as part of this campaign;
- Signature Campaign by the youth volunteers conducted in their respective institutions (five campuses in Hyderabad and Bangalore) and involving other citizen groups to create awareness about Climate Change and its impacts;
- Interaction with citizen groups at major public places such as gardens and lakes (five locations in Hyderabad and Bangalore) to create awareness about sustainable consumption methods;
- Youth rally with messages focusing on sustainable consumption practices in Hyderabad; and
- Plantation drive in pre-identified areas of the city with involvement from corporates and the local communities.

Bangalore: This campaign enhanced the ongoing programme of GCSD, the Climate Campus Competition 2010, which had about 22 colleges from Bangalore participating in August 2010. The first step was to engage these colleges to spread the message of ‘We Pledge, You Promise’, campaign through their networks and encourage youth to sign up with pledges on Oxfam websites and to join social networking sites such as Facebook and Twitter of both Oxfam India and SAYEN. Messages publicizing this campaign were also spread through other networks of GCSD.

Amidst many of the colleges having exams or study holidays for students during the Climate Action Week, two esteemed

institutions in Bangalore, St. Josephs' College and CMR Institute of Management Studies, let the youth groups run a signature campaign in their campuses. More than 1500 students and faculty witnessed this campaign and wrote pledges on the canvasses to contribute in whatever small ways they could to make a difference to their planet. Video interviews on the occasion saw very interesting personal commitment statements, jingles and poems narrated by the students to express their pledges for the planet.

During the week, the Alliance Francaise de Bangalore, one of the most popular Indo French Cultural Centre, opened its campus for the campaign, where the aspiring students, professionals and government officials learning French contributed their bit for the planet. Besides the campus participants, people who came to attend two concerts organized by the Bangalore School of Music and Max Muller Bhavan and hosted by Alliance Francaise, were also excited by the campaign. As a result, an very inter-generational gathering of more than 500 people during these two events committed their pledges on video and in the signature campaign. The most challenging part of the campaign was to engage people visiting the Sigma Mall in Bangalore during the weekend. Among the thousands visiting the Mall and who saw the campaign message on the hoarding, only a few hundreds signed and gave video interviews committing themselves to a sustainable lifestyle.

Hyderabad: SAYEN, with support from Oxfam India, carried out plantation activities in two engineering colleges of Hyderabad on October 13, 2010. Around 700 engineering students from Siddhartha Institute of

Engineering and Technology, Ibrahimpatnam and Shri Indu College of Engineering, Sheriguda took part in the campaign and planted 500 saplings in their college campuses. The students were given an orientation to issues related to Sustainable Lifestyles, Sustainable Development and Climate Change, prior to the plantation. An activity to calculate their carbon footprint was undertaken, after which the students planted the saplings with the awareness that trees are a major carbon sink.

Students of Years 1, 2 and 3 Engineering, pledged that they would form an eco-club and take care of all the saplings planted on their campuses.

3.1.5 Youth Participation at the International Conference "Ethical Framework for a Sustainable World", November 1-3, 2010

The International Conference "Ethical Framework for a Sustainable World" was held at the CEE campus in Ahmedabad in partnership with the Earth Charter International (ECI) and the Ministry of Human Resource Development (MHRD), Government of India, on November 1-3, 2010.

The Conference was held to commemorate 10 years of the Earth Charter (EC). The purpose was to reach a higher level of awareness and outreach of the EC; clearly position the EC initiative as an inspirational, dynamic, global civil society movement; and encourage a positive conceptualization of the future by using the EC as a framework to address key world challenges, issues and priorities.

The Conference brought together over 600 participants, including about 300 participants from all over the world. They represented a variety of stakeholders from diverse fields including environment, school and higher education, human rights, gender, peace, religion, citizenship, social justice and others, civil society / NGOs, corporates, academics, media, government officials and representatives of UN agencies.

3.1.5.1 Youth at the Conference

A major focus of this conference was engaging the youth and enabling them to share their experiences in applying the EC principles in their work. SAYEN played an important role in bringing together youth from various regions to participate and share their perspectives during the 1 conference and also in the various workshops. This was possible through support from the UNEP ROAP Asia Pacific office. Ms. Satwant Kaur, Regional Information Officer at UNEP ROAP in Bangkok participated in the pre-conference workshop and the conference.

Based on the learnings from the youth participation at the previous international conferences including the Fourth International Conference on Environment Education (ICEE), it had been decided that there would not be a separate workshop for youth. The SAYEN youth representatives would be a part of each of the 10 thematic workshops being organised for the conference and contribute to the proceedings.

SAYEN was represented by 82 youth at the conference. They included students and young development professionals from different backgrounds such as law, commerce, media, environmental planning

and technology, biodiversity, climate change studies, human resource management, peace studies, academic research, information technology, arts, science and others. They participated as workshop rapporteurs, plenary speakers, facilitators, volunteers and interns.

The youth conveyed their reactions to the proceedings of the conference through the “Youth Corner”, where an exhibition on “Sustainable Lifestyles and Consumption” was set up, which had posters, collages and information material on the related issues displayed for the visitors.

All the youth participants at the conference made full use of the social networking sites to voice their opinions about the conference and share the proceedings with their counterparts all over the world. They were engaged in discussions and deliberations on Facebook, Twitter, blogs and websites of the conference. They were involved in giving out live feeds on the proceedings of each of the workshops and the plenary sessions.

3.1.5.2 Pre-Conference Youth Workshop

A pre-conference workshop was organised by the SAYEN Secretariat on **October 31, 2010** at CEE towards strategizing the youth participation at the conference. This was attended by all the eighty two participants.

The workshop introduced all the participants to SAYEN, informed them about the various activities of the network which they could undertake as SAYEN associates in their own region, information about the conference, role of youth at the conference, detailed information about workshops, plenaries and other components of the conference.

Mr. Steven Rockefeller (Chair, Earth Charter International Council) and Mr. Kartikeya V. Sarabhai (Director, CEE) set the tone for this workshop through an interactive session on the Earth Charter and its relevance in the world today. Mr. Rockefeller also shared Paul Hawken's initiative on creation of an open directory of organisations working in peace and sustainable development called WiserEarth. Mr. Sarabhai shared an anecdote on how the little hill (tekra) brought about a small revolution in setting up possibly the first Act for Street Vendors in Ahmedabad. Ms. Satwant Kaur, Regional Information Officer, UNEP Regional Office for Asia and the Pacific, helped facilitate the working group sessions along with SAYEN mentors, Govind Singh (India) and Utsav Maden (Nepal).

Together, the youth decided that they would participate actively in the conference as

- Workshop Rapporteurs,
- Plenary speakers,
- Facilitators, and
- Volunteers

The expectations of youth from the thematic workshops were shared with the workshop coordinators. Hence the strategy was that all the youth would take part in the thematic workshops and meet at the end of the day to share their experiences and learnings. This would be facilitated by the youth themselves and the outcomes would be reported to the thematic workshop coordinators. The youth also divided themselves into groups to interact with the eminent personalities attending the conference and share their discussions with their counterparts all over.

Youth were at the heart of the Virtual Conference that took place during the Conference. This was organised by the "Heart in Action" Enterprises. During this conference, the youth interacted with their peers associated with EC across the world, alumni volunteers and administrators of the Earth Charter Global Learning Opportunity (e-glo), and other EC members from different corners of the world.

Following are some of the views voiced by the youth at the conference:

- Reduce the gaps between formal and non-formal education.
- Religious gurus should provide the young with a better understanding of spirituality.
- Language should not be a barrier to communication. One must not forget that all sections of society and all people engaged in different occupations and services need an ethical framework to work towards sustainable development.
- Ethics should come from within.
- The EC can help us capture learning from everyday experiences.

3.2 Internships for Youth at CEE

As part of Capacity Building Youth, CEE provides internship opportunities on projects and activities related to Sustainable Development. The interns are placed with CEE Groups/ Offices in India and are involved in ongoing projects. The minimum period of internship is 21 working days and maximum is about a year.

In 2010, internship opportunities were provided to 37 youth including three international students from Germany as an ongoing partnership with Kurve-Wustrow, Germany. These interns worked on thrust areas including education for youth, children, sustainable rural livelihoods, experiencing nature, sustainable urban development, biodiversity conservation and initiatives for UN Decade of Education for Sustainable Development. They conducted research and documentation on various topics including Climate Change, held awareness programmes like Safe Holi Festival Campaign, participated in Mother Earth Celebration, World Environment Day celebration and Earth Charter Plus 10 Conference.

The Internship Operation Manual was updated taking into account the changing requirements of the internship programme. International internships have been increasing and standard operating procedures for these and addressing gaps in the processes of taking interns were addressed in the new version of the Internship Operation Manual.

3.1.6 Safe Holi Festival Campaign, March 14-19, 2010

SAYEN youth, in coordination with the Information Facilitation Centre of CEE, took the initiative to celebrate Holi festival in an eco-friendly manner in Ahmedabad. The youth promoted the use of natural colours (made from flowers, vegetables and other naturally available materials) in schools and other public places like Darpana Dance Academy, Kankaria Lake, Science City and shopping malls. They made presentations in around eight schools on the harmful effects

of chemicals used in Holi colours, and demonstration of making natural colours; they put up stalls at malls in the city and sold natural colours along with creating awareness. The *Prakriti* bus was also taken to public places as a part of this awareness campaign.

3.1.7 Youth for Clean Air – An Interactive Online Course and Awareness Programmes

SAYEN, with the support of the Male Declaration Secretariat at UNEP and youth partners, developed the Interactive Online Course on Youth for Clean Air. This course was launched by the Principal Secretary, Forests and Environment, Government of Gujarat, India. This course has reached more than 5000 youth in colleges in the South Asia region. SAYEN conducted a one day South Asia Youth Workshop in Sri Lanka on Atmospheric Emissions and Role of Youth, to share the course with its members and plan for the awareness activities in each country. The South Asia Youth Workshop conducted alongside the Regional Meet in Colombo, with the participation of 20 international and 10 participants from Sri Lanka, developed this plan. Awareness programmes for youth by youth like rallies, street plays and competitions were conducted in all South Asian countries.

3.1.8 Online Publication on Climate Change – Resource Material for Youth across South Asia

The UNEP has supported SAYEN to develop an online publication on Climate Change. Around 50 youth developed the outline of the publication and worked out the content in a workshop mode. The tasks for

developing the publication, like providing information and writing the chapters, were shared among them. Currently, the task of compiling the information received from the youth and finalising the publication is going on at the SAYEN Secretariat at CEE.

3.2 United World Mahindra School Youth in CEE, Ahmedabad

“The key lies in triggering understanding of our reasons to preserve the environment.” – MUWCI students.

A group of 10 students and two faculty members from the Mahindra United World College Institute from Pune visited CEE from November 13–20, 2010 as part of their social learning project. All the students, except one, were studying in Class XI IB curriculum, and came from different countries such as Brazil, Guatemala, Spain, Japan, UK, Kenya and India.

A key aspect of the group’s visit was getting involved with an NGO by contributing to its activities. The MUWCI students helped CEE’s *Paryavaran Mitra* team to field test the *Paryavaran Mitra* booklet in one school. The preparation for the exercise included a discussion facilitated by the CEE team on the themes addressed by the booklet, after which the students were divided into three groups to visit and interact with the students of classes VIII, IX, and XI of Anandniketan School, Shilaj. They made lesson plans and the worked out the methodology they would use to interact with the students in the school. One group began with an introduction through games outside the classroom and then a guided discussion inside the classroom; the second group tried changing the seating

arrangement; while the third group presented a skit to elicit responses from the students.

The MUWCI students submitted a report to CEE sharing their experience in the school and feedback on the booklet. They felt that the ethical aspects in the themes would need facilitation by the teacher as these would be interpreted differently according to the context. They suggested that the interlinkages between the themes could be brought out more clearly. More suggestions and supporting ideas could be given to teachers in order to communicate the message to the students. They also suggested providing more everyday examples to explain quantities such as buckets of water instead of litres. Overall, they felt that the booklet was comprehensive, solutions provided low budget, language easy and simple to follow, and was well placed in the local contexts of schools and students.

The MUWCI students also used the opportunity to work on a strategy for Waste Management on their campus. A discussion facilitated by one of their EPA (Environment Protection Agency) group members, based on a brief provided by CEE team members, looked at the sources and types of waste generated, discussed the possible areas of intervention and ideas for dealing with the issue. They came up with suggestions that included creating systems to better manage different types of waste from source to reuse or final disposal; strategy to get a buy-in of the other members in the school; possible measures for reduction in waste generation; measures to discourage wastage and other issues.

CEE helped the group plan visits to other institutions like visit to Science City and GEER Foundation, participation in Heritage Walk, interaction with students at the Centre of Environmental Planning and Technology (CEPT), a game of Frisbee and interaction with Indicorps volunteers, an evening of volunteering at the SEVA Café and an interaction with the Ahmedabad Municipal Corporation (AMC) officials on the Bus Rapid Transport System (BRTS).

The visit was an enriching experience for the CEE team as their interactions were very active and vibrant - the group was highly interested and sensitive. The group plans to implement their Solid Waste Management strategy at their school, and have shown great interest in becoming a *Paryavaran Mitra* school.

3.3 Workshop to Review Curriculum of Electrician Trade of the Industrial Training Institutes (ITI) in Gujarat

A workshop was organised by CEE and the Creative Environment Enterprises, Australia on October 28-29, 2010, to work on developing of a two day training module on Energy, for Industrial Training Institute (ITI) trainers/coordinators, specifically from the electrician trade, along with the Environment Management Framework (EMF) – the purpose also included possible implementation of the module in all the ITI colleges of Gujarat. CEE has been involved in giving training to ITI Principals and other faculty for implementation of the EMF, which has been developed by the Centre for Planning and Technology (CEPT), Ahmedabad as a part of a World Bank project.

The EMF has been adopted by the ITI colleges on recommendation of the Ministry of Labour. CEE has also been working with 10 ITI colleges in Gujarat to provide energy efficiency and conservation education to students through setting up of eco-clubs. The Directorate of Technical Education (DTE) has been a key partner to both these initiatives.

Representatives from the DTE and the ITI faculty participated in this workshop along with representatives from CEE. The curriculum of the electrician trade was reviewed and possible content for the two day module was discussed.

3.4 Credit Course on Forest Ecosystem and Climate Change for College Students

CEE South has initiated a 40 hours credit course on Forest Ecosystems and Climate Change for undergraduate students. The course aims to introduce concepts and issues related to forest ecosystems and climate change with a focus on conservation. Students undergoing this course are rewarded with four credits by the respective college. The course comprises of 15 hours of theory classes and 45 hours of field work in the forest areas. Two batches of the credit course were conducted for two colleges, viz. Mount Carmel and Jyothi Nivas in Bangalore.

3.5 Interaction of Environment Minister with Students

Youth play a very important and constructive role in environmental protection. It is important that youth are given a platform to voice their concerns and express their

perspectives on environment and development. An interaction of youth with the Hon'ble Minister for Environment, Government of Goa Shri Aleixo Sequeira was organized in Carmel College for Women, Nuvem during the state level workshop at the Directorate of Technical Education, Porvorim. The objective of the interaction

was to provide a platform for youth to discuss issues related to environment and development directly with the Minister and see how a partnership of youth and the government machinery could be built for better implementation of laws related to environmental protection.

Experiencing Nature

Sundarvan Nature Discovery Centre is a mini zoo recognised by the Central Zoo Authority (CZA) and an associated activity of CEE. Over the years, Sundarvan has become a popular place for visitors to get a glimpse of nature and become more aware, especially about reptiles. In an increasingly urbanized city with spreading cement cover, Sundarvan acts as the green lungs, providing welcome relief to Ahmedabad.

4.1 Visitors

During 2010-2011, Sundarvan Park received 70491 visitors. Out of this, there were 29642 children below the age of 12 years and the rest – 40849 – were adults. The month of May 2010 received the highest number of visitors – namely, 8155 - and October 2010 saw the lowest number – 5513 - of visitors coming in. During this year, Sundarvan also obtained its renewal of recognition from the Central Zoo Authority (CZA) as a mini zoo for another two years.

4.2 Reptile Awareness Programmes

Reptile Awareness Programmes were conducted for general visitors on every Sunday, along with which, puppet shows were also held. During weekdays, these programmes were organised for schools, colleges and other educational institutions visiting Sundarvan. Between 1st April, 2010 and 31st March, 2011, 138 educational institutes visited Sundarvan Park and for most of them, a reptile awareness programme was conducted within the park premises.

4.3 Reptile Rescue

Sundarvan staff regularly attended rescue calls from the public. Various species of

reptiles such as Monitor Lizard, Rat Snake, Indian Cobra, Common Krait, Common Sand Boa, Wolf Snake and Red Sand Boa were rescued from both residential and industrial areas where they could pose a threat to human beings. Subsequently, these reptiles were released in their appropriate habitat. The rescue programme also shows a definite seasonal trend. The highest number of rescue calls were recorded in the month of October 2010, while the lowest number of calls were in February 2011. An Indian Rock Python was rescued from a village near Viramgam and later released near Utkanteshwar, with the guidance of the Gujarat Forest Department. Due to Sundarvan's rescue programme, there are very few reptiles which are injured or killed by common people now.

4.4 Nature Camps

An important activity of Sundarvan is **Experiencing Nature Programme** or **nature camping**. During the year 2010-2011, Sundarvan organised in all 66 batches for camping, spread over **199 days** and **11 campsites** representing different ecosystems. These camps were attended by **2696** participants from various age groups. Camps were held at Sundarvan – Ahmedabad, Sundarvan – Bakore, Sundarvan - Beyt Dwarka, Polo, Hingolghadh, Jambughoda in Gujarat; Mt. Abu and Fort Kumbhalgarh in Rajasthan; and Hamta Pass in Himachal Pradesh.

Besides this continuing with our **WATCH** programmes, **Sarus Watch** and **Black Buck Watch** were organised to observe them in their natural surroundings in the wetlands of Kheda and Velavadar National Park respectively. During the Black Buck Watch,

as a bonus, the participants were able to sight the ever elusive **Lesser Floricans**. During the Marine Camps, **Dolphin Watch** programmes were also conducted regularly in the Gulf of Kutch. The highlight of the year was that Sundarvan received the highest number of participants in its Marine Campsite in any given year and a new experience – Fort Kumbhalgarh – was initiated in the Arravali Ranges in Rajasthan.

4.5 Nature Camps for School Children

CEE South conducted nature education camps for school children from five elite schools of Bangalore at Dandeli Anshi Tiger Reserve. The schools that participated were Poornaprajna, Bishop Cotton, BGS National Public School, Sudarshan Vidya Mandir and Hill View School. The camps aimed at sensitising students to issues related to nature, forests and wildlife conservation. About 270 participants, including students and teachers, took part in these camps which were conducted in seven batches in April and October 2010.

Besides these, nature camps for two batches of rural school children were also organised at Dandeli Anshi Tiger Reserve in July 2010, in which 60 students took part.

4.6 Nature Camps for College Students

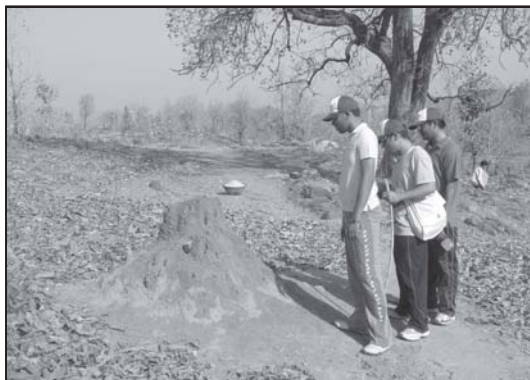
Three day nature camps were also organised for nine leading colleges from Bangalore in eight batches at Dadneli Anshi Tiger Reserve. The colleges are CMR, Presidency, Jyothi Nivas, T. John, Mount Carmel, Bishop Cotton Women's College and Christ College. These camps conducted in April and December

2010, had 334 participants in all including students and teachers.

4.7 Nature Trails and Camps

As part of ecotourism initiatives, Karnataka Tourism Department has established eight theme based nature camps sites in the state, an example being the Kulgi Timber Trail Camp. For each of these camp sites, two to five trails are laid for visitors to explore the forest and wildlife. CEE South, in association with Tourism Department and with inputs from Karnataka Forest Department, has developed 14 trail booklets on specific themes such as Timber, Birds, Reptiles, Butterflies, Elephant, Medicinal Plants, Trekking, Hornbills and others. Three nature trail booklets on Herbal Plants, Birds and Trekking in Sakrebyle Elephant Camp near Shimoga, were released by the Honorable Chief Minister of Karnataka, Shri B. S. Yediyurappa.

CEE South, with the support from the Forest Division of Sirsi, developed a nature trail booklet on Herbal Plants for a Botanical Garden at Swarnawalli Matt near Sirsi. This booklet was released by the Karnataka Education Minister, Shri Vishweshwar Hegde Kageri.



Communicating Environment Through the Media



5.1 ENVIS – Environmental Information System

ENVIS (Environmental Information System) is a programme of the Government of India Ministry of Environment and Forests (MoEF).

It is a decentralized network of distributed subject oriented centres integrating national efforts in environmental information collection, collation, storage, retrieval and dissemination. It comprises a Focal Point at the MoEF and ENVIS Centres set up in different organizations/ establishments in the country, dealing with specific subject matter areas pertaining to the environment.

5.1.1 CEE as ENVIS Centre on Environmental Education

CEE, the ENVIS Centre on Environmental Education, caters to the information needs of environmental educators and other interested groups, through five means:

- **Green Teacher** - the website for the ENVIS Centre on EE;
- **Query-Response Service** to respond to information requests on any aspect of EE;
- **Education for Change** quarterly newsletter to disseminate information on EE and ESD;
- **EE Bank**, a computerized database of concepts, activities, case studies and other resources; and
- **CEE-Information Service Centre (CEE-ISC)**, a collection of books, periodicals and a variety of non-print materials (some of the **databases** are available on the Green Teacher website).

5.1.2 Education for Change Newsletter: ENVIS Newsletter of CEE

Education for change (EfC) is a quarterly newsletter that focuses on EE and ESD related content both at the national and international level.

Four issues, each with a print run of 1000 copies were printed and circulated during 2010-11. As per the ENVIS guidelines, the columns of the newsletter focused on:

- Information on environment related days
- Hands on activities
- International events falling in the quarter
- Resources relevant to themes in the newsletter
- Events, reports and announcements
- International events related to state of the environment
- Reports and experience sharing from experts on EE and ESD

The content of the newsletter was also made available on www.greenteacher.org, www.desd.org and <http://education-for-change.blogspot.com>

5.1.3 ENVIS Website for Educators: www.greenteacher.org

The Green Teacher website was regularly updated and new content added every month, including EE activities, book reviews, articles on EE, information on events and environment days.

5.2 www.kidsrgreen.org

Children's Media Unit (CMU) continued to develop and maintain the monthly e-magazine

www.kidsrgreen.org for the eleventh successive year. This innovative and interactive online monthly environmental education programme harnesses technology to motivate, support and facilitate learning. The site has many interesting features like Spaceship Earth, Let's Do It!, Green Games, Celebrate a Day, kRg Club, Green Gifts and TREE (Terrific Resources for Environmental Education).

For the second year, selected kidsRgreen activities and games are being used as part of the Kuder Galaxy System in the USA. Kuder Inc is the designated supplier of online education and career planning solutions and is implemented in more than 10,000 school systems across US. Kuder Galaxy, launched in July 2009, is a product for children from Pre-KG to fifth grade. The system is accessed by students, teachers, parents and educators.

5.3 TVE Video Resource Centre (VRC)

CEE has been a Video Resource Centre (VRC) of the Television Trust for the Environment since 1997. As a VRC, CEE makes local language versions of international environment films; produces instructional material for facilitating effective use of films as an educational resource; produces print materials to support and promote film distribution - film catalogues, newsletters, periodical publications, and others; promotes the dissemination of films on environment, development and social justice issues through various channels - print, Internet, workshops and film festivals; and produces own films and publicizes films produced by others.

CMU continued its function as a Video Resource Centre during this year too. Various

environment and sustainable development related films were borrowed both by programme groups within CEE and by external institutions for use in training and public screenings. Schools, colleges and NGOs continue to use this resource for their needs.

Currently, CEE's VRC has about 300 films for which the main users are schools and NGOs.

5.4 CMU and Other CEE Programmes

5.4.1 Children Forest Programme

As part of the core team for this programme which is being coordinated by CEE North, CMU is involved in developing IEC material.

5.4.2 Ganges River Dolphin - Conservation Education Programme

CMU is part of the core team for developing the IEC material for this programme which is being coordinated by CEE North. While the development of the brochure is complete, that of the poster and teachers' manual is under way.

5.5 Mobile Environment Exhibition resources: *Jagruti and Jigyasa*

CEE Central completed the fabrication of *Jagruti* and *Jigyasa*, two mobile environment exhibition buses which is funded by the Maharashtra Pollution Control Board. Both the buses aim to highlight major concerns, options and solutions regarding the general environment in the state of Maharashtra. Equipped with 3D exhibits, panels, environmental quality monitoring instruments, activities, games, films, reference publications and computers, the buses are an exciting mobile resource for use

by schools, colleges, teachers, educators, youth groups, panchayats, urban local bodies and other organisations. Currently under pilot testing in Pune district, the buses would soon move to various districts of Maharashtra to create environmental awareness. Through the bus visits, CEE also hopes to conduct teacher orientation, camps and workshops for children and volunteers.

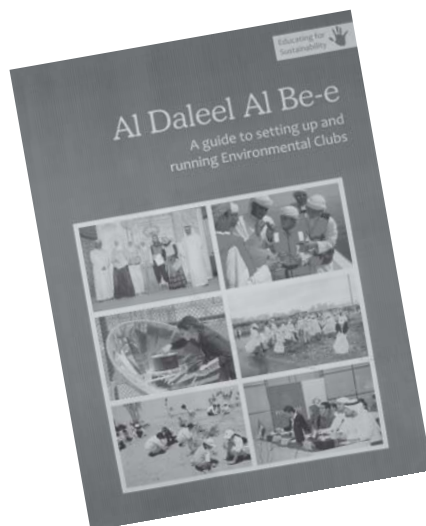
5.6 Maharashtra State Golden Jubilee *Srushti Mitra* Awards 2010

The *Srushti Mitra* Awards have been instituted by the Environment Department, Government of Maharashtra, with the objective of promoting environmental awareness, and especially to acknowledge inspiring and creative work in the field, and environmental action projects undertaken by students and others. The Award was instituted in the year 2010, the Golden Jubilee Year of Maharashtra State.

The Environment Department has collaborated with CEE to coordinate and

manage this award programme at the state level. The activities under this programme included developing the brand and the publicity campaign of the award programme throughout the state. This was achieved through newspaper advertisements and dissemination of the announcement poster to schools and colleges in all the districts of the state. The *Srushti Mitra* Awards announcement poster was sent to around 4000 schools and colleges in all the districts of the state with the help of partner NGOs. A series of articles on the Award were published in various local newsletters with media tie ups for publicizing the same.

Entries were invited from school and college students and others in four categories – action projects, photographs, slogans and *Bal Sahitya*. Approximately 5000 entries were received from different parts of the state in these categories. The entries were evaluated by a panel of experts including environment educators, retired teachers and writers. The awards will be presented on World Environment Day.



Ever since its inception, CEE has been actively involved in the area of interpretation. Over the years, it has undertaken a wide range of interpretation programmes using different media and latest technologies, for protected areas, heritage sites, museums, zoos, and other important places where large numbers of visitors arrive. Through this on-site interpretation, visitors acquire more awareness of our cultural and natural environment. The interpretative projects taken up during the period of 20010-11 are as follows.

6.1 Nandurmadhameshwar Interpretation Project

Nandurmadhameshwar Wildlife Sanctuary is located at a distance of about 40 km east of Nashik in Niphad Taluka of Nashik district in Maharashtra, with a total area of 19 sq km. The wetland habitat harbours a diverse array of bird species and is an important winter refuge for thousands of migratory birds. The forest department had invited CEE to set up an Interpretation Centre to disseminate information and create awareness about the importance of Nandurmadhameshwar Wetland providing a glimpse of its cultural and biological diversity. Various thought provoking exhibits like photo-text panels, dioramas and interactive displays were developed for this purpose.

The Interpretation Centre has been setup and the project completed.

6.2 Mahatma Gandhi Marine National Park Interpretation Centre (Phase I & Phase II)

The Mahatma Gandhi Marine National Park (MGMNP), Wandoor, located in the Bay of

Bengal, covers approximately 281.5 km² area. MGMNP is about 30 km from Port Blair, the capital city of Andaman & Nicobar Islands. The lush green mangrove forests alongside the dense tropical rain forests and the enchanting diversity of coral reefs with sea grass meadows in this area are a visual treat. The national park harbours the richest coral reefs and associated marine life in the country.

An Interpretation Centre housing various exhibits will be set by CEE at this Marine National Park. In Phase I, there will be life size dioramas of giant sea turtles and saltwater crocodiles showing their behavioural aspects along with photo-text panels to decimate information on various aspects of marine ecology and conservation of fragile marine eco-systems. Phase II includes a huge coral reef diorama depicting the complex inter-relationships between various organisms in a fringing coral reef community. A marine life scroller showing various underwater images of marine life will also be installed.

During the year under discussion, research, writing and graphic designs for this project have been completed. Models of reptiles have been made while coral model making is going on.

6.3 Interpretation Centre on Tiger, Pench

Pench Tiger Reserve, deriving its name from the Pench river which passes through it, is spread over an area of 257 sq km in Maharashtra. The reserve is characterised by tropical dry deciduous forests with plenty of plant and animal diversity. The area has a great ecological significance as it represents

the floral and faunal wealth of the Central Indian Highlands and Satpura – Maikal ranges.

The Pench forests are critical for the long term survival of the most beautiful and highly endangered big cat – the tiger. The interstate reserve – the other being Pench Tiger Reserve in Madhya Pradesh – and the adjoining contiguous tracts of forests ensure the movement of the big cat to and from Pench TR, Maharashtra. This is vitally important as excess population of tigers gets dispersed to new areas carrying their genes to distant places. Besides, tigers moving into Pench forests from other areas bring new genes with them.

Keeping the above factors in mind, CEE developed the Interpretation Centre on the life of the Tiger, depicting the ecology of the tiger's life in dioramas consisting life size models of tigers from cubs to adulthood and other associated information, photo-text panels and so on.

The project has been successfully completed with the setting up of the Interpretation Centre.

6.4 Handbook for Pench Tiger Reserve, Maharashtra

As a part of the Pench Interpretation programme a Handbook on Pench Tiger Reserve, Maharashtra is being developed. It comprises valuable information about biodiversity, history, wildlife management, corridors and Protected Area management. It is authored by Dr. Mohan Jha, Field Director, Pench Tiger Reserve and Shri Chaitanya Joshi, Programme Coordinator, PAIE, CEE.

Both the English and Marathi versions of the Handbook have been produced and the project completed.

6.5 Interpretation Centre at Mukki, Kanha Tiger Reserve

Mukki is located at the southern tip of Kanha Tiger Reserve. Madhya Pradesh Tourism Development Corporation has setup a hotel on the outskirts of the reserve and invited CEE to set up an Interpretation Centre to disseminate information and create awareness about the importance of Kanha Tiger Reserve, other protected areas of Madhya Pradesh, and the values and services of forest ecosystems. For this purpose, various exhibits like photo-text panels, slide shows, film shows, touch screens and cartoons will be developed. As of now, the Interpretation Centre has been setup, while the touch screen software is being developed.

6.6 Nandankanan Zoo Interpretation Centre

Nandankanan Zoo is situated at a short distance from Bhubaneswar. With approximately 150 enclosures, a white tiger safari and a lion safari, it is a premier zoo of India. Nandankanan Zoo Management invited CEE to setup an Interpretation Centre to create awareness among zoo visitors. Various thought provoking exhibits like photo-text panels, dioramas and interactive displays will be developed for this purpose.

As of today, field visits, research and writing, translation, designing and fabrication for the project have been completed. Installation will be completed soon.

6.7 Development of Panels and Interactive on Amphibians of Western Ghats

With the support of Dandeli Anshi Tiger Reserve, CEE South has developed six panels on amphibians of the Western Ghats with specific reference to Dandeli Forest Area. An interactive with selected frog calls was also developed and installed at Kulgi Interpretation Centre near Dandeli.

6.8 Development and Establishment of Wayside Panels for Nature Trails

Thirty three outdoor wayside panels were developed by CEE South for Dandeli Anshi Tiger Reserve and for the Forest Division, Sirsi. The panels were developed on various birds, timbers and other aspects related to the forest area. The assignment included content development, design, fabrication and installation.

6.9 Display Board on Role of Forests in Harvesting Rainwater

A large display board depicting the role of forests in harvesting and conserving rain water was developed and installed by CEE South for Dandeli Anshi Tiger Reserve at Cyntheri Waterfall near Dandeli in Uttara Kannada district of Karnataka

6.10 Guru Ghasidas National Park (GGNP) – Conservation Education, Interpretation and Ecotourism Programme

Guru Ghasidas National Park has the largest core area among protected areas in Chhattisgarh state and is home to the Asian

Elephant, recently declared the National Heritage Animal. The effort initiated by CEE focuses on developing a conservation education package about elephants, interpretive elements such as a nature trail, a study of ecotourism and eco development in the forest villages and a mobile resource centre package. During this year, CEE Central completed field visits, wildlife surveys, training, nature trail development and product designs.

Nature Trail and Demonstration of Natural Construction: A nature trail was identified as one component of a daylong visit package for school students. Activity areas using natural construction with rock and wooden material available in the locality were developed with the help of an architect.

Development of Designs for Park Logo and Other Products: A few options for the park logo were developed and the final logo was developed with inputs from the Park Director and other Forest Department staff. Designs for a map for the Park, interpretive signage, school labels and T-shirts were completed and production is under way.

CEE also prepared a proposal for developing Interpretation Centres for GGNP at Baikunthpur and Kanger Valley National Park, Bastar, Chhattisgarh at the invitation of the Forest Department.

6.11 Chaprala Wildlife Sanctuary, Dist. Gadchiroli, Maharashtra - Renovation of Interpretation Centre

CEE completed the renovation of the Wildlife and Tribal Life Dioramas and the addition of interpretive panels on themes of Sanctuary

Map, Bird Migration to the Sanctuary, Wildlife Around Us, Indian Culture and Wildlife, What Can We Do, Paper Bag Making, Conservation Message by Hanuman, Totems and Wildlife, Tribal Words and Shapes of Wild Animals. Wild life Dial, Quiz Board, Energy Pyramids in Forest and Riparian Ecosystems are three interactive components developed under the project. All the media are developed in Telugu and Marathi considering large number of religious tourists from adjoining Adilabad district of Andhra Pradesh to this area, which is located near confluence of Wardha and Vainganga rivers, flowing further as Pranhita. Two thousand copies each of the sanctuary brochures in Telugu and Marathi were developed and printed.

6.12 Exhibition on Sahyadri

CEE Central developed an exhibition focused on biodiversity and conservation issues in Sahyadri, as the Western Ghats are known in

Maharashtra. This 13 panel exhibition was inaugurated by Dr. A.P.J. Abdul Kalam during the regional launch event of the *Paryavaran Mitra* programme at Pune on December 26, 2010. The subjects of these panels cover discoveries of plant species from Sahyadri which are new to science, diversity of Ceropegia and Barleria, inhabitants and conservation issues in Sahyadri, 'Understanding Butterflies', 'Water-rich Sahyadri', 'Grasslands – a neglected ecosystem', Maps and highlights of Koyna WLS, Chandoli NP and Radhanagari WLS and 'Wild Elephants and Ganesh'.

This evolving exhibition was developed through voluntary contributions by taxonomists, wildlife enthusiasts and photographers from Maharashtra and Goa and has been made available free for organizations and institutions for educational purpose.



7.1 Global Communities for Sustainability (GCS)

Global Communities for Sustainability (GCS) is an innovative project that facilitates cross cultural sharing and learning between schools in different countries through sustainability projects. It is meant to promote leadership for sustainability among young people, especially students of high school.

On World Water Day, March 22, 2011, GCS provided the platform for a dialogue between schools from Australia and schools from India on issues and solutions related to water. The purpose of this dialogue was to look at the same issue (i.e. water) from different perspectives in order to understand global issues better. From Australia, students from North Sydney Boys High School, Seven Oaks Senior College and Turrumurra High School

participated in the event. They highlighted various issues like wastage of water, shortage of water, water pollution, soil erosion due to water, water quality and difficulty faced by councils in tackling these issues at the local level. Various solutions they came up with to address these problems are rainwater harvesting, refurbishment in order to save water, integrated water supply, holistic management, installation of bioremediation swamp and water tanks. From India, students from Anand Niketan Satellite, Mount Carmel and Sattva Vikas School participated online in the event. Issues highlighted by them were wastage of water and high salinity content in water. Their solutions to these problems are implementing water efficient technologies in schools, using drip irrigation and recycling of water. The session proved to be fruitful for the students of both the countries.

Industry Initiatives

In the year 2010-2011, the major areas that Industry Initiatives worked on were emission reduction, mangrove monitoring, and capacity building on adaptation, mitigation and other aspects of climate change. Industry initiatives works with diverse stakeholders including government, corporates, universities and media.

8.1 Earth Care Awards

Earth Care Award is an initiative of JSW Foundation with CEE as knowledge partner and the Times of India as media partner. The Earth Care Awards is unique and is aimed at highlighting action taken to tackle challenges posed by climate change, which is of direct relevance to India. The award is for excellence in climate change mitigation and adaptation in industry, community and through individual innovations. This award is in response to the recently growing consciousness about issues associated with climate change, and is borne out of the comprehension that it is important to identify and foster locally evolved options to reduce emissions, approaches to protect land and water resources, other innovations for reducing impacts and highlighting appropriate environmental action.

Industry Initiatives of CEE is involved in developing the technical framework for the awards, including development of the application pack and evaluation protocol, shortlisting of applications, field assessments and dissemination of successful case examples. During the year under review, CEE redesigned the evaluation criteria for shortlisting projects on climate change mitigation and adaptation. This was in response to the need felt for strengthening

the due diligence process and due to the lack of proper assessment frameworks on climate change mitigation and adaptation. The Industry Initiatives team developed the criteria for assessment and also secured the approval from jury members for the same. Currently, the activities for the 2010 awards have been completed as also the outreach activities for the 2011 awards.

8.1.1 JSW Earth Care Award – in Maharashtra

Several applications were received from Maharashtra for the JSW Earth Care Awards for Excellence in Climate Change Initiatives. Representatives from CEE Urban are members of the assessment team and were invited for the evaluation of these applications under the criteria for community and industry initiatives. Mahindra and Mahindra, Vehicle Manufacturing Plant at Nasik and Jai Malhar, Sangamner Community Project from Maharashtra were awarded.

8.2 Mangrove Monitoring

Mangrove monitoring involves site visits to evaluate the growth and survival of mangrove plantation in the Diva Dandi site in Olpad Taluka. As the monitoring agency, CEE has prepared the protocol for field monitoring, and based on it, organized field visits ground truthing of the sites using GPS. A report detailing the observations and findings based on the evaluation framework, has been prepared and submitted to the funding agency.

8.3 Carbon Footprint Assessment

CEE has developed core strength on greenhouse gas accounting, and is working

with organizations to carry out carbon proofing of initiatives and conduct carbon footprint assessment. As part of this, carbon footprint assessment for the operations of Aga Khan Rural Support Programme (AKRSP) is currently under way. This activity is to be implemented in a phased manner to cover the organisation's three field locations and its central office, and has started off with AKRSP's operations in Gujarat. It also involves providing training to the people operating in field and project levels to understand and assist in data collection. Besides this, protocol development for organization, programme level data collection, detailed analysis and interpretation of data using emission factors, training of field associates, identification of opportunities for carbon footprint reduction and preparation of action plan for its implementation are the other activities involved in the project. The output will be the baseline creation for AKRSP on carbon footprint. In the reporting year, the activities related to the project have been initiated by conducting initial assessments and preliminary field surveys.

8.4 Work Programme on Governance, Education, Training and Awareness - India's Second National Communication (NATCOM) to UNFCCC (2010)

CEE has been engaged by the Ministry of Environment & Forests to prepare a report on the aspects of information pertaining to the national circumstances such as research and systematic observations; climate change

relevant research programmes, education, training and public awareness; national development; transfer of technology; measures to mitigate climate change; and financial, technological and capacity needs and constraints.

The report consists of two segments pertaining to the environmental governance profile of India, including steps taken to address climate change in India and efforts of the Government, NGOs, and the private sector in education, training and public awareness of climate change issues.

CEE has compiled detailed information regarding the areas mentioned above. The objectives have been achieved by multiple methods like analysing appropriate information available on relevant websites and publications of various institutions and agencies. Desk based review was initiated to reach out to institutions associated with NATCOM I and important organizations working in the areas of climate change governance and climate change education. Information received from various other NATCOM institutions were compiled and assessed, and subsequently presented to the Ministry.

8.5 Low Carbon Development Strategy Workshop

CEE organized a workshop on Strengthening Low Carbon Development Strategy in collaboration with Worldwatch Institute. CEE partnered with Worldwatch Institute to carry out the study and validate its findings. Significant and recommendations in the course of the workshop were also compiled and a final report submitted.

8.6 Other Important Initiatives

The Industry Initiatives group coordinated a Climate Change News Room during the United Nations Climate Change conference at Cancun, Mexico (COP-16) through its Ahmedabad office and helped in establishing a dialogue between the CEE representative at the Conference and the local media. The news room, assisted by the students of M Sc Climate Change Impacts Management course, was conducted as joint activity of CEE and Gujarat University under the MEC-CC, and local experts also received good response from the local media.

CEE also initiated a Climate Change – Information and Networking System on adaptation to climate change with PwC (PricewaterhouseCoopers) for a GIZ (a German organisation) project. Experts from CEE are involved in this activity as climate change adaptation specialists and provide input to the process of state level climate change action plan preparation. In the reporting year, the activities undertaken related to initial inception and need assessment activity for the states of West Bengal, Tamil Nadu, Rajasthan and Madhya Pradesh.

9.1 Hingolghadh Eco-development Programme (HEDPro)

CEE has been working since the last two decades with the rural community in 30 villages of Jasdan block, Rajkot district of Gujarat for sustainability education. The major interventions are in the area of village level institutional building for promoting sustained agriculture, sustainable livestock production, promoting Low External Input Sustainable Agriculture (LEISA), micro-finance, micro-enterprises development, water and sanitation, partnership with government for mobilising financial and technical support and other related areas.

The Jasdan Block Office works as a Rural Knowledge Centre (RKC) for providing support services, guidance, reliable and need based information services, capacity building programmes, facilitating government programmes and schemes, demonstrating various sustainable livelihood options and market linkage support. Institutional Building has remained a major strategy towards achieving ground results. Towards this end, CEE has been working on capacitating three major institutions - Village Milk Cooperatives initiated by HEDPro since the last six years; *Sahyog*, an agriculture support and Producer Company floated last year; and an informal federation of SHGs.

9.1.1 *Sahyog* and its Achievements

Sahyog was established with the objective of promoting *Vikas* (for sustainable development), *Vigyan* (for sustainability science), and *Vepar* (for marketing linkage). The company is established and managed by farmers and CEE facilitates the process of

sustainable development through sustainability education.

To sustain the institute financially, a membership fee of Rs. 1000 was collected, which also acts as the corpus to conduct various activities. The company has appointed a youth to manage it and he is being trained and facilitated to play the role of a community educator for sustainable livelihood practices. Compared to other agro-centres, the uniqueness of this company lies in its approaches, like,

- Intensively promoting bio-pesticides, bio-control and other sustainable and alternative technologies;
- Providing various authentic/genuine agriculture and dairy farming inputs at low price;
- Conducting education and capacity building programmes and providing information on sustainable agriculture and livestock production through collaboration of various government and non-government institutions.

Achievements

- Despite the levying of a membership fee of Rs. 1000, the total membership is 331 farmers from 30 project villages.
- Following a gender just approach, 50% of company's general body members are women. The executive body of the company also has a strong presence of women.
- The company's turnover during 2010-11 was Rs. 7 lakh.

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- It provided diverse inputs and services to its 331 members, like like soil testing (27 farmers), water testing, mobilizing government schemes of drip irrigation (15 farmers), seed village scheme (200 farmers), vegetable scheme (eight farmers) and others.
 - The agri-mall also has a mini resource centre with necessary educational resources, viz. magazines, newsletters, pamphlets and handbooks. Thus the agri-mall has become the knowledge hub for sustainability education for the visiting farmers.

This network of 331 farmers is a platform for CEE to conduct various educational, capacity building & demonstration programmes for wider outreach.

9.1.2 Village Milk Cooperatives (VMCs)

Initiating, strengthening and sustaining 25 Village Milk Cooperatives, in an area where such previous experiments had failed disastrously, and where there was no milk cooperative in existence at all, is in itself an achievement for CEE. Added to this is the fact that last year, the total turnover was Rs. 12 crore which is an indicator of the quantum of progress. A number of activities as listed below were undertaken during the last year with or through the VMCs.

- Exposure visits to progressive dairy farms, VMCs demonstrating best practices and the best managed village milk cooperative societies, were organized for lateral learning which would help strengthen the VMCs.

- CEE team also participated in the annual meeting of all the VMCs and provided guidance and support to strengthen and reach out to more families.
- Sustainable livestock practices were discussed during various SHG meetings and visits throughout the year. This has had a positive impact on improved quality of life, education and women empowerment in the project villages.
- Some of the sustainable livestock practices promoted by CEE are chaff cutter, urea treatment from agro-waste, silage, proper fodder and feed management, veterinary care, cattle shed, fodder tree plantation and new fodder farming practices.

9.1.3 Farmers Field Schools (FFS)

CEE commenced the Farmers Field Schools (FFS) approach to Sustainable Agriculture in Jasdan with support from the Agriculture Technology Management Agency, Rajkot. The FFS is a form of adult education, which evolved from the concept that farmers learn optimally from field observation and experimentation. It was developed to help farmers tailor their practices to diverse and dynamic ecological conditions. In regular sessions from planting till harvest, groups of neighbouring farmers observe and discuss the dynamics of the crop's ecosystem. Simple experimentations help farmers further improve their understanding of functional relationships. In this cyclical learning process, farmers develop the expertise to make their own crop management decisions. Special group activities encourage learning from peers and strengthen communication

skills and group building. The major focus of FFSs was the promotion of sustainable farming practices through demonstration and regular consultative meetings.

The FFS activity in Jasdan had its beginnings in three FFSs, each consisting of 15-20 small and marginal farmer families spread over three villages, with the purpose of demonstrating Sustainable Agriculture Practices. An initial span of one month was focused on soil preparation and seed selection, after which the crops were sown. Meeting of FFS members were organized every fortnight, where the discussions centred on new sustainable cultivation practices for agricultural crops, farm ecosystem, soil fertility, composting, bio-pesticides and bio-control, water management, nutrient management, integrated pest management, soil analysis, zero budget farming, weed management, harvesting practices, grading, value addition and marketing linkages.

9.1.4 Narmada Trust

This is a community based organisation promoted by CEE during the previous year for the administration of *Gram Nidhi* corpus, and supported and guided by CEE for promoting micro-finance to start or strengthen eco-enterprises. During the year, Rs 6 lakh from this was given to 75 entrepreneurs to start eco-enterprise based on organic farming, sustainable livestock production, value addition to agro inputs and others. CEE provided counseling, capacity building, technical support, marketing support, information services and knowledge exposure to promote sustainable livelihood in the project villages.

9.1.5 Livelihood Education Programmes

9.1.5.1 Organic Farming *Milan* (Dialogue)

The All India Organic Farming *Milan* (Dialogue) was organized at Anand with the collaboration of various NGOs, in which CEE was one of the partners for organising and promoting the initiative. Thirty farmers from CEE project villages as well as the CEE team participated in and supported the event, which saw around 800 people from across India participating. CEE promoted sustainability education through facilitating workshops, live demonstrations, skill training, exhibitions and experience sharing. An exhibition on global warming and its impact on agriculture, and games and activities to promote sustainable livelihood educations, were some of the highlights of CEE's participation.

9.1.5.2 Kishan Swaraj Yatra

Kishan Swaraj Yatra (Farmer self-reliance agriculture campaign) was organized with the collaboration of Organic Farming Association of India (OFAI) in the project villages. Its purpose was to create awareness among farmers about sustainability and self reliance in inputs rather than unsustainable market driven agriculture. The campaign was organized in eight villages, in which more than 1200 farmers participated, including those from other states like Punjab, Haryana, Rajasthan and Assam. The campaign provided a platform to share the consequences and issues of modern agriculture in Punjab and Haryana and also the sustainable farming experiences of Rajasthan and Gujarat. Some of the issues

discussed were: the negative impacts of chemical input and pesticide based intensive farming, genetic modified crops, market based inputs versus good practices in organic farming and Low External Input Sustainable Agriculture (LEISA). Issues related to organic farming like certification, market linkages, government support, research and extension support were also discussed in detail during the campaign.

9.1.5.3 Dry Land Horticulture and Floriculture Promotion

A major focus of CEE in the project area is to promote dry land horticulture, which is more sustainable in rain-fed semi-arid areas and also low in risk compared to the high input intensive cash crop based farming. This year, CEE promoted *Sapota*, Pomegranate, Indian Gooseberry, Lemon, Drumstick, Papaya and *Ber* among the farmers in the project villages, along with medicinal crops like *Tulsi* and *Kaucha*. *Tulsi* farming, as an intercrop, has reduced insect-pest incidence in the main crop and also provided additional income to the farmers. The *Kaucha* crop, which is a carbon sink, is being promoted as a boundary crop.

One family was trained in rose cultivation and its processing to develop various products. This year, new products like rose powder, *Gulkand* (Rosejam), rosewater and rose soap were manufactured and marketing support provided for them. The success of this experiment served to inspire other farmers. This experiment was also documented and telecasted by Rajkot Doordarshan which would enable other farmers to learn from it.

9.1.5.4 Conserving Agriculture Biodiversity

In another experiment, the minor pulse *Alasi* was sown as an intercrop and sold in the urban market in Rajkot and Ahmedabad. This approach can help develop a market for such disappearing crops and thereby conserve them. Various consultative meetings with individual farmers and in groups were organized to provide information and tips for improvement of sustainable farming practices like soil and moisture conservation, improving farm ecosystem, better use of agro waste, composting, bio-pesticides, bio-control, value addition for local employment and marketing linkages.

9.1.5.5 Market Linkages

Throughout the year, marketing support was provided to entrepreneurs through approaches like participating in various fairs, festivals, conferences and other events across Gujarat State. This year, groups and individuals participated in *Satvik* Food Festival, Ahmedabad; Vibrant Global Gujarat Summit, Gandhinagar; Handloom Fair, Ahmedabad; Agriculture Fair, Upleta and others, where various products were marketed directly to the consumers and retail outlets. The total sales for the year in the project villages touched Rs 14 lakh.

9.1.5.6 Advocacy and Networking

CEE works to infuse the learning gained from its projects in the government planning process at the district level, with intensive networking and liaison with various government departments at the district level. The CEE team is a member in the following committees, where they share and guide the

planning process for the sustainable development of the region.

- Jasdan Nagar Vikas Samiti
- District level Prasar Bharti Committee, Rajkot
- Trustee in the Society for Research and Initiatives for Sustainable Technologies and Institutions, Ahmedabad
- District Coordination Committees of ATMA Programme, Rajkot; National Horticulture Board, Rajkot; National Medicinal Plant Board, Rajkot; National Food Security Programme, Rajkot; National Agriculture Development Programme, Rajkot

9.2 Gramshilpi

Gramshilpi is a project that was initiated in 2007 in collaboration with Gujarat Vidyapith. The programme aims to provide extensive capacity building inputs and initial financial support to selected students of Gujarat Vidyapiths, mainly postgraduates, to work towards holistic rural development. As of now, 11 *Gramshilpi*'s have taken up the cause of rural development and have settled down in villages, undertaking various activities for their upliftment. *Gramshilpi*s are having monthly stipend for their personal and programmatic needs during the initial two years.

In year 2010-11, seven postgraduates were selected for the project as *Gramshilpi*s. After one year of training part, they have been placed in five different districts. Their training covered both content like primary education module and water module as well as methodology and skills. Significantly, as

part of the skills training, they have been trained to make solar lanterns, which they will transfer to women in the villages to make solar equipments preparation a home industries. Six of the *Gramshilpi*s from the current batch are now associated with this project.

The major thrust areas of the *Gramshilpi*'s activities are education, health, sustainable Natural Resource Management, promoting social equity and entrepreneurship support. In their adopted village, the *Gramshilpi* plays of role of a mobile information centre. They have become a guide for villagers in matters pertaining to education, career, administrative procedures for villagers to get their lawful entitlements and other requirements. They also provide villagers updates regarding various rural developmental and agriculture schemes. Apart from this, most of the the *Gramshilpi*s are also working towards eliminating social evils. *Gramshilpi*s who have settled in remote tribal areas are also working towards conserving tribal culture, music, traditions and practices.

9.2.1 Education

The educational activities of *Gramshilpi*s cover

- Non-formal educational activities with non-school going children
- Activities such as library, reading groups, English language teaching, teaching Maths and Science through environmental activities and night study classes to enhance the educational level of the students
- Teachers' training, capacity building, providing educational material for

schools and organizing parents meeting to improve the quality of education in the village school

- Holding competitions like drawing and story telling, creative activities like card making and toy making from bamboo

Key Achievements

- In Khoba village of Valsad district, the *Gramshilpi* has initiated a trust name *Lok Mangalam* Trust to and started a residential facility for children of migrating parents who have dropped out of school. Currently 20 children stay there.
- The GS in Dungarpur village has converted his own house as a day care and night stay facility for 31 children from marginalized and migratory communities.
- All the GSs are working with village primary schools where they have initiated children's library.
- A students' saving bank has been started in one village with with the savings of 50 members; this amount is being used for their development.
- In Pedhamali, the GS has adopted five nearby village schools, where he voluntarily teaches students while also help capacity building and motivating teachers. He also gets supporters to provide educational material for needy children. Ajay, a 5 year old child abandoned child has been taken in by the GS and his wife and is now studying in grade 2.

9.2.2 Health & Sanitation

This includes

- Awareness activities such as street plays, exhibition, rallies
- Medical checkup camps, dental camps and free treatment
- Collaboration with nearby hospitals to provide treatments including surgery at concessional rates or free of cost
- Enabling of villagers to avail medical/ health related schemes and benefits by helping them complete the required paperwork

Key Achievements

- From Pedhamali village, 10 children were taken to the Gandhian event *Sarvodaya Mela*, as a result of which six children who were addicted to tobacco and other undesirable substances gave up their addiction.
- Twenty five cataract surgeries were performed free of cost.
- One school has developed a backyard garden with medicinal plants and vegetables.

9.2.3 Social empowerment, Equity and Welfare Activities

These cover:

- Formation of a state level group of about 100 youth volunteers who support a range of socially constructive activities.
- Formation and strengthening of village level institutions such as women's group,

youth group, SHGs (self help groups) and others.

- Undertaking anti-alcoholism campaign which includes activities such as street plays, personal counseling and others.

Key achievements

- Six SHGs have been formed with a collective savings of Rs 1 lakh.
- The GSs in Pedhamali village organized an exposure tour for senior citizens where about 50 people from different castes participated, setting aside caste discriminations. They have also set up a grain collection box named as *Sarvodaya Patra*; the grains collected from this are being donated to the poorest families of the village. In another touching example they have adopted two orphan village children from a socially marginalized community, who now stay with them.

9.2.4 Natural Resource Management and Livelihood

This includes:

- Activities to promote local resource based livelihoods
- Skill training programmes for youth and women
- Promoting weaving of Khadi as a cottage industry
- Establishing a griculture resource centres
- Promoting better livestock practices and providing information regarding good quality of breed, and helping villagers in purchasing it
- Plantation and nurturing trees

- Environmental awareness activities such as poster exhibition, street plays, youth camps
- Activities to promote organic farming such as guidance on multi-crop farming, information exchange forums, exposure trips

9.3 Samvardhan Project Support Unit - Valsad

The Rural Programmes Group of CEE initiated its work in selected villages from Tapi, Valsad and Dang districts of South Gujarat during 2003-04 as part of *Samvardhan* Phase II. Drinking Water, Livelihood and Primary Education were the three thrust areas. *Samvardhan* – Community Entrepreneurs (CEs) took the lead in implementing a range of activities in these areas since then. During the current year, CEE focused on three major themes:

- Drinking water security – in collaboration with Water and Sanitation Management Organization (WASMO) in 60 villages
- Livelihood Promotion Activities - Entrepreneurship promotion in 30 villages and *Sahyog* Agri Mall in 74 villages
- *Samvardhan Samvaad* – Development Dialogue to understand people's needs and concerns, conducted in three clusters involving 24 villages

9.3.1 Drinking Water Security Programme

To help villages achieve drinking water security, CEE has collaborated with WASMO as an Implementing Agency to implement

the *Swajaldhara* Programme of the central government. As part of the programme, CEE is working with 60 villages of four blocks, viz., Sonagadh (Tapi district), Dharmpur and Kaprada (Valsad district) and Ahwa (Dang district). Fifteen villages have been selected from each of these blocks. Some of the activities undertaken during the year include:

- Initial introductory meeting, formation of Village Water Committee (VWC) and its approval by *Gram Sabha* in all 60 villages
- Baseline survey and Participatory Rural Appraisal (PRA) were conducted in the 60 villages to understand the status and the community's concerns related to drinking water.
- To orient the VWCs regarding various aspects of planning and execution of drinking water security programme, field trips were organized for VWC members of all the villages.
- With the participation of the community and the involvement of VWC, village action plans were prepared for each of the 60 villages. This is a key document for the actual implementation of *Swajaldhara* programme. Village action plans detail the various activities to be undertaken, including software (educational and awareness programmes) and hardware activities (Construction – laying of pipes, water supply layout)
- These action plans are technically monitored and corrected by an engineer appointed by WASMO. The WASMO approved plans are then sent to the Gram

Sabha for its. The WASMO engineer, Social worker, Implementing agency, *Gram Sabha* and *Pani Samiti* collectively finalize the plan and approve it and forward it for final implementation approval to a committee chaired by the District Collector. Currently, village level approval has been obtained in all 60 villages. Final implementation approval has formally been received for 24 villages while that for the remaining 36 villages is under process.

- Water and Sanitation activities such as awareness, *Jalvahini* exhibition van, competitions and screening of educational films are being conducted with 73 village schools. Programmes such as village cleaning campaign and rallies were also conducted in the project villages.
- Training for water quality monitoring was conducted for VWC leaders and members.
- The work so far has yielded satisfactory results and is well appreciated in the project villages.

9.3.2 Livelihood Promotion Activities

Promoting sustainable livelihood through systematic selection, entrepreneurship training and marketing can go a long way in improving the quality of life while also conserving ecology in the long run. During 2010, 130 entrepreneurs from 30 project villages of four clusters were selected and trained. Some of the activities undertaken for them include:

- Nine exposure trips and information exchange/sharing trips for farmers to

promote better farming and animal husbandry practices were conducted where more than 350 farmers participated.

- Workshop on Zero Budget Farming
- Demonstrations on organic farming, azola farming, composting, solar cooker and bio pesticides
- Promoting and marketing vegetable farming, turmeric cultivation, *Nagali* and other local crops
- Marketing support through various events such as *Srishti-IIM* organic food festival

9.3.3 *Sahyog Agri Mall*

Based on the Jasdan model, Agri Malls have been launched in three blocks, viz. Kaprada, Subir and Mamabhacha in March 2011. Farmers become members in this cooperative model Mall. For the first year, the target is to increase membership up to 25 villages for each Mall, with at least 11 farmers from each village. Agri Mall supports informational, training, networking and marketing needs of the the community while also providing them quality seeds and other materials at cheaper rates.

9.3.4 *Samvardhan Samvaad*

Samvardhan Samvaad is a one day developmental dialogue organized to understand people's concerns, needs and priorities in a cluster. Three such dialogues were organized during May 2010 where about 240 participants including members of SHG groups, village water *Samities*, *Gram Sabha*, farmers, Panchayat members, youth and others participated. To facilitate the

dialogue, an exhaustive list of concerns/developmental needs of the area was prepared based on CEE's previous experience in the area. During the dialogue, participants collectively and in small groups discussed and prioritized their developmental needs. The whole exercise was highly educative not just for participants but also for the CEE team as it enabled them to understand the communities' needs and give new direction to ongoing programmes.

9.4 Rural Knowledge Centre, Halvad

The construction of the Rural Knowledge Centre (RKC) in Halvad was completed in May 2010. RKC is a novel concept introduced by CEE in Halvad Block in Gujarat. Its objectives are:

- To serve as a node for networking and information sharing for the various stakeholders of Halvad block, especially those who are poor and marginal; and
- To provide extensive Human and Institutional support through relevant thrust areas for local institutions, governance structures and Common Interest Groups of Halvad block for at least a decade.

9.4.1 Major Activities and Achievements of RKC

- A horticulture demonstration plot of custard apple cultivation in one acre area has been developed, where sustainable agriculture practices such as drip irrigation, different types of composting including vermi-composting, vermi-wash and bio-pesticides have been set up.

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- A nursery operating in RKC aims to provide people quality saplings of chosen varieties. This year 3000 saplings of 70 varieties were sold from here.
 - Demonstration models of biogas and solar equipments such as solar light and solar cooker have been set up in RKC, to encourage the use of non-conventional and renewable energy sources. About 80% of the electricity for RKC is being obtained through solar energy.
 - RKC campus is rich in biodiversity, with more than 1600 plants of about 135 varieties. Care has been taken to conserve local and threatened species. To demonstrate successful horticulture farming, many such trees have also been planted on the campus. Information regarding medicinal uses of the plants is being shared with the community.
 - RKC has a rich library containing a wide variety of books and magazines on agriculture and livestock keeping which are the main occupations of the villagers. It also has a collection of more than 1000 books for school students.
 - A number of training programmes have been organized at/by RKC, such as:
 - A one day workshop for the members of Farmers Field School, on the theme of 'Productivity of Soil'. Ten such workshops were organized during the year with about 200 farmers participating.
 - Training programmes for SHG members were organized to discuss sustainable agriculture practices, better livestock keeping, savings-credit for livelihood support and development. In 20 such trainings during the year, about 500 women participated.
 - Two workshops involving involving 80 participants were organized on the theme of RTI Act and Domestic Violence Act.
 - In a very interesting approach, RKC organized a formal-informal interaction with the village community, Farmers Field School (FFS) and Self Help Groups (SHGs), to motivate them to send their children for secondary education. RKC has networked with various *Ashramshalas* - Post Basic Schools - of the region. As a result of CEE's efforts last year, 10 students, who would otherwise have dropped out and possibly become another victim to the vicious cycle of salt farming, joined Post Basic schools for further education. This can be seen as a remarkable achievement and an approach worth trying on a larger scale in coming years.
 - Ten students from Bachelor in Rural Studies/Masters in Rural Studies/Masters of Social Work stayed at the centre as part of their internship programmes, also known as *Kendra Nivas*.
- In all, RKC has proven itself to be a successful model for creating knowledge based societies that can take decisions leading to sustainable development. It provides an excellent platform for lateral learning as well. RKC demonstrations have enhanced the communities' interest and faith in sustainable livelihood options. It has also
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been recognized as one of the best practices to combat desertification and land degradation, as part of the 'Elucidation of the 4th National Report on Combating Desertification', which was submitted to the United Nations Convention to Combat Desertification (UNCCD) by the Ministry of Environment and Forests.

9.5 *Gramdoot*

Gramdoot is an innovative action research project that aims to initiate 'Life Long Learning' (L3) for farmers, and to promote information empowerment and livelihood security among the rural poor in Jasdan in Gujarat, through the use of technology based Open and Distance Learning (ODL) for community education. Through direct interventions with a select group of 150 farmers, the project has prepared them as a resource group to serve as *Gramdoot* (village messenger). They have been further clustered into four Common Interest Groups (CIGs) based on learning needs perspective, viz., agriculture (60 members), horticulture (25 members), livestock (40 members), non-farm (25 members). Along with propagating the L3 programme, they will also ensure the continuation of locally generated learning material. Developing and validating bankable proposals for following up with interested banks and setting up a sustainable producer company are also included in the objectives of this programme.

Indirect distance learning through technological interventions like voice mail and lateral learning through direct interaction with *Gramdoots*, are being employed in the project to empower another 850 persons and also to test the effectiveness of using only

ODL as an approach for strengthening sustainable development education in the rural context. The project also strives to establish linkages between the participating communities with finance, market, information and communication technology and extension institutions.

Some of the activities undertaken during the year include:

9.5.1 Project Orientation Meetings

Orientation cum consultative meetings with pre-defined objectives was conducted with the existing Producer Company (PC) and CIG members. About 300 members participated in the meeting. The main topics discussed were project orientation, learning, plan of action, roles and responsibilities, *Gramdoot* Resource Centres, financial linkages with banks and insurance companies, mobile based ODL and the L3 approach.

9.5.2 Monthly Meetings

The monthly consultative meetings, known as *Poonam Bethak* (Full moon Day Meeting) were focused on thematic groups. Various themes related to sustainable agriculture were discussed with the Agriculture and Horticulture CIGs, which covered basic fertilizers, bio-control, bio-pesticides, nutrient management, soil management, privatization of inputs, genetic modified crops, government policies, low cost farming, and integrated pest management in cumin, wheat, green gram and other crops. The focus of these meetings remained on sustainability in livelihood and changing the mindset from mere producer towards entrepreneurship. Various resource persons from the linkages and network point of view were invited for

every meeting, in which 50-60 members participated with one or two resource persons providing guidance and technical support.

9.5.3 Training

The CIG members were also selected by the Farmers Field School (FFS) programme of the Agricultural Technology Management Agency (ATMA) of Gujarat government, for receiving technical and skill training. About 75 members were organized into three FFSs. Fortnightly meetings were conducted during specific crop seasons. During such meetings, agronomical practices for quality and quantity of production and sustainability of various crops like wheat, cumin and green grams were discussed. Twenty selected farmers were also provided training during the National Organic Farming Meet at Anand, on topics like organic farming practices, mixed cropping, horticulture, agro-waste management, seed, water and soil conservation, and bio-pesticides.

9.5.4 Demonstrations

Ten demonstrations have been set up to showcase the potential output when adopting various sustainable practices and also issues faced when adopting or implementing such practices. Some of the demonstrations are on composting from agro-waste; improved crop varieties farming demonstrations for cumin, green gram, and wheat crop; foundation seed plot; cultivation of medicinal crops like *Tulsi* (Basil) and *Kaucha* (*Mucuna pruriens*); orchards of fruits and vegetable crops; and horticulture sapling nursery net house.

9.5.5 Institution Building

The advisory committee for *Sahyog Krushi Vikas* Private Ltd. (SKVPL) (farmers'

producer company - PC) was formed and strengthened to provide guidance and support for the company. PC meetings were held every month to review, plan and also provide guidance and support on various issues as well as future direction. SKVPL is already selling various products like cattle feed, CFL bulbs, engine oil, seeds, bio-pesticides, bio-inputs and agriculture implements at cost effective rates to its members. The PC had also tied up with Godrej, Oreva, Gulf Oil, RCM Marketing Network, Gujarat Seed Corporation Ltd., Dharati, Vasundhara, Namdar, Vikram, Rashi, GPL, UPL, Excel and others for enabling direct purchase.

9.5.6 Learning Material Development

A monthly newsletter *Sahyog Khedut Samachar* was published and disseminated for *Gramdoot* members, which features recommended practices for agriculture and livestock for that month. The *Gramdoot* Resource Centre at CEE Jasdan was also enriched through the addition of approximately 250 print, video CDs/DVDs and other learning materials.

9.5.7 Gramdoot Samvaad (Dialogue)

Since the last one year, consultative and knowledge exposure meetings of the four Common Interest Groups, viz., agriculture, livestock, horticulture and non-farm were conducted regularly. These meetings were meant to provide the members opportunities to share their knowledge and livelihood experiences and also learn sustainable practices from other livelihood options. About 225 community members participated in the *Samvaad*. Experts in agriculture, livestock, horticulture and non-farm livelihoods were

invited to enrich the experiences and also establish linkages with government, research and financial institutions. Detailed discussions on winter crops, dry land horticulture, agriculture insurance, bank loans for livestock and government schemes were held. Some of the key points discussed were soil testing, judicious use of chemical fertilizers, importance of compost and farm yard manure, rain-fed farming, cropping pattern, cultivation practices, value addition, traditional and modern scientific knowledge, improved seed varieties, seed diversity, integration of agriculture and livestock, dry land horticulture, drip irrigation, organic farming practices, net house, vegetable farming and agriculture implements. Sustainable wheat farming, agriculture insurance and bankable business plans were also discussed.

9.5.8 Writeshop for Dairy Farming Voice mail

A two day writeshop (Write Workshop) was organized by CEE to facilitate the development of voice mail content on sustainable livestock production. Twenty five participants from various sectors like livestock raisers, farmers, women, veterinary doctors, dairy experts, communication experts, post graduate students, NGO staff and researchers participated in the workshop. The main purpose of the workshop was to document and develop messages regarding best practices and learning through consultation. The workshop also provided a platform to share experiences and network with other individuals working in this field.

Participants formed four groups to discuss the sub themes in sustainable livestock

production, viz., management, reproduction, nutrition, and health care, and identified the best practices / experiences. They also prepared a draft message related to the same and finalized it in the form of voice mail content. The support team of identified experts and facilitators helped the participants to develop, technically edit, finetune and finalize their voice mail content. Text material for about 300 voice mails was prepared.

9.5.9 Community based Participatory Video

The participatory approach is a key bottom-up tool in supporting community development, which gives the opportunity to participate in various activities and share knowledge or information. Community based participatory video (PV) on sustainable livelihoods messages was prepared in partnership with Proplaneta, Brazil. Ten community members including six women participated in the process. The group of community members were first selected and trained on PV for one day, especially on handling and operating the video camera, tripod, camera and computer. They were also given hands-on training by Ms. Fernanda Baumhardt, a social environment communication consultant.

The group first discussed what they would talk about in the film, which was crystallized into their farming processes, materials and techniques. They then organized themselves in pairs and decided their roles – who would film and who would feature in it. The film featured villagers talking about 10 green messages for sustainable livelihood. The script was also written by the group who

then did the video shooting of the messages. The product in the form of a seven minute video was finalized through a participatory process for content and editing, both of which were completed the villagers themselves.

Participatory videos can be effective tools for breaking barriers and to make media and technology inclusive and people centered. They enable the villagers to share their good practices with others and provide them a media vehicle to do it.

9.6 Implementation of Environment Management Framework in Tamil Nadu Empowerment and Poverty Reduction Project (Vazhndhu Kaattuvom Project (VKP))

CEE AP is the State Environment Resource Agency (SERA) for the *Vazhndhu Kaattuvom* project being implemented by the Government of Tamil Nadu through the *Vazhndhu Kaattuvom* State Society in 15 districts with support from World Bank. The role of CEE as an environment resource agency is to design and facilitate the implementation of an Environmental Management Framework (EMF) in the project.

The purpose of EMF is to ensure that neither the livelihoods of the rural poor nor the environment are compromised. CEE contributes to the EMF implementation through:

- Development of Technical Environmental Guidelines for Environmental Appraisal of the livelihood activities being supported through the project;

- Capacity building for different stakeholders including the project functionaries and community representatives;
- Development of Information Education and Communication (IEC) materials; and
- Monitoring support

CEE was initially engaged to provide these services for a period of two years during 2007-2009. This agreement has been renewed from October 2010. The activities under this project accomplished during the year 2010-11 include.

Capacity building for stakeholders: CEE has facilitated district level refresher training programmes on EMF for the project functionaries in five districts. These trainings included class room sessions and group work.

Supervision and Environment Audit: One round of supervision visit to check the implementation of EMF was completed during the period.

9.7 Environment Assessment Study for Bihar Panchayat Strengthening Project (BPSP)

CEE AP has been engaged as a consultant for conducting the Environment Assessment Study for the Bihar Panchayat Strengthening Project, an initiative of the Panchayati Raj Department, Government of Bihar, with the support of World Bank. The role of CEE is to conduct an Environment Impact Assessment exercise and to develop an Environment Management Framework for the project. The duration of the project was January - December 2010. The study has been completed and the final report submitted.

9.8 Green Yacharam - Towards Carbon Neutralization

CEE AP has conducted the baseline survey of Yacharam mandal of Ranga Reddy district for the Society for Elimination of Rural Poverty (SERP), Department of Rural Development. The purpose of the survey is to understand the existing pattern of energy consumption and scope for enhancing the greenery to make Yacharam' mandal 'carbon neutral'. The survey was conducted during July – December 2010 with the help of educated youth in the village and the draft report has been submitted.

9.9 CAPART – Institutional Monitors Initiative

CEE Karnataka has become the institutional monitor for the rural development projects of CAPART Regional Office, Dharwad

Karnataka. As part of this activity, the CEE team will carry out monitoring and evaluation of projects being funded by CAPART during pre-funding, midterm and post evaluation activities.

During this reporting period, CEE Karnataka has received the following evaluation assignments from CAPART and carried out the evaluation and reporting activities.

CAPART Evaluation from April 2010 to March 2011

Sl.No	Projects	Number
1	Pre funding evaluation	03
2	Mid term evaluation	04
3	Post evaluation	03
	Total	10



Water and Sanitation

10.1 Documentation of Total Sanitation Campaign (TSC) Initiatives in Dakshina Kannada

Dakshina Kannada is one of the districts in Karnataka which has achieved the distinction of Open Defecation Free district status with the successful implementation of the Total Sanitation Campaign (TSC). CEE South initiated a project with the Zilla Panchayat, Dakshina Kannada to do a process document on the successful implementation of TSC. As part of this initiative CEE has developed

- a. An inspiring case study booklet;
- b. 20 minute video documentation on the process of implementation of TSC;
- c. Three videos of five minutes each on three inspiring case studies of TSC initiatives; and
- d. A brochure on the process adopted in the implementation of TSC.

10.2 Mensural, Sanitation and Hygiene Education Programme in Schools

CEE South, in association UNICEF and SSA, initiated a programme on Sanitation, Hygiene and Mensural education in the schools of Karnataka. This programme aimed at improving the sanitation and hygiene practices among school children in 1000 schools spread across 62 Blocks in 18 districts of the state. The following activities were executed by CEE South as part of the programme:

- a. Developed a survey format for gathering information related to school sanitation;

- b. Oriented officers from the education department on data collection;
- c. Trained 375 master trainers on sanitation and hygiene practices in schools;
- d. Trained 1000 teachers on hygiene practices through these master trainers;
- e. Analysed the data collected from schools and compiled a report of the same; and
- f. Reviewed the execution of sanitation and hygiene activities through teleconferencing.

10.3 Sanitation, Assessment, Awareness and Action for School Campaigns (SAAAF) – Medak, Warangal and Kurnool Districts

With the support of UNICEF, CEE AP has initiated SAAAF programme in three districts – Medak (300 schools), Warangal (320 schools) and Kurnool (800 schools). The main objectives of the programme are to identify the infrastructure gaps, develop actions plans to bridge them and to create awareness about hygiene and sanitation among children with the help of local facilitators and teachers. The programme has been initiated in February 2011. The survey to identify the infrastructure gaps has been completed in all the schools and analysis of the data is in progress.

10.3.1 Sanitation, Assessment, Awareness and Action for School Campaigns (SAAAF)

CEE AP, with support from UNICEF, Hyderabad has implemented the SAAAF project in 300 schools spread over 21 mandals

in Medak district. The objectives of the programme were (a) to create awareness among the teachers and students on sanitation issues; (b) assess the infrastructure facilities available for water and sanitation; and (c) to address the infrastructural gaps with the help of government line departments and the District Administration. The project was implemented up to December 30, 2010.

The tasks accomplished under the project during the report period include:

- SAAAF campaigns were organised in 210 schools for awareness building, participatory assessment and to develop action plans to resolve the problems;
- Action plans were developed for all 300 schools and presented to the Department of Rural Water Supply (RWS), Panchayat Raj and Department of District Education;
- Facilitated the implementation of the action plans in the schools.

After the assessment findings were shared with the DEO, the Department of Rural Water Supply and UNICEF, the report was forwarded to the District Administration. The required fund was allocated by the District Administration for addressing infrastructural gaps. Following this model, the District Administration has since conducted the assessment of infrastructural gaps in all the schools in the district.

10.4 Green Kids Forever – Say No to Plastics Campaign in Schools

CEE AP with support from the Tidal Data Solutions Pvt Ltd (TPED Grants Programme)

and the Hyderabad Metropolitan Development Authority (HMDA) has organized school level contact programmes in 40 schools of Hyderabad and Medak between July and September, 2010. As part of the programme, one-two hour contact programmes were organised in each school and 100 cloth bags were distributed.

10.5 Integrated Sanitation and Hygiene Management in Residential Institutions of Medak

CEE AP has initiated the project Integrated Hygiene and Sanitation Management (ISMH) in welfare hostels with the support of the District Administration and UNICEF in 230 Welfare Hostels (also known as Residential Institutions). The project has two components:

- Identification of the issues related to water and sanitation infrastructure, operation and maintenance practices and personal hygiene behaviors among children through participatory surveys, and initiation of actions through involvement of stakeholders and industries in Medak through their Corporate Social Responsibility (CSR) initiatives
- Conducting education programmes for hostel children on best practices in Water and Sanitation, and Personal hygiene

The programme was initiated in January 2010 and a baseline survey was conducted in all the hostels to identify existing issues related to infrastructure and practices pertaining to health and sanitation, based on which action plans have been developed. The survey

findings were shared with the District Administration and the implementation of the action plan is in progress.

10.5 Pilot Water Security Plan Project

CEE is partnering with the Public Health Engineering Department of Assam and UNICEF in implementing the Pilot Water Security Plan Project in Rani and Kamalpur blocks of Kamrup and Kamrup Metro districts in Assam. The project aims to provide every person in the rural areas with adequate safe water for drinking, cooking and other basic domestic needs on a sustainable basis in the project blocks.

Despite the impressive coverage of provision of safe drinking water facilities in the rural areas, there is considerable gap between the infrastructure created and service available at the household level. The erstwhile premise of providing 40 litres pcd (liters per capita per day) has proved to be inadequate for a large section of the community. Moreover, while massive water supply infrastructure has been created over the years in rural areas, they have often been unsustainable and also plagued by quality issues. The revised National Rural Drinking Water Supply Programme (NRDWP) guidelines 2009-2012 issued by the Rajiv Gandhi National Drinking Water Mission, Department of Drinking Water Supply, has shifted its focus from the conventional norms of litres per capita per day to water security for all in the community. The new policy further aims to empower the community to plan, implement and manage their own water supply systems. Finally, the policy stipulates that the state should transfer the

programme to the PRIs, particularly to the Gram Panchayats for management within the village.

Based on the above policy guidelines, three programme components have been identified under the project as follows:

- Preparation of village level water security plans
- Community participation in the process of development of the village water security plan
- Management of the village water security plan by the Panchayats

The following activities of the project were undertaken during the year 2010-11:

- District level training - A district level meeting was held in the Communication and Capacity Development Unit, Betkuchi in the presence of the Chief Engineer on November 23, 2010. During the meeting, a thorough orientation was given to all the Nodal Officers, Block Coordinators and *jal surakshaks*. Representatives of CEE, PHED, DRDA, Gram Panchayat, UNICEF, NRHM and SSA were present in the meeting.
- Another training programme for the Nodal Officers and NGO functionaries of PWSP was held at CCDU, Betkuchi during August 4-6, 2010.
- Several block level orientation programmes of *Jal Surakshaks* were held during October to December 2010. The workshops were held in two phases and included all the Gram Panchayats.

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- Directory of PRI members - A directory of the PRI members in both the blocks has been prepared with their names, the name of the Gram Panchayat they belong to, ward numbers and contact numbers.
 - Exposure visit - A team of NGO functionaries went for an exposure visit to Chennai from during September 1-5, 2010.
 - A household survey of 10 villages has already been completed in both the project blocks, viz., Rani and Kamalpur blocks.
 - Water sample collection - Water samples from six villages from both the blocks have been collected and sent to the state laboratory for testing.
 - World Water Day was celebrated in two schools of Rani Block.



Sustainable Urban Development

India has a very large and increasing urban population. Though cities are often seen as the culprits in discussions on sustainability and climate change, not all activities and not all people in cities have high emissions and environmental impact. On the other hand, well planned cities can help achieve healthy living conditions and a good quality of life for all with a low footprint. CEE Urban aims to develop and apply effective methods of communication, education and participation towards more sustainable urban habitats, especially leading to:

- Healthy living and working environments for the inhabitants, especially vulnerable populations, including access to civic services and amenities essential for health (safe water, sanitation, waste management, paved roads, footpaths, shelter);
- Mitigating the environmental impact on local, regional and the global environment;
- Triple bottom line decision making so that development decisions aim for environmental improvement, social benefits and economic efficiency simultaneously.

As part of the urban programmes of the centre, CEE took up three new initiatives in the areas of performance assessment of municipal services, urban ecosystem services and urban transportation.

11.1 Assistance to Pimpri Chinchwad Municipal Corporation in Service Level Benchmarks

Standardized Service Level Benchmarking (SSLB) is a mechanism of the Ministry of Urban Development, Government of India. The benchmarks help evaluate the status and performance of the urban local body in providing basic services like water supply, sewage, solid waste and storm water drainage to its citizens. CEE facilitated data collection and preparation of reports for the Pimpri Chinchwad Municipal Corporation (PCMC) using the SSLB framework. CEE's inputs are expected to improve the data reliability of the PCMC SSLB reports. A sample study was also designed and conducted by CEE in partnership with *Janwani*. CEE Urban Programmes group is now facilitating the pilot phase of the systematic improvement of the SSLB reporting systems.

11.2 Professional Development Programme on Supporting Urban Sustainability

CEE was invited by the SWEDES programme at Gotland University to be part of an initiative to offer a professional development programme *Supporting Urban Sustainability – Collaborative learning for ecosystem services governance in the context of poverty alleviation*. The other partners are SAC-REEP, Stockholm Resilience Centre, the Swedish International Centre for Local Democracy, the Global Action Plan International and the Worldwide Fund for Nature. The programme is supported by the Swedish International Development Cooperation Agency (Sida). A team of five professionals from Ahmedabad Municipal Corporation (AMC), Centre for Environment Planning and Technology (CEPT), Self

Employed Women's Association (SEWA), EPC and CEE has been selected to participate in the programme.

11.3 SUM Net India - Urban Transportation Network

In the area of urban transportation, CEE has taken up an initiative to develop a network of civil society organizations in various cities. This network - SUM Net India - is engaged in policy advocacy on urban traffic and transportation issues at the national level. Through discussions and sharing of experiences/ reflections related to the principles of sustainable urban mobility, the network also hopes to advance public understanding about this field. As a first step, the network participated in the Urban Mobility Conference 2010 and installed an exhibit outlining the principles of sustainable urban mobility. The partners of the network also met at Delhi before the conference to discuss about the network, its structure and interventions. The initiative is supported by *Shakti Sustainable Energy Foundation*.

11.4 Civil Society Inputs into Strategic Environment Assessment, Pune

In Pune, CEE continued facilitation of civil society inputs into the strategic environment assessment which is feeding into the process for the revision of the master plan of the old municipal limits of the city. The final report for the project, prepared jointly by Ramboll Natura, NEERI and CEE, was submitted to the Pune Municipal Corporation (PMC) in Dec 2010. This project has been supported by Sida.

11.5 Participatory Budgeting

CEE Urban is exploring ways of enhancing citizens' engagement in urban governance. The group is facilitating participatory budgeting in the city of Pune for the past few years. CEE has developed a 'Menu Card' for public facilities which can help citizens choose products and designs for street furniture, public construction and facilities through ward level budgets. Indicators related to the eco-friendliness of the materials and designs are being added to the descriptions of the products to help citizens choose more wisely.

11.6 Waste Management Pune Regional Workshop

CEE WARM group worked with CEE Urban to organize a regional workshop on Public Awareness Campaign on waste management, for the states of Maharashtra, Madhya Pradesh, Chhattisgarh, Goa and Gujarat. The workshop was for the officials of the state government departments dealing with solid waste management, representatives of municipalities, pollution control boards, environment departments and NGOs on development of public awareness campaigns on solid waste management in their areas. This one day workshop organised at YASHADA, Pune on June 14 was attended by around seventy participants from the above mentioned states including both representatives from government departments and NGOs working in the field. The outcome of the workshop was a compilation of ideas for public awareness campaigns and a draft proposal by the state agencies to the central government for financial support.

11.7 ESD session on Urban Issues for GYLI (Global Youth Leadership Institute)

CEE Urban designed and conducted a two day module on ESD and urban issues with a global perspective for the Global Youth Leadership Institute (GYLI), US. CEE offered this module to two batches of international students of GYLI from different countries in July 2010 and in March 2011. The focus of the programme was on experiential learning by students and hands on projects. The students were exposed to various sustainability issues of urban areas like heritage and culture, biodiversity, traffic and transportation, waste management and others. The visits to biodiversity areas being protected by the citizens on Baner Hill in Pune, interaction with traditional artisans like coppersmiths in the old city, interaction with waste pickers, and walkability assessment surveys were found quite interesting and engaging by the participant students.

11.8 Clean Green Neighbourhood Mela

CEE Urban has developed a community education and communication methodology on waste management at the local level titled "Clean Green Neighbourhood Mela." The *mela* has been designed as a half or one day event that takes place in a space provided by a residential block. It currently offers activities such as a clean-up campaign, a map based or survey based assessment of waste management practices and identification of spaces for sorting, a 'V-Collect' service for disposal of recyclable items/ scrap, demonstration of waste

segregation, composting, a discussion platform for stakeholders including service providers and the local municipal office, paper bag making and poster exhibition. The aim is to include activities on traffic calming and walkability, biodiversity protection/ greening, stream restoration, rain water harvesting, participatory budgeting and others. The objective of this venture is to take a localized, customized package of practical environmental education very close to the people and to bring the various stakeholders together.

11.9 Internship Programme in Sustainable Urban Development

CEE Urban group offers internships to college students and youths in the area of sustainable urban development. This year, internships were provided to students coming through the German Red Cross, the Global Alliance, from Sweden with support from SIDA, the Pune University, Karve Institute of Social Work and other local colleges. The areas of work included designing localized waste management systems and facilities, investigations related to participatory budgeting and participatory urban governance.

11.10 World Environment Day Event at General Motors India

CEE was invited by General Motors India to organise an environment education event for their staff members to observe the World Environment Day 2010 at their Talegaon Plant. CEE put up a poster exhibition with the posters of Act Now, WED posters of UNDP and other wildlife posters. EE games

and activities like web of life, ropes and ladders and waste segregation were organised with the staff members. The CEE representative made a presentation on climate change to the leadership team of General Motors. Environmental films on wildlife, biodiversity and climate change were also screened for the workers.

11.11 CWG Event and NGO Plantation

CEE Central assisted in the facilitation of Green Champions at the CWG regional event organised at Pune. It also facilitated plantation activities with the partner NGOs on the route of the Queens Baton Relay and dissemination of Low Carbon Lifestyle tool kit.

11.12 Talk by Prof. Peter Newman

‘Sustainable Transport for Resilient Cities - Responding to Climate Change’

The CEE Urban Program organized this talk in partnership with the Australia India Council, *Parisar*, FEED, MCCIA and the Sustainable Urban Mobility Network India.

Prof. Peter Newman is Professor of Sustainability, Curtin University, Australia and Lead Author Transport, IPCC, 5th Assessment Report, and Author of “Resilient Cities: Responding to Peak Oil and Climate Change”. Prof. Peter Newman invented the term ‘automobile dependence’ to describe how we have created cities where we have to drive everywhere.

In his talk in January 2011 in Pune, Prof. Newman examined seven characteristics of ‘resilient cities of the future’: renewable; carbon neutral; biophilic, with smart,

distributed green infrastructure; eco-efficient with industrial estates using industrial ecology to close the loops on their metabolism; place-based with emphasis on local economies and local identity; and with quality public transit and walkable centre. He especially spoke about the shift away from automobiles to sustainable modes of transport. Over 200 college students, professionals and others attended the talk. Prof. Newman later met with representatives of local academic institutes and NGOs to explore future collaborations in training and research.

11.13 Sustainable Urban Development Activities in Ahmedabad

11.13.1 Ahmedabad Green Partnerships – Manekbaug

CEE continued maintenance of the Manekbaug plot and put up tree signs along the walking path. Discussions with the Ahmedabad Municipal Corporation (AMC) on further ways of developing the area were held. Once every month, teachers and children from schools have been visiting the plot which is used for nature education by CEE.

11.13.2 Ahmedabad Municipal Corporation and the Gujarat State Forests Department Launch a Plantation Drive

CEE participated in the large scale plantation drive by the AMC and the State Forests Department who had pledged to plant over 100000 saplings in one day, to create a Guinness World Record of maximum saplings planted in a day. CEE planted over

2000 saplings of different species near its premises, involving staff from CEE, VIKSAT and children from *Paryavaran Mitra* Schools. Over 90 per cent of these saplings have survived.

11.14 Take Care Take Charge Campaign

The Times of India and Garnier along with CEE as Knowledge Partner launched the campaign “Take Care, Take Charge” on April 21, 2010. Under this campaign, readers, especially youth, were invited to send ideas on green and sustainable solutions to environmental issues under the following broad themes – water conservation and pollution; energy generation and conservation; recycling and waste management; transport and vehicular pollution; heritage and culture conservation; and biodiversity and greening. The solutions given could be at an individual level, community level or for an entire city. These could include innovative technology solutions, a marketing solution, practice, or a way of impacting behavior for positive change. The campaign was primarily being carried out in Mumbai, Kolkata, Chennai, Hyderabad, Bangalore and Delhi, but invited young people from across India to participate. Over 4500 ideas were received on the Take Care Take Charge website. Road shows and events at malls, mass mailers and advertisements in the Times of India brought about a keen interest among people about the campaign. CEE developed the selection criteria and was involved in the shortlisting of 10 ideas per city. The ideas were judged on robustness, scalability, ease of implementation and cost. These ten people

were invited to make a presentation to a panel of judges, who identified one idea from those presented. The final six winners met Mr. Jairam Ramesh, Minister of Environment and Forests to present their ideas. As part of this, the June 5 Times of India paper in the six cities was printed on recycled paper.

11.14.1 Take Care Take Charge Campaign - Bengaluru

In Bengaluru, many citizens (young and others) took part in the campaign and brought in many innovative ideas in sustainable development practices. The final presentations on the ideas were presented at the Times of India corporate office at Bengaluru. The jury included cine actor Mr. Ganesh, Dr. Arunkumar A.N and Dr. CSP Patil. The winner has been sent to Delhi to present the ideas before Mr. Jairam Ramesh, Minister of Environment and Forests, Government of India.

11.14.2 Take Care Take Charge Mumbai

Mumbai being one of the eight cities where this campaign was carried out, CEE Pune coordinated and facilitated the local activities in Mumbai city for publicity of the TCTC campaign and assisting in promoting the campaign in generating ideas from the people, in organisation of road shows and other public events. The ideas received through the website were evaluated and scrutinised. People shortlisted for their ideas were invited to the event held in Mumbai for presenting their ideas to a panel of experts. One of the ideas for better management of waste droppings from the latrines in the

moving train submitted by Mr Ravindra Ladkat was selected and sent as one of the final entries. CEE also facilitated recycling of 10 kg of newspapers with the local vendors for every idea submitted to the TCTC campaign at Mumbai.



12.1 Healthcare Waste Management and Education Programme

12.1.1 On Site Trainings for Implementation of Health Care Waste Management (HCWM) for Package II (759 Primary Health Centres) in Rajasthan

CEE conducted on site trainings for the implementation of Health Care Waste Management (HCWM) for 1500 Primary Healthcare Centres (PHCs) in Rajasthan. The objective of the consultancy has been to provide quality training on infection control measures and healthcare waste management practices to all the staff and workers at the facility level; to sensitize the trainees and make them aware of Bio Medical Waste Management & Handling rules through hands-on experience and through demonstration of cradle-to-grave steps of waste management - segregation, handling, collection, transportation and treatment followed by disposal of infectious and non infectious waste generated from healthcare facilities. CEE has developed the biomedical waste management training manual in Hindi. In the first phase of the project, 16 districts have been covered, where training programmes, orientation and re-orientation programmes have been conducted in all the 759 PHCs. CEE was also involved in Training of Trainers and preparation of educational material like training module and kit. CEE provided training on Biomedical Waste Management with special focus on women health conditions at child birth to the PHCs. Apart from the training, demonstration cum KAP on some safety and infection control procedures like hand washing and disinfection procedures were also performed. The training across the 16 districts was

undertaken in collaboration with an associated organization - Enviro Science Analyst - from Jaipur. The final report has been submitted and the Rajasthan Health System Development Corporation has extended the offer to conduct similar training programmes in the remaining 16 districts of the state under Package III, which is likely to take off by June/July 2011.

12.1.2 State level Training cum Orientation Workshop on Biomedical Waste Management

This workshop, supported by UPPCB (Uttar Pradesh Pollution Control Board), was organized by CEE North on April 19-10, 2010. The programme aimed to make the participants understand the legal implications in dealing with wastes, anticipate future legislative requirements and develop familiarity with the present techniques to reduce use of hazardous substances and generation of waste, thereby saving money too. The seminar, through experience sharing and discussion, also provided for clarifying and illustrating various facets of waste management and arriving at practical solutions, mechanisms and frameworks for waste management. The Waste and Resource Management (WaRM) group provided the overall content and facilitated the workshop and also helped in identifying technical experts for the workshop.

12.1.3 Knowledge and Information Centre (KIC) on Municipal Solid Waste Management (MSWM)

CEE East and WaRM are developing a Knowledge and Information Centre (KIC) on

Municipal Solid Waste Management (MSWM) in association with Orissa Renewable Energy Development Agency (OREDA) and Housing and Urban Development (H&UD), Government of Orissa at the Biju Pattnaik Energy Park (BPEP), Bhubaneswar. The main objective of the KIC is to disseminate knowledge and awareness on Waste Management to the varied stakeholders in the society. The centre will help develop an understanding of the adverse effects of improper waste management on human beings and the environment in the waste generators, viz., hospitals, nursing homes, dispensaries, clinics, industries, shops, commercial establishments and homes. It will be well equipped with information on handling various categories of waste and will showcase the information through multiple methods like panels, table top dioramas and IEC materials.

The following actions have been initiated for setting up the centre.

- It has been decided that the centre would have three rooms. The first room would orient the visitor to the fact that there is generation of waste all round us, which is also because humans term it as waste though it could be a resource for others, as is often seen in nature. The second room would focus on management of Municipal Solid Waste, while the third room would focus on other kinds of solid waste like biomedical waste and E-waste.
- The centre will display about 25 panels to explain our reckless attitude that has led to generation of immense waste,

which could be a resource if wisely used, and how our lifestyle has hindered the ecological systems leading to many manmade disasters like climate change and spread of various diseases.

- The centre will showcase six table top dioramas of which three would display waste composition, the varied sources of Municipal Solid Waste generation and the methodology of waste management. One diorama would be about resource out of waste like use of paper and plastic, and the materials that could be manufactured out of them. Another would show the different types of E-Waste and this too could be a resource if properly used. The last one would be a voting machine displaying messages, which will judge the visitors' understanding and clarity on the subject, and the lifestyle that they would adopt.
- Organizing outreach programmes for schools, colleges, housewives, rag pickers and others
- Organizing training Programmes for various stakeholders like the Municipality, rag pickers, SHG workers, entrepreneurs and others
- Development and printing of IEC materials on various subjects related to waste management -

25 IEC materials on waste management are being developed for the centre which will be printed in English and Oriya. The drafts of the IEC materials have already been prepared.

Through this centre,

- Consultancy would be provided to support waste management activities.
- Students would be enlightened on career prospects in waste management.
- Guest lectures would be organized for students/ NGOs/ Practitioners/ Industries/ Municipalities and others on waste management.

12.1.4 Solid Waste Awareness and Management Programme (SWAMP) – Coimbatore

SWAMP is a project undertaken for the Coimbatore Corporation, funded by Jawaharlal Nehru National Urban Renewal Mission (JnNURM), with the objective of providing information, education, communication (IEC) and awareness among the general public on Solid Waste Management.

The following tasks have been completed by CEE Coimbatore during April 2010 - March 2011.

- A cycle rally was conducted on World Environment Day - June 5, 2010 – in which 800 students from various Corporation schools participated. The event was flagged off by the Mayor Mr. R. Venkatachalam in the presence of the Coimbatore Corporation Commissioner Mr. Anshul Mishra IAS, Health officer Dr. Aruna, Sanitary Inspectors, Ward Councilors and teachers of various Corporation schools. The objective of the rally was to generate awareness among the general public on Solid waste

management and environmental protection.

- Followed by this was a meeting with these 800 students, where Ms. Priscilla Joshua, Project Officer of CEE Coimbatore spoke to them on environmental protection and avoiding plastic usage and also motivated them to segregate wastes as biodegradable and non-biodegradable.
- After the rally, CEE Coimbatore placed a kiosk near the main bus stand at Coimbatore on the same day, where CEE staff distributed brochures on solid waste management and explained the SWM practices to about 2000 citizens of Coimbatore.
- CEE Coimbatore organised a one day workshop titled “Southern Regional Resource Persons Training Workshop cum Agenda Preparation Meeting” in June 2010, which was inaugurated by Mr. Anshul Mishra IAS, Corporation Commissioner. The panel members for the technical sessions included Dr. Shymala Mani, Programme Director, Waste and Resource Management Group, CEE and Mr. Khader Shahib, Joint Director, Directorate of Municipal Administration, Andhra Pradesh. Representatives of various government departments from the southern states and union territories such as Tamil Nadu, Karnataka, Andhra Pradesh, Kerala, Pondicherry, Andaman, Nicobar and Lakshadweep islands attended the workshop. There were also participants from NGOs who shared their experiences and gave suggestions on

solid waste and plastic waste management.

- As part of the SWAMP Coimbatore project, a half day workshop was conducted for all the sanitary inspectors and sanitary supervisors of 72 wards in July 2010. The Project Officer, CEE Coimbatore made a presentation on the present scenario on solid waste management in Coimbatore and the steps required to implement proper waste management practices. This was followed by a zone wise group meeting in which the sanitary inspectors were involved in planning for the implementation of solid waste management in Coimbatore.
- Participatory committees were formed in all the 72 wards during July-October, 2010. Each committee consisted of the Ward Councilor, Sanitary Inspector, Sanitary Supervisor, Medical Officer, School eco-club teacher, members from residents welfare associations and two sanitary workers. They were then apprised of the present scenario of Solid Waste Management in Coimbatore and what needs to be done to manage it properly. The roles and responsibilities of the participatory committee members were also explained in the meetings.
- In August 2010, a group meeting was conducted for the NSS programme officers from various parts of Tamil Nadu at Avinashilingam Deemed University, Coimbatore. Ms. Priscilla, Project Officer, CEE gave a brief orientation about solid and plastic waste management. In October 2010, a similar meeting was conducted for the NSS Co-coordinators from various Universities of Tamil Nadu at Avinashilingam Deemed University, Coimbatore.
- In November 2010, a group meeting was conducted for the Head Masters and Head Mistresses of all the corporation schools in Coimbatore.
- A ward wise training workshop was conducted for all the sanitary workers from December 2010 to February 2011. So far, this workshop has covered the workers of 52 wards. The workers were oriented to proper waste management practices and handling techniques of solid wastes, with the help of slides on Do's and Don't's. They were also entertained by skits, songs and games on solid waste management.
- A second rally was conducted in January 2011, which was also flagged off by the Coimbatore Corporation Mayor Mr. R. Venkatachalam. About 500 students from various Corporation schools took part in this rally, marching with placards and banners in their hands and raising slogans on solid waste management.
- In January 2011, another training workshop was conducted for the NSS co-coordinators of various Universities of Tamil Nadu at Avinashilingam Deemed University.
- A signature campaign was conducted for 500 NSS volunteers at Krishnamaal College for Women in February, 2011. About 500 student volunteers signed and promised to be part of the door to door waste management project of Coimbatore.

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- CEE Coimbatore is now conducting door to door education on solid waste management for the households in nine model wards of Coimbatore. Early morning monitoring of door to door segregated collection of municipal solid wastes in these model wards is also being carried out.
 - The educational materials developed as part of this project include: three Tamil brochures on Composting, Lesser Plastic and Garbage; newspaper advertisements in both Tamil and English; and six banners in Tamil.

12.1.5 Regional Resource Persons' Training Workshop on "Public Awareness Campaign for Municipal Solid Wastes and Plastic Wastes"

This project, supported by the Ministry of Environment and Forests, GoI, comprised of a one day regional resource persons' training workshop cum agenda preparation meeting on "Public Awareness Campaign for Municipal Solid Wastes and Plastic Wastes" at our locations in India, viz., Coimbatore, Pune, Lucknow and Kolkata, during the period May 28-June 30, 2010. The workshops were attended by state representatives comprising of officials from state environment departments, pollution control boards, state departments of municipal administration, urban local body officials of selected cities, NGO representatives and private companies dealing with waste management. A complete session on the effective use of media and communication in popularizing the concepts of solid waste management among the general public and

related stakeholders was a highlight of the workshops across the country. The IEC materials on solid waste management were also trans-adapted in the regional languages and printed for distributions to the participants. The training sessions were followed by sharing of best experiences/ case studies by the local NGOS and municipal officials, which in turn motivated the participants to think in new directions for positive results. The meeting culminated in a working group exercise in which the participants and local ULB officials developed proposals to conduct such awareness and popularizing campaigns in their region of work, which were then presented and shared with the entire group of participants. All the regional proposals developed in the workshop have been submitted as part of the final report to MoEF.

12.1.6 IGNOU-CEE Certificate Courses in Solid Waste and Waste Water Management

Environmental and developmental issues have been engaging social attention for quite some time now and the matter has assumed such dimensions that any further procrastination in terms of a social action plan is likely to bring disastrous consequences. It has often been seen that environmental issues either get enclosed in pure science discourse in a way that they become inaccessible to the common man or get discussed in a language which is too pedantic for any meaningful result. A social action agenda perhaps requires an intersection of science and social impact of adverse environmental conditions such that the area of overlap becomes a matter of general educational concern. If this objective

is kept in view, programmes of vocational/extension education can be developed that focus on environmental issues, their social implications and solutions, wherein convenient and common place attempts at mitigating impending environmental catastrophes could be included. Accordingly, it is proposed to design, develop and disseminate two awareness-cum-training educational programmes as certificate programmes for municipal sanitary workers. The programmes have been identified during the brain storming session and the meetings of the expert group that followed, consisting of academics, CEE, other NGOs, industry and pollution control agencies, held at IGNOU. This small decisive educational step is proposed to be delivered in easy and intelligible language, which will go a long way in addressing the issues/problems concerning environmental management at the grass root level. The proposed programmes are:

- Certificate in Solid Waste Management
- Certificate in Waste Water Management

The target clientele for the above programmes are *Karamcharis* employed in all ULBs in the country (extendable to *Zillas*, Gram Panchayats and all municipal areas). To achieve the above, CEE's WaRM group, along with other well known writers and environmentalists, has been working consistently to put together several chapters and modules of the courses. CEE is involved in the overall conceptualization, design, writing and editing of the course material. CEE will also deliver the course through its various offices across the country during the implementation phase. A formal MoU for

the same is being worked out. Two authors' workshops and one evaluation workshop/meeting have been organized by IGNOU this year. The programme would be launched formally by the School of Science, IGNOU.

12.1.7 Multi Stakeholder Consultation for Addressing Industrial Waste Management in Orissa

WaRM group is working on the project "Multi Stakeholder Consultation for Addressing Industrial Waste Management in Orissa", whose overall objectives are: creating awareness, building consensus, generating participation in the processes of change and development, and making informed decisions for reducing the environmental burden caused by industrial waste and effluents in the region. The project also aims to evolve cost effective, environmentally sound and feasible strategies to mitigate the identified problems and concerns faced by the various categories of industries of the region.

During this year, a multi stakeholder group was formed and stakeholder meetings held with an aim to develop future actions. These included many interventions at the scientific, policy and industrial levels. The findings from these recommended interventions were summarized and circulated among the stakeholders for further comments. IEC material for the project has been developed for distribution to the local public, which provides them information on best practices for maintaining their health while working in chromium mines.

Two bio-remediation proposals have also been framed as part of the scientific interventions from the members of the

stakeholder group from AMIFEM and KIIT School of Biotechnology, KIIT University. These propose the use of chromium tolerant plants and microorganisms to remediate the contaminated soil of the toxic form of chromium.

A visit to the chromium mining region was undertaken to collect soil and water samples for analysis and estimation of the amount of chromium present. The site visit was undertaken during the monsoon, when there is a mining holiday. An overall visual survey helped the team to understand the gravity of the problem of pollution in the region; untreated mine discharge and runoff water from the mines could be observed joining the Damsala Nallah, the sole water source of the region. The lack of development in the region, which has no basic amenities for the local public except some borewells dug by the Tata Steel and Balasore Alloys Ltd, were also noted.

Six water and three soil samples were collected from the region and were analysed for estimating the amount of Chromium and Hexavalent Chromium present in them. The analysis was conducted at the Environmental Research & Services (P) Ltd. – a PCB certified establishment. The results came out as expected: the levels of Chromium in the water samples were higher than the permissible limits, but the disparity was not huge. The observed disparity was found to be related to the monsoon inflows into the water streams.

WaRM group has been recently added as a member of the Utkal Chambers of Commerce and Industry (UCCI) where Ms. Reema Banerjee, Programme Coordinator

will represent CEE and be part of its Environmental Advisory Committee. This is expected to strengthen the ties between CEE and UCCI and will be mutually beneficial.

As an extension to the multi stakeholder project, The WaRM group has proposed an Environmental Training project for the industrial units in and around the city of Bhubaneswar. This is presently under discussion and may soon be implemented with the assistance of UCCI.

12.1.8 Ground Water and Surface Water Remediation through Biofilters for Removal of Metal and Colour

This project is based on the environmental pollution remediation approach and is site specific to Balotra, Rajasthan where the condition of ground water and surface water is moving from bad to worse. CEE, in its previous project, had discovered that this area is badly affected by textile effluents causing serious problems of textile chemicals, mainly dyes and metals. Studies made by others and CEE's own recent findings on the water quality from a preliminary study of this contaminated area, have led IIT Kanpur to associate with CEE and facilitate field trial of biofilter for the drinking water sources in the villages of Balotra. Deep rooted chemical pollution in the water bodies - ground and surface - has adversely affected the drinking water quality. Instead of a survey study, the project proposes a remediation plan for the affected areas by popularizing biofilters. While IIT Kanpur is involved in basic laboratory research, testing and development of biofilter of specific standards/conditions, CEE's involvement in the project is to provide details on the quantity, quality and

distribution/location of colored, saline and metal polluted water sources in Balotra; community education and awareness, and monitoring. CEE will also prepare a report on the potential impact of the use of contaminated water on the livelihood of the rural poor in this region. The data that has accrued from the project on industrial waste in Balotra implemented earlier has been shared with IIT Kanpur. During the visits to the affected villages, various issues related to the extent of contamination and impact on health, agriculture and drinking water sources were discussed, so that the gravity of the situation could be assessed and understood, and an approach for remediation of the contaminated land/natural body could be developed. Villages like Bithuja, Bindu Kua and Jasol have been identified for field trial of the biofilters. The samples of contaminated water have been sent to IIT Kanpur for testing. Two community awareness meetings have been conducted in the aforesaid villages of Balotra region to discuss the issues and popularize biofilters and other methods. Biofilters have been distributed to twenty families in the three villages, which have been connected to their drinking water source; the filtered water is being used mainly for drinking purpose. The evaluation of the filters is ongoing.

12.1.9 Creating Awareness on Fly ash Management among Students of Vocational Education and Training

CEE Kolkata has been approached by West Bengal Pollution Control Board to conduct an awareness programme on fly ash management in two regions of West Bengal. The target audience was students of

vocational education and training. The main objectives of the workshops were to create awareness amongst the students about various aspects of fly ash - its generation, utilization and concerns regarding its disposal. Awareness on fly ash was also linked with their immediate environment, ecosystems and climate. The workshop also aimed to mobilize youngsters to find solutions to fly ash utilization/disposal by instilling in them a spirit of scientific inquiry. It highlighted the various opportunities available for the young entrepreneurs to utilize the disposal options as a means of income generation. A leaflet on various aspects of fly ash was developed and translated in Bangla for the local students. The leaflet provided information on concerns about and management options for proper utilization of fly ash. Two such workshops were held: February 18, 2011 in Durgapur and February 25, 2011 in Kolaghat. These venues were chosen for the workshops due to the existence of thermal power plants nearby, which necessitates awareness creation among students of the region on the effective and proper utilization of fly ash generated by the plants. About 175 vocational education students from Durgapur, Kolaghat and nearby places participated in the workshops. Officials from West Bengal Pollution Control Board, the thermal power plants of Kolaghat and Durgapur and Fly Ash Based Fly ash Brick Manufacturing Association (FABMAS) were also present in the workshops as resource persons /experts. Different kinds of fly ash bricks, tiles and pavement materials that can be used for various construction activities were showcased. The focus was on initiating and taking up fly ash based enterprises by

students apart from providing a basic understanding of various aspects of fly ash management.

12.1.10 Environment Management (EM) Capsule Course For Management Students

12.1.10.1 EM Capsule Course for Students of Aravali Institute of Management, Jodhpur, Rajasthan

The WaRM group organized a capsule course on Understanding Environment for the students of Aravali Institute of Management (AIM), Jodhpur. The course comprises both lectures and field visits. Two batches of 2nd year PGDBM students of AIM visited Ahmedabad for a week long programme during October 2010 and April 2011 respectively, for the capsule course. In the reporting year, 80 students benefited from the course, which enlightened them on various aspects of and concerns regarding the environment. The aim of the course was to create awareness and inculcate environment friendly practices in the students. It also aimed to infuse the concept of environment management and sustainable development in their future decisions as budding managers. The indoor sessions for the batches comprised of topics on sustainable development, climate change, energy, water conservation, biodiversity, legislations, waste management, green business initiatives and environmental health. The sessions were handled by in-house experts as well as subject experts from other reputed institutions. Professors from IIM Ahmedabad helped judge the green business plans of one of the batches and also guided them on how to create a successful business initiative. The students also actively

participated in group activities which brought out their talents. The two day outdoor session included activities like trekking, rock climbing, bird watching and star watching/identification in Polo Forest. The course also sensitized the students to gender contextualization and human rights issues linked with environment.

12.1.10.2 Capsule course on Understanding Environment for Affinity Business School, Khurda, Orissa

The course was conducted from April 26-30, 2010 in the auditorium of Affinity Business School by the WaRM group of CEE East. Forty students attended the four day long course. Eminent people working in various fields of environment were invited to appraise the students on varied aspects of environment during the course. Designated people from universities, State Pollution Control Board, NGOs, Chilika Development Authority and senior WaRM group persons handled sessions for them. This week long capsule course used classroom lectures, films, power point presentations, a field visit to Satpada, Chilika as well as various filler activities to ensure participation of all students and to make the sessions more interactive and enthusiastic. The four day programme generated enthusiasm as well as understanding on their roles and responsibilities towards environment. Replication of such capsule courses can go a long way to building awareness and motivation among the younger generation.

12.2 Other Services, Workshops & Consultancies of WaRM Group

Trans-adaptation of Coastal Regulation Zone Notification in Bangla: The CRZ notifications

and the recently notified Island Protection Zone have been trans-adapted and edited in Bangla for the MoEF website by the WaRM group staff at CEE Kolkata.

Go-Zero - The carbon Offset Expo at Poorva Sanskriti Kendra, New Delhi: The Society of Child Development and the MoEF organized *Go-Zero: The Carbon Offset Expo* at *Poorva Sanskriti Kendra*, New Delhi. CEE used this platform to showcase all its publications and its ecofriendly recycled products. WaRM group members shared the benefits of recycling the waste and contributed their experiences various community initiatives with the visitors.

Earth day at Apollo Tyres Pvt Ltd , Gurgaon: The employees of Apollo Tyres organized this event to mark the contribution of every individual towards the betterment of environment. The CEE team showcased the short movies *Kooda Kya Hai* and *CEE-Ecofriendly Recycling Unit* during this event. CEE also showcased its publications and eco-friendly recycled products.

Workshop on Management of Operation Theatre and Labour Room Organized by MP Nursing Home Association, at Gwalior: In this workshop held on May 9, 2010, Dr Shyamala Mani delivered a lecture on Infection Management and Environmental Protection in Operation Theatre and Labour Room.

Training cum Craft Workshop: WaRM group of CEE Delhi celebrated World Environment Day on June 4, 2010 at CEE Delhi, with the theme of the event being Lesser Plastic. WaRM group members trained every participant individually in making coasters and baskets. The resource materials used for

these craft were gift wrappings, chips packets and dry grass (*Khus*), which were provided by the WaRM group on the spot to the participants. All participants received participation certificates.

Enforcing Ban on Plastic Carrybags in Rajasthan through Informed Citizenry: This was organized by the Association for Rural Advancement through Voluntary Action and Local Involvement (ARAVALI) on June 16, 2010 with support from Rajasthan State Pollution Control Board. WaRM members from Delhi delivered a lecture on CEE-ERU Eco-friendly Unit and explained to the participants the various steps taking by CEE for for management of waste, through films like *Nirmal Yatra*, *CEE-ERU* and *Clean up Kodagu*.

National Conference on “Cost Effective Sustainable Sanitation - An Indian Experience”: WaRM group staff attended this national conference organized by WASH Institute and Department of Drinking Water Supply and Sanitation during June 28-30, 2010.

Fair Trade and Sustainable Consumption: WaRM group attended and participated in the Round Table on “Fair Trade and Sustainable Consumption”, organized by the Fair Trade Forum - India on June 30, 2010.

Consultation Meeting on Draft E-waste Rules: WaRM group attended a consultation meeting on Draft E-waste Rules organized by Toxics Link on July 1, 2010.

Climate Change Workshop: WaRM group attended and participated in this workshop organized by CEE and World watch Institute in Delhi at the India International Centre on September 13, 2010.

Ms. Reema participated and attended the workshop on **“Evolving Network for Sustainable Transportation** organized by CEE in Ahmadabad on July 29-30, 2010

Learning Networks Workshop on Low Carbon Lifestyle: AIESEC - IIT Kharagpur Chapter, as part of their Green Vision, organised a learning network workshop on October 23, 2010. Ms. Reema Banerjee, on behalf of CEE, was invited as a resource person to facilitate the learning through a four hour workshop for 150 students of IIT Kharagpur. The workshop aimed to generate an inclination among students towards understanding the concept of ESD and motivate them to adopt low carbon lifestyles to mitigate the Climate Change effects.

Ms. Reema, as a part of her mentoring programme under the **Regional Facilitator’s Course – NeXT**, conducted by ASPBAE, attended the reflection workshop during November 24-27, 2010 at Bogor, Indonesia. The echo workshops conducted by each participant were reflected upon; plans were also made to continue the facilitations beyond boundary in a sustainable way.

12.3 Hussain Sagar Lake and Catchment Area Improvement Project (HSL&CAIP)

CEE AP has implemented the project “Hussain Sagar Lake and Catchment Area Improvement Project (HSL&CAIP), with the support of Hyderabad Metropolitan Development Authority (HMDA). The main objectives of the programme are

- To conduct various awareness meetings on Solid Waste Management, Health and Sanitation, and community toilets, and

public awareness activities in the existing area and in the extended areas of M. S. Maktha and Raj Nagar colonies (Cluster-II) - slums adjacent to the Banjara Nala;

- To identify the status and issues of solid waste management and develop solutions with the support of GHMC and HMDA;
- To identify the open dumping and open defecation areas in the colonies and develop solutions with the support of GHMC and HMDA;
- To identify solutions for proper collection of household wastage from the colonies by *subraks* and GHMC workers

CEE organized awareness programmes on Zero Waste Management for various groups of people living in the above mentioned colonies, particularly for community representatives, Self Help Groups and vendors. Community awareness material like posters, stickers and pamphlets were designed and distributed. Events like World Environment Day and Wetland day were celebrated. Cloth and paper bags were distributed to prevent/reduce the usage of polythene carry bags by the public. As part of the programme, health camps were organised for the community. Environmental education activities like nature camps, nature trails and film shows on solid waste management were organised for school children.

12.4 State Level BMWW Workshop in Lucknow

CEE North and WaRM group organized a state level training cum orientation workshop in Lucknow in April 2010, in association with UP Pollution Control Board and with the

financial support from Ministry of Environment and Forests.

The workshop deliberated on the understanding about the bio-medical waste management (BMWM) system, related legislations, case studies from Rajasthan and Delhi, implementation concerns, role of various stakeholders, occupational health hazards, common treatment facility success stories and related topics. Experts from MoEF, UNDP, JNU, IGNOU, Rajasthan Health System Development Project, CEE, UPPCB and Common Facility Operators were present and spoke about various aspects of BMWM and responded to queries from participants. Participants were taken through a virtual journey of CHAMP by the CEE team, showcasing it as a state of the art common facility.

Around 100-110 participants from government and private medical institutions, pollution control board, NGOs, *nagar nigams* and common facility providers attended and benefited from the workshop.

Recommendations of the workshop focused on the ways to overcome the constraints faced in the implementation of biomedical waste management practices, starting from segregation to its proper treatment and disposal. Recommendations included a wide debate on the implementation of legislation related to BMWM, phase wise shift to using glass syringes instead of disposable plastic ones, inclusion of biomedical waste management as a separate topic in medical and nursing curricula, feasibility of using interstate common facility services by HCEs of bordering districts and the need for enforcement of the existing legislation.

12.5 North Regional Workshop on Public Awareness Campaign

CEE North and WaRM group organized the first regional resource person training workshop cum planning meeting on “Public Awareness Campaign on Solid and Plastic Waste” in June 2010. The workshop was supported by the Ministry of Environment and Forests, Government of India. The objective of the workshop was to devise a road map for the participating states for better management of municipal and plastic waste in each of these states through education and awareness programmes and campaigns

During the workshop, the state representatives developed an action plan for conducting week/month/year long campaigns which will be executed in the next phase. The campaign will use advertisements in the newspapers, short film spots in cable television and radio channels highlighting issues, solutions and action plans which can be adopted by the towns / cities and districts of that state for better management of municipal solid and plastic waste.

The workshop was attended by over 60 participants from the northern states - Uttar Pradesh, Bihar, Uttarakhand, Himachal Pradesh and Delhi. Officials from State Pollution Control Boards, State Departments of Municipal Administration, NGO representatives and private companies dealing with waste management participated in the workshop.

13.1 Hoolock Gibbon- Conservation Awareness and Education Programme

To address the issues related to the conservation of Hoolock Gibbon in northeast India, CEE Meghalaya State Office is implementing the project on Hoolock Gibbon Conservation Awareness and Education Programme with the support of the United States Fish and Wildlife Service (USFWS) under its Great Ape Conservation Fund (GACF). The project duration is two years and involves site specific school conservation education programme, community campaign, training and capacity building programmes and local educational resource material development.

It may be mentioned here that Hoolock Gibbon is the only ape found in the Indian subcontinent and is distributed in the seven north eastern states. They are also referred to as lesser apes due to their smaller body size. There are two species of Hoolock Gibbon (Western Hoolock Gibbon, *Hoolock hoolock* and Eastern Hoolock Gibbon, *Hoolock leuconedys*). IUCN has declared the species as endangered and it is also a Schedule I species as per the Indian Wildlife Protection Act, 1972. The species are facing threat due to habitat degradation, poaching, encroachment and developmental activities.

The school programme, being the major component of the project, has been carried out by the formation of NGO-School clusters and implementation of year long school activities and programmes in the 20-25 selected schools falling in the fringe of gibbon habitats. A total of eight such clusters were formed under the project in Assam, Manipur,

Meghalaya, Nagaland and Tripura in northeast India covering a total of 130 schools. Eight NGOs were trained in developing their skills and capacities towards implementing this project and supporting the field based programmes locally.

The project strives to inform the fringe village communities about the need for protecting the species and its habitat through the school children. The overall project goal is to spread awareness and education concerning the dangers faced by Hoolock Gibbon and its habitat and the urgency of the conservation actions required at the ground level.

The activities conducted during the reporting year include the following:

13.1.1 Development of a Teachers Manual

The manual consists of background information as well as activities on Hoolock Gibbon. It aims to acquaint the teacher and provide enough information for her to teach students about the Gibbon, its habitat, social behavior and characteristics; to create a positive attitude and a sense of responsibility among school children regarding various aspects of conservation; and to help students and teachers to undertake small research, education and action programmes. The draft of the English version has been developed, which will also be translated into Garo language.

13.1.2 Gibbon Newsletter

For wider publicity and community outreach for the project, two volumes of the *Gibbon Newsletter*, containing information about the species, news item, articles, stories and traditional beliefs about the Gibbon has been

developed and circulated to all the project partners.

13.1.3 Training and Capacity Building

Eight Teacher Training Workshops (TTWs) have been conducted in the project sites by the NGOs, with a representative of CEE present in all of them. The workshops were organized to orient and train the teachers-in-charge of selected schools under the project to take forth the Gibbon based educational activities and programmes involving children from their schools. They were held in collaboration with the local forest department and also involved the education department personnel and wildlife experts through sharing information and discussing the protection of the species and its habitat. During the TTWs, local district administration authorities, forest officials and the local MLA were also invited as speakers/resource persons.

13.2 Jumbo Conservation Education in North East India

With the declaration of the elephant in India as a natural heritage animal by the Ministry of Environment & Forests, GoI, CEE Meghalaya is working in close association with the forest and education departments, agencies and institutions of the north east, towards generating a project proposal on Asian elephant conservation education programme in North East India. Meetings and discussions have been held with Forests officials and NGOs to discuss various aspects of project implementation. Support from education department and grassroots NGOs have been obtained for implementing this project.

North East India is one of the high priority areas for Asian elephant conservation. Overall, the region contributes about 37% of the total elephant habitats and 35% of the recorded elephant corridors and elephant population of about 5200, in the country. North East India shares international boundaries with many elephant migratory routes and corridors with countries like Myanmar, Bhutan and Bangladesh. Many of these elephant corridors have been lost due to habitat fragmentation. This apart, the region has witnessed several incidents of elephant deaths by poisoning, accidents in railway tracks and by electrocution, while human elephant conflicts have resulted in death of both elephants and human lives.

To address these issues and to strengthen the effort of Asian elephant conservation in the region, CEE Meghalaya has taken the initiative to developing a project proposal on North East India Asian Elephant Conservation Education Programme. As part of the Centre's wildlife based conservation education programme in the northeast, the proposal has been submitted to the United States Fish and Wildlife Services (USFWS) during the reporting year for support funding. The proposal in principle has been accepted by FWS and is likely to give a sanction grant during July this year.

13.2 Dudhwa Initiative with Tribal Community

CEE North has been working in Dudhwa Tiger Reserve (DTR) since 2005 with the objective of conserving the rich biodiversity of the area with the Tharu tribal community using a participatory mode. The project activities are focused on the promotion of

sustainable energy and livelihood options along with community awareness and school education programmes, with the ultimate aim of minimizing the pressure on forest resources. Emphasis has been laid on making communities more self dependent with the help of education, awareness, training and exposure visits. The project is being implemented in a phase wise manner with the tribal community. The first three phases were supported by Keidanren Nature Conservation Fund (KNCF), Japan and focused on natural resources management and biodiversity conservation through building rapport with community, motivating and mobilizing the community to participate in related initiatives and also improvising the living standard of the community. The main action points were:

- To increase awareness about the conservation and protection of the biodiversity and natural resources of the area;
- To motivate the tribal community to participate in the conservation activities;
- To increase employment opportunities and thereby the per capita income through farm and non-farm based activities;
- To reduce the pressure on forests due to fuel wood collection and grazing within the protected area; and
- To create a synergy with the ongoing initiatives of government and other agencies.

Training programmes for capacity building and skill development and exposure visits

were organized during these phases. To maximize the efforts, CEE has signed a Memorandum of Understanding (MoU) with WWF Terai Arc office to take up more villages in the area. The efforts were focused on alternate energy options through introduction of various biogas models and improved stoves; alternate livelihood options such as organic, agriculture, herbal garden, handicraft promotion and marketing. The project also includes an initiative in the schools of the area.

Phase IV (2010-11)

After three consecutive phases of the Dudhwa Project, CEE has built up a momentum to take up demonstration activities to showcase sustainable options. The Commonwealth Foundation UK has supported this phase of the project which focuses on *Conserving Biodiversity through Introducing Sustainable Livelihood Interventions for the Indigenous Community*.

To build upon the CEE's past work with the community in the area, CEE decided to demonstrate and showcase alternative options which emerged as the need of the area and community. The interventions centred around creating livelihood opportunities, strengthening agricultural and animal husbandry practices of the community, providing alternatives for the forest based energy sources, involving youth and children of the Tharu community in biodiversity conservation initiatives, organizing environmental education and awareness programmes for schools and community members.

13.2.1 Sustainable Livelihood

In earlier phases, CEE had explored the scope of alternative livelihood acceptance and income generation options for the community, which led to CEE working with an artisan group of Tharu women making handicraft items, who were identified during the activities of the second phase. These Tharu women were engaged in making handicraft items but were not using it for income generation. CEE felt that improvised designs and linkages with the market, this can become a potential income generation activity for the women. CEE discussed this with the Tribal Cooperative Marketing Development Federation of India Ltd. (TRIFED) which then supported a three month Primary Level Training (PLT) programme on the making of *Dari* and handicraft items for these women members. The PLT training programme was held at Goubraula Village in the Dudhwa Range of the reserve.

TRIFED is an agency of the Ministry of Tribal Affairs, Government of India, which provides marketing linkages and training for handicraft items prepared by tribes from different regions of the country. A group of 20 Tharu women participated in this training programme and prepared various handicraft items (hand bags, hats, mobile covers and wall hangings) using sun hemp, and *Daris*, which were then sent for marketing trials to the TRIFED shops. After the marketing trial, TRIFED would place orders with the group for the successful products.

13.2.2 Sustainable Agriculture and Animal Husbandry

To strengthen the agricultural practices of the Tharu community and make agriculture

more profitable and sustainable, CEE had organized an exposure and training visit of the farmers to the Allahabad Institute of Agriculture Sciences, a Deemed University, in the third phase of the project. During the implementation of the Phase IV activities, CEE demonstrated vermicompost units in the project village and oriented the community members to adopt crop rotation cycle and organic farming. The use of vermicompost will enhance the soil fertility and water holding capacity of the soil. It will also minimize the huge investment required for the purchase of chemical fertilizers.

Considering the food security situation and the status of nourishment of the growing children, CEE promoted backyard vegetable gardening in the project villages. Seeds of local vegetable varieties including Pumpkin, Spinach, Brinjal, Carrot, Bottle Gourd, Radish and Bitter Gourd were provided to the community, avoiding the promotion of hybrid seeds. The results of this initiative were extremely good as evidenced by the productivity and taste of the vegetables grown organically.

13.2.3 Livestock Management Orientation Workshop

An orientation workshop on productive livestock management was organized by CEE in Dudhwa in September 2010 at the Primary School, Balera. The main objectives of this workshop was to make the community aware of productive livestock management practices, benefits of stall feeding, improved breeds of livestock, prevailing diseases in the area and their control, and also to motivate them to take this up as a livelihood generation activity.

For this programme, e-Pahal Allahabad, an NGO working on livestock management and livelihood generation partnered with CEE. Dr. Gopal Krishna, a veterinarian and Director of e-Pahal and Shri Harjeet Singh, an innovative farmer and dairy owner from the nearby village of Bhagvant Nagar, were the resource persons for this programme. Around 40 community members from the project villages participated in the workshop.

As a follow up to the workshop, two widows were provided with female goats as their source of livelihood, which, it is hoped, will also improve the breed.

13.2.4 Sustainable Energy

Four units of cow dung based biogas Units were demonstrated as a source of alternative energy options, to reduce the pressure of fuel wood collection from the forest. These demonstrations were conducted with the help of beneficiary contribution. The beneficiaries were selected jointly by the community members during village level community meetings. For the biogas units, WWF and the Forest Department provided support. The biogas units are becoming popular in the area among the community members, which will help in reducing the fuel wood dependency of the community in future.

13.2.5 Education and Awareness

Several rounds of meetings and discussions were organized to discuss environment, social and economic issues related to the village and the protected area with the villagers. A two day community awareness programme on the International Day for Biological Diversity 2010 was organized in May 2010

by CEE North in association with WWF Dudhwa. This programme was held at three locations and reflected the theme of the year '*Biodiversity is Life, Biodiversity is Our Life*'.

After a brief introduction on biodiversity and its role in our life, an interactive session was conducted which focused on the reasons for the decreasing diversity of food grains and vegetables and its consequences for the future. The importance of the forest and its flora and fauna was also discussed with the community. This was followed by a puppet show by Hariom Puppet Group from Lucknow, which not only provided entertainment but also sent out messages to the community encouraging them to take part in the conservation efforts of biodiversity at the local level. The show emphasized plantation and nurturing of trees and adopting newer options for energy requirements in the form of biogas and smokeless stoves that require less fuel wood.

Around 600 community members including women, farmers, youth, students, elders, media and officials participated in the programme.

13.3 Sanjeevani

The *Sanjeevani* project focuses on linking medicinal plant biodiversity conservation and experience based education, and extending the latter to the community level. It was supported by the Toyota Environmental Grant Activities Programme, Japan. The project developed 10 Post Basic Schools (PBS) as a hub for community oriented Biodiversity conservation and education. A Biodiversity Conservation Resource Area (BCRA), developed with each PBS, acted as an experience based nature

school for both the school and the neighbouring community.

13.3.1 Development of Biodiversity Conservation Resource Area (BCRA)

Designing of the BCRA itself was a highly educative and participatory process. The three main components that guided the designing of the hardware and software of BCRA were

- conserving biodiversity,
- biodiversity education, and
- recreational and aesthetic value.

As part of conserving medicinal plant diversity, the medicinal garden has about 60 planting beds with 30-40 herb species, 15-20 species of medicinal climbers in an exclusive climber zone, 30-40 medicinal shrubs, and 15-20 medicinal trees. In fact, many of the annual herbs have been planted for a third time, indicating the schools' interest and enthusiasm in the project. It is noteworthy that most of the BCRAs have 150-200 medicinal species as against the target of 50 planned for the project!

The BCRAs have been conceptualised as as an experience based learning centre – a nature school or nature laboratory - for school children, teachers and the community. Excellent educational opportunities have been provided for the school children and the community through the nursery, compost pit, bio-waste management unit, activity area, open class room, interpretation spaces, drip technology demonstration, specified areas for reading, observation and experimentation, rare medicinal plants, Special *Ayurvedic* Zone

(e.g. *Triphala* area), bird nesting, memorial plantation, small ponds, signage and herb processing area, which have been designed and developed in the BCRAs. These also establish an interlinkage between the school curriculum and extra curriculum activities. The reading area is become nature library for students. To support the conservation education activities each BCRA has a resource room with a wide range of education and training material in vernacular language.

Along with the educational components, recreational and aesthetic components like *Sanjeevani* hut, small hillock, rockery, live colourful fencing, internal pathways, garden area, gate, seasonal flowering area, lawn area, walk area, small play area and medicinal plants trail, also attract students, teachers, community members. Other schools in the neighbourhood also visit the BCRAs frequently.

A *Sanjeevani* Club developed in each PBS takes care of maintenance, growing, watering, weeding and collection of medicinal plants. A maintenance and use plan for the same has also been developed. The schools have started using the various medicinal plants for their health needs. Linkages have been created between the PBS, traditional healers, medicinal plant cultivators, *Ayurvedic* University, research centre, hospital and processing industry.

BCRA and its activities have strengthened the children's understanding and valuation of the importance of medicinal plants; it has also strengthened their self esteem and conviction that the traditional health care system is at par with modern allopathic system. Children also became aware of the

importance of medicinal plant cultivation as a source of livelihood in the future. All these, it is hoped, will lead to an increase in their awareness and capacity for preserving and conserving local biodiversity.

Some of the major activities during the year were:

13.3.2 Capacity Building and Educational Programmes

13.3.2.1 Exposure Tours cum Trainings

Four exposure tours cum training programmes were conducted to create awareness regarding the importance, cultivation, use and processing of medicinal plants were organized for teachers, farmers and traditional healers, which covered 239 participants from 10 villages and their Post Basic Schools. The major outcomes of these tours were:

- Understanding the medicinal value of plants and the basic philosophy of *Ayurveda*;
- Demonstrations and hands on experience in 21 basic herbal preparations with the support of *Dhanvantari Pariwar* Trust and preparation of a herbal first aid kit for the school/household;
- Understanding organic cultivation practices for medicinal plants;
- Making teachers more receptive and interested in using herbal based treatments/remedies;
- Capacity building programme for new/strengthening of existing medicinal plant based livelihood options for traditional healers;

- Experience sharing, strengthening *Sanjeevani* network and establishing linkages with other practitioners, cultivators, entrepreneurs and academicians from the field;
- Some places visited and the learning experiences gained by the participants included: the NGO *Jagaran* for their long term programme with certification, marketing strategies and community mobilization for traditional health services; *Vidyabhavan* to understand the training process and enterprise development; *Shikshantar* for non-school education programmes and employment generation; *Narayan* for their health education programmes; and Haldighat for *Ayurvedic* and aromatic crop farming and value addition.

13.3.2.2 Health Camps

With the partnership of various NGOs, *Ayurvedic* doctors and schools, seven health camps were organized in the Saurashtra zone to create awareness and understanding about the traditional health care system and the importance of medicinal plants. Five doctors of the *Dirghayu* Trust, *Bajarang Mitra Mandal* and *Ravikrupa* Trust and also seven schools participated in the health camps. During the camps, a medicinal plants exhibition was set up and talks organised by experts on medicinal plants and traditional health care. About 2000 children and 1300 villagers were examined in these health camps and traditional health care treatments suggested.

13.3.2.3 Workshop on Ceramic Waste as a Resource for BCRA

A one day workshop on “Ceramic Waste as a Resource for BCRA” was held for local

masons, teachers and students, for creating various educative built environments in the amphitheatre of the BCRA, with the support of BPS Architects. The participants learnt to use ceramic waste to produce designs in China Mosaic Pattern on the seats, and sanitary waste like wash basins and toilet seats to create the basic structure of an amphitheatre. The workshop gave them innovative ideas and the joy of creation and ownership. They also got basic practical lessons in architecture, masonry and design. At the end of the workshop, all the 23 seats in the amphitheatre were completed in patterns generated by the school children.

13.3.2.4 Nature Camp

A two day nature camp on medicinal plants for school children was organised at Hingolghadh Nature Education Sanctuary, to help children appreciate and learn about the local biodiversity, especially the richness of the medicinal flora. About 36 *Sanjeevani* Eco-club students, four teachers and six traditional healers participated in the nature camp. Medicinal plants identification trail, discussion on their medicinal use, nature and biodiversity education games and activities like medicinal plant leaf zoo were some of the activities conducted. Experts took sessions on medicinal plant biodiversity and its importance, and global warming and its impact on biodiversity. The art of poetry and its use for biodiversity education was also discussed.

13.3.2.5 Resource Material Developed

Sanjeevani Games: As a part of the school biodiversity awareness package, *Sanjeevani* Interactive Board Game consisting of four games combined on a single board with

electric circuit has been developed. It focuses on themes such as medicinal uses of plants, local names and synonyms for plants, identification, morphology and other related topics. All the resource centres and both the field offices have been equipped with the board game.

Aarogayani Sanjeevani - Exhibition on Medicinal Herbs for Health

An exhibition *Aarogayani Sanjeevani*, with 30 panels in vernacular language with high reader friendliness, has been developed. It displays herbal remedies for 29 commonly seen health issues using cartoon style conversation. The exhibition has been set up on various occasions in the project schools, villages and other places.

Sanjeevani Shikshan: Ek Abhinav Prayas - Handbook on Medicinal Plant Conservation Initiative

The handbook has been designed as a complete practical guide and resource book for anyone who wishes to replicate the *Sanjeevani* Project. It is a thorough process documentation of the project and the chapters cover topics such as concept, approach and strategies, capacity building programmes, reference material, developing a conservation area, demonstrative micro projects and others. To enhance its utility value, the book also has a list of resources, a discussion on technical terminology, health issues and uses of medicinal plants. The whole process of preparing the book was also highly participatory: the teachers and the staff team discussed and documented their experiences and learning, which were then transformed into this 100 page handbook.

13.3.2.6 Successful Outcomes

- A *Sanjeevani* network has been formed consisting of the principals of the 10 PBSs, 20 teachers, 20 traditional healers, farmers undertaking the 35 Demonstrative Micro Action Projects (DMAPs), 40 resource person, and 15 institutions and organisations that enable lateral learning. The members have been extending their services to sustain the initiative.
- Many of the schools have already started mobilizing financial and other support for strengthening the *Sanjeevani* initiative from other funding and government agencies.
- Traditional Healers have assured purchase of raw material from BCRAs and in turn provide their guidance and health services to the schools as part of the sustenance mechanism.
- For most of the schools, the BCRA has become a flagship programme, a must show to any formal/informal visitors.
- During this year, on an average, five to six formal schools visited their nearby BCRA, which sums up to about 50 formal schools visiting the PBSs and affiliated BCRAs.

13.4 *Nandanvan* Project

Background: Biodiversity, being fundamental to all necessities and services that underlie human civilization, the economic and social development of a region is often very closely interlinked with the quality and quantity of biodiversity therein. CEE implemented a yearlong *Nandanvan* Programme in

collaboration with China Light and Power (CLP) Holdings Limited, Hongkong at CEE's Halvad Field Office. CEE is the national partner of CLP in India for the campaign "Love the earth, Plant a tree".

This programme was implemented through the active involvement and partnership of teachers, children and community members in 35 primary schools and villages of Halvad, Surendranagar district, Gujarat. The goal of the project was to improve and conserve biodiversity in the semi-arid fragile areas through planting indigenous trees in 35 schools and villages by children and their parents. The activities undertaken as part of this programme are given below.

13.4.1 Consultative Meetings

Participatory consultative meetings were held with the 35 primary schools to discuss in detail the programme's aims and objectives, roles and responsibilities, programme implementation structure, expected outcomes, and mechanisms to ensure human and infrastructure facilities; the meetings also served to explore the external and internal resources in terms of people and institutional linkages.

The CEE team also met with the Block Education Department for getting permission for and involving the block level education officials in the *Nandanvan* programme, which helped to make them an official partner in the *Nandanvan* campaign.

13.4.2 Teacher Training

A one day teacher training programme for 40 teachers was held to orient them to the programme, form linkages, enhance their understanding on biodiversity and prepare

the school level action plan for the plantation and awareness programmes. The Block Education Inspector was present during the training and encouraged schools to actively participate in this neighbourhood greening and environment management process. Various activities and games on environment and biodiversity were conducted with the teachers to enhance their knowledge on biodiversity conservation. The sessions focused on the what, why and how of biodiversity and its linkages with primary education. In the technical session, participatory methods were adopted for selection of saplings for each school. A group discussion was held to decide the criteria for the selection of tree species for the school as well as community plantation. Based on these criteria, each partner school was requested to prepare a list of the species to be planted in the school as well as at home by the students or by farmers, after discussing with children. The list of species meant for a biodiversity garden at the Rural Knowledge Centre (RKC) was also prepared by the CEE field team. Based on all this, the final list of saplings showed a requirement of 22493 saplings of 75 varieties of trees, shrubs and climbers.

13.4.3 Nature Camp

A one day nature camp was organized for the children of each participating school at the RKC. The specific objectives of this camp were to create biodiversity awareness and to understand tree planting and plantation care. The campus also served as a location for field trips for children, where they could understand the native ecosystem and through the 135 indigenous plant biodiversity. The

campus biodiversity provided a hands on, practical education about the identification of various tree species, their importance, uses, planting techniques, maintenance and other related matters. The awareness programmes for children used various methods such as film screenings, talks, activities, games, identification competitions, and on-site practical demonstration of plantation, care and maintenance. In each of the 35 such nature camps that were conducted for the participating schools, about 100 children and one or two teachers participated, thus covering 3500 children and 55 teachers.

13.4.4 Pocket Book

A booklet on *Tree Plantation and Care* was developed to provide basic information on biodiversity, sapling selection, plantation preparation, plantation process, care and maintenance; it also contained environmental slogans. Ten thousand booklets were printed and disseminated among the participating schools and children. The text of the booklet was kept simple with liberal illustrations for ease of understanding about tree planting among children and the community.

Green Campaign for Green School and Village

Each school organised a one day green campaign in the respective village, involving children and community members in tree plantation in schools. During this campaign, saplings were distributed among children and their parents. More than 10000 children and 10000 community members from 35 villages participated in these programmes.

Subsequently, consultative meetings were held with each school to ensure and increase

the survival percentage of trees planted in the schools and design a system for their maintenance. Each school prepared and discussed an implementation plan for “Our School, Green School”, as part of which a small green learning corner would be developed through tree plantation. Support was provided for various care and maintenance activities, viz., small drip irrigation set for watering, protection fences for the green learning corner, soil work, manure, name tags for trees, seating places.

13.5 Biodiversity Conservation Activities in Chhattisgarh

13.5.1 Biodiversity Surveys

Field visits and rapid surveys of un-surveyed taxa were conducted in Guru Ghasidas National Park, Chhattisgarh involving representatives from CEE Central, external subject resource persons and Forest Department officials. These surveys resulted in

- Preparation of a butterfly checklist of 39 species covering five families and 19 Odonates including 15 Anisoptera (Dragonflies) and four Zygodactyla (Damselflies) species; and
- Identification of 19 important medicinal plants and collection of grass specimens for identification.

These surveys also recorded two fish species of *Garra mullya* (Sykes, 1841) and *Salmotoma boopis* (Day, 1873) not recorded before by Zoological Survey of India, and a species of fat-tailed gecko.

13.5.2 People’s Biodiversity Registration (PBR) Process

CEE developed Hindi formats with expert inputs from the experiences and formats evolved in Maharashtra for the People’s Biodiversity Registration (PBR) process. A four day PBR Training Workshop was organized for village youths from over thirty forest villages and Forest Department staff of Guru Ghasidas National Park. Another workshop was conducted for the field staff of *Lokshakti Samaj Sevi Sanstha*, Rajnandgaon and *Dharohar Samiti*, Kondagaon, Bastar towards the PBR process in seven villages. CEE also completed photo documentation of over two hundred and fifty rice varieties from Kondagaon *tehsil* of Bastar with *Dharohar Samiti*.

13.6 Achanakmar-Amarkantak Biosphere Reserve, Madhya Pradesh

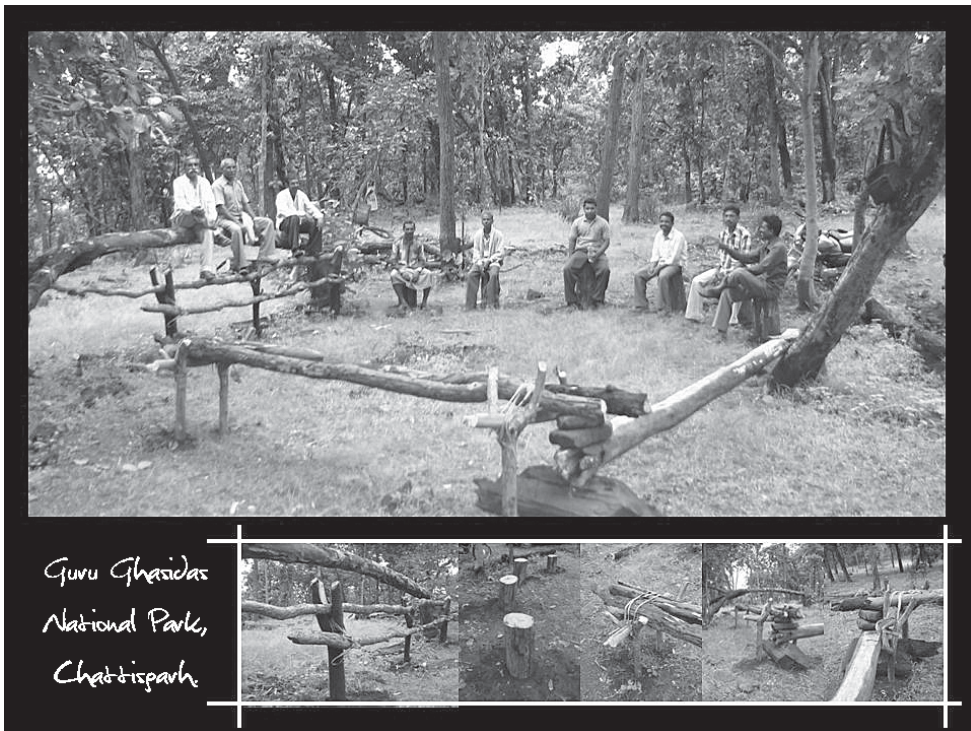
Based on secondary material survey, field visits and inputs from Biosphere Reserve officials, CEE Central developed and printed a map and brochure for the Achanakmar – Amarkantak Biosphere Reserve which was created in 2005 for Environment Planning and Coordination Organization (EPCO), Bhopal.

13.7 Biodiversity Conservation Education

The theme of this year’s National Environment Awareness Campaign is ‘Biodiversity Conservation’ where NGOs submitted their proposals on conducting awareness and action based activities. A state level orientation programme was organized

in February by the Regional Resource Agency for Eastern Uttar Pradesh, Shohratgarh Environment Society where Ms. Preeti Kanaujia facilitated a session on understanding biodiversity conservation in

the context of the state and talked about various ways to conduct conservation education programmes. Other speakers were from Forest Department and State Biodiversity Board.



Disaster Preparedness and Rehabilitation

14.1 *Rebuilding Trust - Rehabilitation of Earthquake Affected People of Kashmir*

According to the National Disaster Management Authority, Government of India, "The entire Himalayan Region is considered to be vulnerable to high intensity earthquakes of a magnitude 8.0 or higher on the Richter scale as the entire region falls in the seismic zone 4 and 5. Scientific researches have also warned of severe to very severe earthquakes likely to hit the Himalayan Region anytime, adversely affecting the lives of several million people of the country. *Rebuilding Trust*, CEE's Kashmir Earthquake Response programme being implemented since 2005, has now shifted its focus from response to preparedness. Most of the activities undertaken during the reporting period are aimed at increasing preparedness amongst the community.

14.1.1 Disaster Risk Reduction (DRR) Education in Schools

The objectives of the programme are to create awareness among the students and teachers; to involve them in understanding the various disasters specific to mountain areas; and familiarize them with precautionary and preparedness measures to ensure safety in schools and society at large.

With these objectives, the DRR awareness and preparedness campaign continued this year also in the schools of five project districts, viz., Ganderbal, Bandipora, Srinagar, Kupwara and Baramulla. After the introductory module last year, the strategy for this year was to reach the students of middle and higher schools with a more detailed module on preparedness, involving the students in rapid visual risk assessment in and around their schools, getting ready school disaster preparedness plans and participating in mock evacuation drills. The multimedia mobile exhibition was used for demonstration and hands on experience. In all, 35,483 students and 2,474 teachers from 282 schools falling in two districts participated in this drive during the year.

15.1.2 Teacher Training Workshops (TTW)

Teachers act as 'change agents' for the society and hence training, orienting and reorienting them is significant. With this philosophy in focus, teachers are being trained since the inception of the Rebuilding Trust programme on various aspects of disaster management. The focus of the current teacher training programmes is on disaster preparedness and climate change education. The two day module designed by CEE provides necessary information related to disaster preparedness as per the CBSE

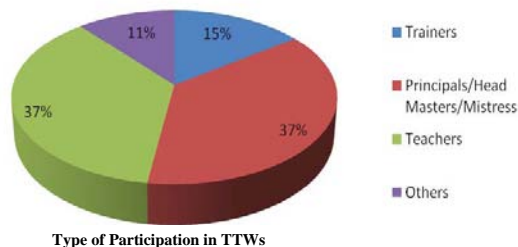
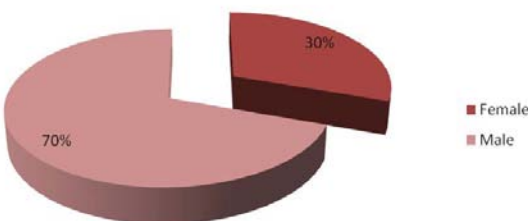
Table 1: Outreach of the School DRR Programme

Districts	Schools	Total Students	Boys	Girls	Teachers
Kupwara	82	4086	2086	2000	289
Srinagar	200	31397	15261	16136	2185
Total	282	35483	17347	18136	2474

syllabus. Climate change, emerging as a major issue to be addressed through education, is being adequately dealt with during these trainings. Teachers are also apprised of child rights, especially during disaster situations. Teachers get an opportunity to experience hands on activities like mapping of school premise for disaster proneness; vulnerability, risk and capacity assessment; mock drills and evacuation; making evacuation plans for the schools; identification of possible disasters that can occur in the area; first aid and fire safety.

More than 260 teachers were exposed to this climate change and disaster preparedness programme through four such trainings held in Baramulla and Srinagar districts. These trainings addressed not only the teachers, but also the resource persons and trainers from the education department, Principals of B Ed colleges, Head Masters of higher secondary and high schools. Members of the District Resource Group from Sopore Education Zone, Zonal Education Officer and Zonal Education Planning Officer of Pattan Education Zone also attended these training workshops.

Fig 1: Summary of Teacher Training Workshops



14.1.2.1 Training for Pre-Service Teachers at B Ed College Pattan

A one day training workshop was conducted by CEE Himalaya on the request of the Principal, Al Huda B Ed College, Pattan, for the B Ed students and their teachers on March 31, 2011. The aim of this TTW was to provide the students an insight into the climate change issues in the region and related disaster preparedness. The participants were given tips on how to cope with any disasters, draw an evacuation plan for their schools, and improve their habits and daily lifestyles towards low carbon emissions that help in safeguarding the environment. Around 120 B Ed students and their teachers participated in this day long workshop that focused on participatory, activity based and joyful teaching and learning methodologies. The participants got an opportunity to get hands on experience in using the IEC material developed by CEE.

14.1.3 Village Contingency Plans (VCP)

Contingency planning is an important step towards community based disaster preparedness. It aims at sensitizing and

orienting the community and local level governments about their vulnerabilities and capacities towards hazards and disasters, and helps them in preparing contingency plans for emergency situations. This activity is strategically relevant considering the fragility of the area and its proneness to various disasters. The Village Contingency Plan is a document prepared through a participatory process highlighting the capacities and vulnerabilities; needs for risk minimization; safe routes and evacuation plans; and the roles and responsibilities of stakeholders in case of emergency.

The significance of a VCP lies in the fact that it can be utilized by multiple actors - be it government, non government, national, international or military organizations - in disaster response. As the villagers or the community members themselves participate in its preparation, they also have a clear conception about the strengths and weaknesses of the community. Thus the probable critical issues that need to be addressed get highlighted during the process of preparing the plan. A DRR initiative prepared while keeping the VCP in mind will automatically address the socio economic vulnerabilities of that community and add to its strengths. Here lies the true essence of mainstreaming development with DRR.

Thirteen villages from three districts - Srinagar, Bandipora and Ganderbal - were considered during the year for the development of village contingency plans. *Sarpanchs*, villagers, religious leaders and other village representatives actively participated in the contingency planning process for their villages. PRA tools were used to assess the capacity and vulnerability

of the village and to prepare a plan to enable an immediate and effective response to a disaster. Social and Resource Map, Capacity and Vulnerability Map, History of Disasters, Livelihood and Hazard Matrix were prepared with the involvement of the local community. After collecting all the information about the village, the CEE team analyzed it and prepared the contingency plans. Such VCPs were prepared for the following villages: T. A. Shah, Gundi Qaiser, Shoukbaba, Kunusa, Brar, Gadoora, Chunduna, Urpash, Najwan, Rezan, Cheki-Youngoora, Bakshipora Tangpora, Takanwaripora.

14.1.3.1 Mainstreaming Village Contingency Plans into District and State Disaster Management Plans

Village contingency planning is a grassroots level exercise that feeds into the district and state disaster management plans which are being prepared by every state as a mandatory step under the Disaster Management Act 2005. In an effort to mainstream CEE's community based disaster preparedness initiatives to state and district DRR preparedness plan, CEE met with the officials of the State Disaster Management Cell, Srinagar and the District Disaster Management Cells in selected districts and shared the reports of the VCPs of 39 villages for their comments and inputs.

A meeting was held with the Disaster Management Head, Additional Deputy Commissioner, Baramulla. He was apprised of CEE's work in Kashmir. A brief discussion was held on DRR / VCP. A separate meeting was also held with the Joint Director, Planning to apprise him about CEE's work on village level contingency planning. The

Joint Director helped in procuring *tehsil* and local area maps and also provided overall support in other areas.

The Divisional Fire Officer, Sopore provided technical support for the mock drills. Other officers from departments like Agriculture, Mushroom Culture, Apiculture, Medical and others also supported CEE's initiatives.

14.1.4 Anandshala Schools

The *Tehsil* of Tangdar and Karnah are totally cut off from the rest of the Kashmir Valley during the winter months due to heavy snowfall and bad weather. There is only one exit to Kashmir Valley through the Teetwal-Kupwara Road transecting through Sadhana Pass, which also gets cut off easily due to slight disturbances in the weather or snow slides. The *tehsil* shares international borders with Pakistan on all other sides which are therefore under heavy security by the armed forces. The schools identified for reconstruction are very remote, where children were forced to study in the open even four years after the earthquake that damaged their schools. The progress in the construction work continued in all three schools - Magaray Patti of Nawa Gabra in Tangdar Education Zone and Ibkote and Bahadurkote in Chamkote Education Zone.

The Boys' Primary School, Ibkote being constructed on half *kanal* of land, includes three class rooms, one kitchen, a toilet and a small open play ground. The Boys' Middle School, Bahadurkote being constructed on one *kanal* land donated by Mr. Qulander Mir, a resident of Bahadurkote, has seven rooms with a kitchen and a toilet. The Boys' Primary School, Magaray Patti, Naya Gabra being constructed on one *kanal* of land

donated by by Mohammed Younis Qureshi, a resident and *Sarpanch* of Naya Gabra has five classrooms, one kitchen and a toilet.

The construction work is being supervised by CEE, Education Department and the SSA Engineer. Village Education Committees headed by the Zonal Education Officer were also involved in monitoring the quality and construction standards. The construction in all the three schools is nearing completion and CEE hopes to hand over the schools before commencement of the next session.

The design of the building is such that it can act as a shelter in case of an emergency. The SSA design for earthquake resistant buildings with some additions was used for these schools. CEE is developing these three schools in Kupwara and another six schools in Baramulla district constructed earlier as resource centres for disaster risk reduction, school safety and sustainable lifestyles, by providing relevant IEC materials, training teachers and involving students in a variety of programmes regularly.

14.1.5 Livelihood Restoration through Appropriate Technology Demonstration-cum-Training Centres (DCTC)

The 27 Training cum Demonstration centres to demonstrate and popularise appropriate technologies - Poultry, Apiculture, Mushroom culture and Poly green house - were established in ten villages during the previous phase of the RT project. These were constantly supported by the CEE Himalaya team for about three years. Some of the centres are doing well and also setting a good example in the area while others are still picking up. In order to phase itself out and help the

community own and run these centres independently, CEE handed these over to the community - to SHGs who run these centres through a legal agreement made in the presence of the *Sarpanch*, *Numberdar*, ward member and other influential members of the village. As per the agreement, CEE would continue to provide guidance and technical support to the members running these centres. However, sustaining the centres will be the responsibility of the concerned group and the village panchayat. CEE Himalaya will also continue to liaison with the concerned departments for their monitoring and follow up.

- Apiculture Centres have been established in six villages: Khurmazar-Noorkhah, Meyian, Reshawari, Bugna, Thajal, Bijhama and Salamabad Dachina.
- Mushroom Culture Centres were set up in seven villages: Noorkhah, Meyian, Reshawari, Bagna, Dani Syedain, Bijhama and Salamabad Dachina.
- Poly Greenhouse Demonstration Centres have been set up in seven villages - Noorkhah, Jabadar, Meyian, Reshawari, Bugna, Dani Syedain and Salamabad Dachina.
- Poultry Demonstration Centres have been set up in Noorkhah, Jabadar-Bijham, Meyian, Reshawari, Thajal and Bagna villages.

All these villages fall in Uri Tehsil, the worst affected area of Baramulla district.

14.1.6 Leh Cloud Burst

On the fateful night of August 5/6, 2010, Leh district of Ladakh province of Jammu &

Kashmir witnessed the worst natural disaster in its recent history. Successive cloudbursts and heavy rains brought thousands of tonnes of soil, sand, stones and large boulders into the valleys and low lying areas inundating them with over 20 ft of debris and causing massive destruction of life and property. The calamity took a toll of more than 1000 lives. Besides the local Ladakhi people, a large number of migrant labourers from Jammu region, Punjab, UP, Bihar, Orissa and Chhattisgarh also suffered and/or became victims of the disaster.

A good part of the livestock population also got trapped in the mud and slush resulting in the death of many animals. Agricultural fields with ready-to-mature crops of barley, mustard, wheat, potato and alfalfa got silted by more than 3-5 feet leading to destruction of both the crops and the fields. While some houses got totally washed away, others were partially damaged. Schools and other important buildings like hospitals, roads, bridges and petrol pumps too got destroyed or severely damaged.

Out of 112 villages, 36 villages were affected by this cloud burst. Fortunately, human casualties were limited to a few villages. However, most of the villages thus affected, suffered loss of agricultural land, damage to buildings and property, damage to infrastructure like roads, bridges, irrigation channels, water reservoirs and paths.

CEE Himalaya undertook a need assessment survey in about 12 villages and identified the intervention areas, viz., Psychosocial care for children and adults, Retrofitting and reconstruction of damaged schools, Technicians' training on disaster resistant

energy efficient construction, Shelter support for affected families, Providing irrigation to standing crops and restoring irrigation channels, Livelihood support – alternative and traditional livelihoods. CEE Himalaya also joined the NGO Coordination Committee headed by SPHERE India. CEE has submitted a proposal on intent of response to the disaster, on areas mentioned above. However, CEE could not intervene with a full fledged programme due to non-availability of resources

14.1.7 NIOT Staff Training Programme

CEE Tamil Nadu shared its experience in assessing the vulnerability of a group, based on its own experiences in coordinating the Tsunami - Rebuilding Lives Programme. Field exercises were conducted to demonstrate the technical processes involved in developing the vulnerability assessment reports.



15.1 Global Environment Facility (GEF) - UNDP Small Grants Programme

Small Grants Programme (SGP), funded by the United Nations Development Programme (UNDP), Global Environment Facility (GEF), seeks to support initiatives which demonstrate community based innovative, gender sensitive, participatory approaches and lessons learned from other development projects that lead to reduction of threats to the local and global environment.

The GEF SGP was launched in 1991 by UNDP to assist developing countries in fulfilling their commitment towards the protection of the global environment. The programme is sourced with a belief that global environmental problems can only be addressed adequately if local populations are involved in planning, decision making and sharing roles and responsibilities at all levels. With small amounts of funding, communities undertake a range of activities which enable them to leverage resources, skills, knowledge and funds from a variety of sources working directly at the grassroots level, while enabling them through the SGP to make a **significant difference** to their lives and livelihoods. UNDP GEF SGP is currently offered in 122 countries worldwide. The programme was launched in India in the year 1996-1997. The UNDP and the Ministry of Environment and Forests (MoEF), Government of India (GOI) administer the Small Grants Programme (SGP).

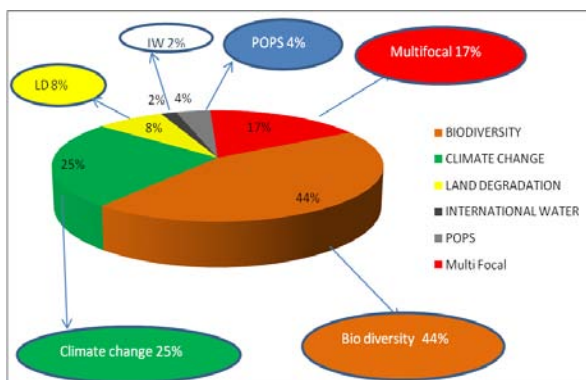
15.1.1 SGP India

In India, the SGP is implemented by CEE as the National Host Institution (NHI) since

September 2000. The emphasis of SGP India has been on establishing low cost, low external input and easy to manage technologies and social mechanisms to enhance livelihoods.

Some of the targeted beneficiaries of the projects during the reporting period tribal communities, women, communities affected by chemical pollutants from industrial effluents, marginalized communities (eg. rag pickers, Schedule Castes and Tribes), communities in and around protected areas, those residing in inaccessible remote areas, small and marginal farmers, women and the girl child, migrated communities and others. The projects approved during the reporting period target to benefit nearly 400 villages and more than 50000 households (HHs). All SGP projects are guided towards institution building at the village level. On an average, in every project village, the project partners have four to five Self Help Groups (SHGs) in which 80% members are women, involved in various activities related to environment protection and livelihoods. The projects supported in the period are expected to directly benefit more than 10000 women through project interventions.

SGP India, as of today, has supported 301 demand led, local area based and community driven actions. Apart from this, 14 projects were approved from UNDP CO grants under the project of Capacity Development Initiative (CDI) and 18 projects were approved under the grant of MoEF's In-country Co-financing. The map below gives an overview of state wise SGP dissemination.



SGP Focal Area wise Distribution

15.1.2 SGP Networking Opportunities and Linkages

GEF SGP in India has always encouraged and focused on sustainability of the actions, both at the project and programme levels. The focus of the India programme, over the last 3-5 years, has been to strengthen the projects and the programme through mentoring, regular face to face hand holding meetings, creating interface between

governments and institutions on one side and the NGO and CBO partners on the other to work in a systematic manner, building institutions, ensuring linkages and participation and ensuring active involvement of the community at each step.

At the programme level, two major achievements of the India programme were the support from

- Ministry of Environment and Forests
- UNDP Country Office (UNDP CO)

Considering the impact created by the SGP projects and realizing the need for more such projects to ensure sustainability, MoEF supported 18 projects while UNDP CO supported 14 projects of SGP India. The main objectives of such co-financing were:

- To scale up and replicate the projects of SGP which have created significant impact on the environment;
- To reach out to such geographical areas in the country which are remote and inaccessible and require immediate interventions to address environment and livelihood concerns.

At the project level, SGP India has developed linkages and partnerships with the Ministry of Rural Development (MoRD), Department of Science and Technology (DST) and the private sector, and looks forward to more such partnerships.

Many private partners and international institutions like GTZ, Energia and JSW have extended their support and continue to do so towards building capacities and training SGP partners and the SGP team for better implementation of projects and sustainability.

SGP India has also extended its focus to training and building capacities of partners especially towards developing enterprise based business models for the promotion and sales of some of the remarkable environment friendly products. This approach has also evolved a new idea of forming an institutional set up strategically linking the SGP partners and establishing a brand/chain for the marketing and sales of their products. This will ensure long term environment sustainability and growth, and generate alternate livelihood options.

SGP India has always built and maintained partnerships and linkages among various target groups. It has also established partnerships with the private sector: corporate like JSW Energy (co financing to the tune of nearly Rs. 7,30,000), GTZ-ASEM (Rs. 2,50,000), GTZ-InWent (Rs. 5,00,000), Urja Unlimited (Rs. 1,50,000), Arcelor Mittal India (Rs. 50,00,000), and Catholic Relief Services (CRS) (co financing of nearly Rs. 24,00,000). The donors have given funds predominantly to scale up and replicate the actions and share workshop expenses.

Institutional linkages have also been established organizations like Indian Institute of Forest Management (IIFM), MBA institutes, Keystone Foundation and others. Nearly 54 student interns were hired by the project to document results and processes in the GEF SGP.

SGP India has also established partnership with RALIEGH'S (UK) AND AIRBUS FOUNDATION towards Conservation of Biodiversity including hands on actions involving young people and local communities from AIRBUS.

In country Co-financing of MoEF (Rs. 156.35 lakhs) and UNDP CO CDI (Rs. 246.49 lakhs) funds to the SGP programme in itself is a good example of the strengthened partnership with such agencies. Apart from this, there are various SGP projects being implemented with the support of and linkages with the local government bodies and schemes, corporate groups and other institutions.

Another linkage established has been in the area of collection of waste paper and recycling of the same into various paper products. One SGP partner has been linked with Microsoft-Delhi and Deloitte-Gurgaon for such an initiative.

SGP India and CEE have partnered with **Earth Day Network (EDN) for their campaign 'A Billion Acts of Green'**. The campaign aims to register one billion pledges for the environment on the website <http://act.earthday.org> in advance of the global Earth Summit in Rio in 2012. These pledges were simple individual gestures like riding a bicycle instead of driving, washing laundry in cold water, fixing a leaky tap, shutting off electrical appliances when not in use, turning ignition off at red lights and not leaving appliances on standby mode. These pledges have been directly uploaded on the website to add to the count of one billion.

A trainer's guide to Low Carbon Lifestyles was published during this period. This training tool kit is a set of materials in an easy to understand language and is based on the latest science and policy inputs. It aims to arm a trainer with facts and figures on how small changes in everyday actions can help reduce an individual's contribution to

greenhouse gas emissions in the atmosphere and also save money. It focuses on climate friendly choices we all can make in the use of electrical appliances, transport, paper, water and such every day activities. All the data provided in the tool kit is relevant to the Indian context and the choices presented are practical and easy to adopt.

15.1.3 Capacity Building

15.1.3.1 Workshops for SGP Partners

Three workshops on experience sharing and capacity building of SGP partners for the approved projects were conducted. The main objectives of these workshops were to build capacities of SGP partners and enhance their knowledge for the successful implementation of the project and project sustainability. More than 100 SGP partners and stakeholders from different parts of the country came together to share their experiences and learn ways and means of effective project implementation and sustainability. Apart from addressing the issues and strategies at the grassroots level for better 'project sustainability' these workshops also helped cross sharing of project experiences and ideas from the sanctioned projects between a range of institutions.

15.1.3.2 BMA (Business Model Approach) Workshops

For the capacity building of the NGOs and CBOs under the UNDP CDI project and the GEF UNDP Small Grants Programme (SGP), Centre for Environment Education (CEE) organized a two day workshop in sharing the final field level experiences undertaken by

the partners in a Business Model Approach towards women empowerment and sustainable development. The workshop was held on July 16-17 2010 at Fair Trade India Forum, New Delhi. More than 20 project partners have adopted the approach; different models of business have been adopted keeping in view the local socio-economic conditions of the area, the markets and local resource base use.

15.1.3.3 Exposure Visits SGP Women Partners

SGP women, especially SHG members (nearly 20 women) from Uttar Pradesh and Orissa had a rare experience when they were linked to the India Women, Food and Climate Change Training Programme, a yearlong capacity building and training program initiated by Women's Earth Alliance (WEA), USA and Gorakhpur Environmental Action Group (GEAG), India. The goal of the training was to equip rural women leaders with appropriate solutions, knowledge and networking support to manage climate change and environmental crises, to improve their food and economic security, while also ecologically managing their farms and natural resources. This training is a holistic one meant to benefit rural women farmers, and





Training given to Women SHGs to make cooking stoves

its curriculum is based on a foundation of sound gender and ecological principles. This training will be carried out in October 2011 in South India also.

15.1.4 STAR Funds - Operation Phase 5 - Small Grants Programme

With the STAR (System of Transparent Allocation of Resources) funds, the GEF secretariat allocates resources in an indicative way to its eligible countries in a replenishment period. This was developed to upgrade the Resource Allocation Framework (RAF), which was used in the fourth replenishment period of GEF 4. In the fifth replenishment period - GEF 5 - the STAR covers three focal areas: Biodiversity (BD) Climate Change (CC) and Land Degradation (LD). Other focal areas and programmes may be covered by the STAR in the future GEF replenishment periods.

The main benefits of STAR for eligible countries are predictability of funding and flexibility in programming. This will also enhance the planning process and contribute to country ownership of GEF projects and

programmes. In addition, the STAR can incentivize eligible countries to maximize their investment benefits, so that they may get higher allocation in the next replenishment period.

India has been graduated to FSP under STAR funds with an allocation of 10 million USD. GEF Council has allocated USD 5 million for four years, and on replenishment, the next 5 million can be sought from GEF Council .

15.1.5 Awards for SGP Partners 2010-2011

15.1.5.1 SGP/GEF/IND/OP3/1/05/RJ16 - IBTADA - Project Title - Scaling up animal husbandry practices as sustainable livelihoods, empowering women through credit, self help and alternative fuels/energy sources

IBTADA has been awarded 1st Runners Up for **Outstanding Annual Report** in medium category (50 lakhs to 5 crores) by CSO Partners Forum in India. The award consists of a cash prize of Rs. 1 lakh.,

The award has been selected by the panel of jury based on a review of accounting practices adopted by the participating enterprises in the preparation of their financial statements, disclosures and communication in their published annual reports. The way information was documented for the GEF/UNDP SGP projects was taken as a best practice. Accordingly, the award signifies that the practices followed by IBTADA in the respective projects, community level institutional frameworks, development of the concerned enterprise in the form of livestock units by

the NGO – all these were seen as innovative examples. Many small scale enterprises, some started with support from GEF UNDP SGP amongst them, had participated in the competition.

15.1.5.2 SGP/GEF/IND/OP3/1/05/OR18 – SAMBANDH - Project Title - Program for promotion of indigenous knowledge for biodiversity conservation and its applications for health and livelihood security among tribal communities in India with a demonstrative intervention in Orissa.

Name of the Award - 2011 India Development Marketplace by World Bank

The Heritage Producers' Company promoted by SAMBANDH has received the award from 2011 India Development Marketplace of World Bank. SAMBANDH, an SGP partner, facilitated the formation of the Healing Heritage Producers' Company (HHPC) in 2005 with an objective to nurture the cooperative spirit and inject a corporate efficiency in the management for promotion of traditional medicines and herbal tea. With 13 members in the Board of Directors and 1072 general body members from cooperatives, Self Help Groups (SHGs) and associations of local healers, this company now produces 22 products and has a turnover of more than Rs. 50 lakh during 2010-2011.

The contribution of GEF UNDP SGP and the collaboration with NABARD, GIZ, KFW, Department of Science and Technology and FAO has also been recognized with this award. This award would help them to

develop a specific product - an anti-malarial for the malaria endemic areas. GMCL and FRLHT had also played a role in instituting a good marketing strategy in the initial years. Now its products are well recognized in the market including the metros in India.

15.1.5.3 SGP/GEF/IND/OP3/1/05/MS20 - Yerala Projects Society (YPS) - Project Title - Demonstrative project to link ecosystem and livelihood mechanism to counter desertification in Jalihal area of Sangli district of Maharashtra

Name of the Award – *Rajashri Shahu Gaurav Puraskar*

This SGP partner has received the prestigious award *Rajashri Shahu Gaurav Puraskar* for its contribution in the fields of rural development, livelihoods and educational activities. This award has been instituted by *Rajashri Shahu Chatrapati Memorial Trust*, Kolhapur, Maharashtra. The award distribution was held on February 17, 2011 in Shahu Memorial Auditorium, Kolhapur. It was given by the President of the Trust, Dr. N. J. Pawar, Chancellor of Kolhapur University in the presence of ex-Minister Mr. Shrinivas Patil, Satara and trustees. This year (2011), the trust has selected four individuals persons and one organization, Yerala Project Society (YPS) for its awards.

Yerala Project Society (YPS) has been conducting a range of activities, but the initiatives undertaken with the support of GEF UNDP SGP in its initial project and then the scaling up effort has been much recognized as a more conservation cum

livelihoods approach in the rain shadow areas of Sangli district, in Maharashtra. The project was titled “Scaling up subsoil irrigation programme to support marginal farmers from drought prone areas in horticulture to ensure sustainable agricultural”

15.1.5.4 SGP/GEF/IND/OPII/04/TN/10 - CREED – Project Title - Community-led Biodiversity Conservation of Mangrove Forest Ecosystem in Pitchavaram; Institutionalizing organic approach in land upgradation to optimize livelihood of poor families

This GEF UNDP SGP partner won the best NGO award, which was given away by the President of India on November 14, 2010. This *Seva* award is conferred on three individuals every year who make outstanding contributions in the fields of Child Protection, Environment, Child Development and Child Welfare, and the selection is made by a National Selection Committee chaired by the Minister of State for Women and Child Development Smt. Krishna Tirath.

15.1.6 UNDP GEF Small Grants Programme – Southern Region

The following were the highlights of the year under discussion:

- **Wider circulation of the information about GEF/CCF – SGP to the target agencies (NGOs, CBOs, Educational Institutes, Registered Trusts and others) in the southern region**
- **Providing technical and scientific inputs to NGOs in the Southern Region for**

developing project proposals under the SGP

- **Organizing the Regional Committee Meetings to scrutinize the proposals; Scrutinizing and commenting on the concept papers and application forms received from the target agencies in the region**
- **Completing the mid-term and final evaluation of projects under the programme**
- **Execution and monitoring of the programme in the southern region**
- Discussions with NGOs visiting the Southern Regional Office on developing proposals and concepts for SGP projects
- Completing the reporting work for mid-term and final evaluations, and the semi-annual report on GEF UNDP SGP in the region

Some of the specific activities carried out in the region:

- About 100 wider circulations, two RCMs, two GEF meetings, 30 office and 12 field discussions with NGOs were conducted.
- About 30 proposals were developed, while two mid-term evaluations were carried out during the reporting period.
- About 60 proposals and 140 concept papers were reviewed and comment notes sent to the applicant organizations.
- Discussions were held with various NGOs/CBOs on developing proposals for SGP projects.

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- A field visit was carried out with the staff of *Sahayoga* and Centre for Sustainable Development to review the work of a sanitation related project.
 - The officials of UNDP and Ministry of Environment and Forests, Government of India, visited the southern region to review the progress of SGP projects.
 - SGP personnel attended the project related meetings of the programme in Bangalore, Ahmedabad and Delhi.

15.2 Public Consultations

15.2.1 Public Consultation on Coastal Regulation Zone (CRZ)

Following the Coastal Regulation Zone (CRZ) public consultations conducted by CEE, the Ministry of Environment and Forests (MoEF), had come out with the pre-draft CRZ 2011 Notification. CEE has uploaded this on the website and facilitated the general public to comment on the document. Further, MoEF also assigned CEE to bring out local versions of the pre-draft Notification for wider dissemination. Accordingly, CEE has worked toward producing nine local language

versions relevant to the coastal states and UTs of India. Subsequently, MoEF published the draft CRZ 2011 Notification in the Gazette and has asked CEE to bring out local versions of these too.

15.2.1.1 Facilitation Support to Department of Science, Technology and Environment, Government of Goa on CRZ

CEE Goa facilitated organization of meetings, workshops and discussions related to

enacting the CRZ 2011 and according a special status to the state of Goa. The Deputy Programme Coordinator of CEE Goa accompanied the government delegation led by the Hon'ble Minister for Environment, Government of Goa to Delhi for discussions related to CRZ.

15.2.2 Public Consultations on Green India Mission (GIM)

The Green India Mission is one of the eight Missions under the National Action Plan on Climate Change announced by the Prime Minister. It aims at improving the country's forest cover qualitatively and quantitatively, thereby increasing the carbon sequestration potential of our forests, so as to enhance the country's resilience to impacts of climate change. In its afforestation and forest protection activities the mission aims to involve a variety of stakeholders from all sections of society. The Ministry of Environment & Forests, which has the nodal role for the implementation of this Mission, asked CEE to conduct a series of Public Consultations across the country. During June and July 2010, CEE organized seven consultations for wider public awareness and to gather comments and feedback from the general public, civil society groups, researchers, activists, institutions and other stakeholders. The feedback was collated, analyzed and presented to the Ministry for finalizing its draft version of the Mission Document and to help the Ministry get a wider base of public support and input in formulating its action plans under this mission. The Hon'ble Minister for Environment & Forests, Shri Jairam Ramesh, chaired all seven public consultations, held at Guwahati, Pune, Dehradun, Jaipur,

Visakhapatnam, Bhopal and Mysore. CEE prepared and distributed 11 language versions of the draft mission document, and collected and consolidated feedback from across the country via post, email and other channels.

Concurrent meetings of senior foresters and other officials from key government departments were also held at these locations, which were steered by the Director General (Forests), MoEF. These meetings helped to focus on the operational, financial and inter-agency cooperation issues related to the proposed mission.

15.2.2.1 GIM Consultation - Dehradun

The consultation on GIM was held at the Indian Council of Forestry Research and Education (ICFRE), Dehradun on June 22, and was attended by more than 200 people representing NGOs, activists, scientists, forest and government officials, media, panchayat representatives, women groups from *van* panchayat, business groups and others, from various parts of northern India. A group of 30 IFS probationary officers was also part of the day long consultation.

The first half of the consultation was chaired by Shri Jairam Ramesh where he highlighted some of the the concerns of the mission like the fragile ecosystem of Himalaya, the need for maintaining the balance between environment and development, and maintaining the quality of forests. He listened to the various groups/representatives present in the consultation. The consultation elicited lots of suggestions and comments on the mission document from diverse groups.

15.2.2.2 GIM Consultation - Mysore

This consultation was held at Rani Bahadur Hall, University of Mysore campus, Mysore. Various stakeholders, including the state government officials of southern India, farmers, forest department officials, forestry scientists, forest managers, civil societies, CBOs and media personnel, numbering over 250, participated in the deliberations, which were presided over by Shri Jairam Ramesh. Reports as well as video, audio and photographic documentations have been submitted to the GIM Secretariat in Delhi.

After the consultation, a meeting attended by officers from the forest departments from the states in southern India, IGF and officials from MoEF.

15.2.2.3 GIM Consultation - Vishakhapatnam

CEE AP organised the public consultation on July 5 in which around 200 people participated

15.2.2.4 GIM Consultation – Pune and Bhopal

CEE Central organised the regional level public consultation in Pune for the states of Maharashtra and Gujarat, and in Bhopal for Madhya Pradesh and Chhattisgarh on the Green India Mission for the MoEF, which is a part of the National Action Plan for Climate Change (NAPCC). The draft document was provided in Marathi and initial public discussions held in Pune and Goa to create awareness about the GIM and invite people's comments and inputs. An orientation was held for media representatives prior to the public consultation. The inputs from the public were compiled and submitted for incorporation into final report for the Ministry.

15.2.3 National Consultations of CBOs & NGOs on Desertification, Land Degradation and Drought (DLDD) and Best Practices; Strengthening Synergy between the Rio Conventions (UNFCC, CCD and CBD) at the local level

The consultation meeting of civil society was organized to get NGOs' views on the issue of DLDD and their experience with best practices. The workshop was organized to facilitate discussion and exposure to the issues on the field, delineation of best practices and convergence of the three important UN conventions. Best practices were identified in technology, application and adaptation, capacity building and awareness, knowledge management and public participation and networking approaches to management. Some of the important points raised during the consultations pertained to the need to undertake an evaluation exercise on existing schemes to check how much convergence exists, role of private sector and how they can integrate through better sharing of experiences, documentation, link between traditional knowledge systems and technology, how the successful best practices can be mainstreamed into policy which can lead to development of action based programmes, need to allocate, create a separate innovative fund to combat desertification through civil society, find ways how LD can partner through programmes/grants of the National Rain Fed Authority, need to capacity build people on those areas we want to impact, need to avoid reinventing, duplication of resources, working in isolation and finding the missing links to optimise the resources.

About 37 experts from diverse fields participated in the meeting.

15.2.4 Stakeholder Consultations for Developing Vision Document for Goa

The Government of Goa has constituted the Goa Golden Jubilee Development Council chaired by Dr. Raghunath Mashelkar. The objective of the council is to prepare a vision document for the state of Goa for the next 20 years. Various subgroups have been identified by the Council to evolve the vision document. Environment and Sustainable Development is one of the thirteen subgroups constituted by the Council, with Prof. Madhav Gadgil in the chair. To evolve a holistic vision document for the environment and sustainable development of Goa, a state-wide consultation with various stakeholders was planned, the responsibility of organizing which was given to CEE Goa through the Department of Science, Technology and Environment. CEE Goa organized 25 consultations with various stakeholders including fishermen, industry representatives, tribals, youths, farmers and others. Prof. Madhav Gadgil was present for all the consultations. A report of the consultations has been prepared and is being used to develop the vision document on Environment and Sustainable Development of Goa for 2035.

15.2.5 Climate Change: Agro-climatic Zone-wise Public Consultations for MP SAPCC

The Government of Madhya Pradesh has entrusted the Environmental Planning and Coordination Organization (EPCO) with the

responsibility to draft the State Action Plan on Climate Change (SAPCC), with support from UNDP. A Climate Change Cell has been established in EPCO for this. As part of this initiative, and in order to reach out to the micro level regional concerns and addressing them in the State Action Plan, CEE was commissioned to organize consultation workshops in the 11 agro-climatic zones of the state. The inferences of these workshops will inform the SAPCC. CEE undertook the following tasks:

- Conduct of 13 workshops in the 11 agro climatic zones of Madhya Pradesh;
- Develop and print a resource booklet for distribution; and
- Invite various stakeholders through various means including personal communication and publication of advertisements in newspaper to ensure wider participation.

Each workshop was structured to obtain inputs on various themes including forests, water, health, energy, agriculture, urban and rural areas. The report on and documentation of these consultations are being processed for submission to EPCO and incorporation in the SAPCC.

15.2.6 Consultation on Big River Dams in the North East

A major concern of the country today is the growing need for energy, along with the realization that it is important to generate clean energy to meet such needs. This has led to the planning of river dams of various scales. North East being blessed with an abundance of rivers, the power ministry has

proposed more than 100 river dams of different scales to produce energy for the country's requirement. Among them the Lower Subansiri dam has been the talk of the region, with many stakeholders expressing their concern over the construction of the dam, and its adverse effect on the environment as well as on the people of Assam.

Although NHPC has obtained environmental clearance to construct the 2000 MW hydel project on Subansiri, the majority of local institutions, civil society, various students groups and common people are against the construction of the dam.

To revisit and to capture the grievances of the various stakeholders of the region, CEE North Eastern Regional Cell organized a consultation on Big River Dams of North East in Guwahati on September 10, 2010. The Minister for Environment and Forests, GoI, Shri Jairam Ramesh, chaired the consultation, which was divided into two sessions. In the first session, the overall impact of big dams was discussed. Officials of NHPC also made a presentation on their work and assured the audience that the dam will not cause any harm to either the people of Assam or the environment. The expert committee formed to review the construction work and related issues of Lower Subansiri dam, on the other hand, appealed to the minister to stop the construction work of the dam. The committee raised concerns about the devastating impact in case of an earthquake as Assam lies in earthquake zone V. In the second session, downstream impact was discussed and various stakeholders expressed their views and concerns

regarding the construction of the dam. More than 500 people participated in the consultation representing different stakeholder groups like academicians, NGOs, students union, farmers unions, women's unions, government officials as well as individuals. The minister later on assured the people that a comprehensive impact assessment of the Lower Subansiri dam will be undertaken.

15.3 CEE's Project Management Unit at Commonwealth Games 2010

As host of the XIX Commonwealth Games (CWG), the Government of NCT Delhi set an aim of hosting a "Green Games" by inducing behavioural change towards low carbon practices and setting the environmental benchmark for organizing multi-disciplinary games in the future.

Creating awareness on 'low carbon practices' was included as one of the objectives of CWG 2010. To this end, the Organizing Committee Commonwealth Games (OC CWG), with support from the Union Ministry of Environment and Forests (MoEF) and United Nations Development Program (UNDP), implemented a project titled *Low-Carbon Campaign for CWG 2010*. This partnership was also extended to the Ministry of New and Renewable Energy, Bureau of Energy Efficiency, GEF UNDP Small Grants Programme and State Forest Departments. A small team was outposted from CEE from June 2010 to January 2011, to set up and run the Project Management Unit (PMU) located at the Games Organising Committee in New Delhi. The PMU provided

continuous support to the project in the areas of management, finance, programme and logistics. Even after the completion of its contract term, the PMU continued functioning from CEE Delhi and facilitated a full management level audit of the project, followed by an external evaluation.

The activities planned under this project included:

- Development of 30 AV profiles, 10 shera pop-ups and 10 radio messages on Green Commonwealth Games and low carbon practices
- Organization of four low carbon fairs (of five days duration) in Shimla, Shillong, Hyderabad and Port Blair
- Organization of Green Concerts in selected cities
- Plantation in districts/cities along the Queen's Baton Relay route through State Forest Departments and GEF UNDP SGP Partners
- Awareness among the public, students, athletes, visitors, facility managers, CWG participants and media on low carbon practices
- Development of Guidelines for 'greening' future sporting events in the country through quantification of results from project interventions
- Development of a manual – *Guidelines and Best Practices for Greening Major Sporting Events*

15.3.1 Commonwealth Games - Queen's Baton Relay – Low Carbon Practices Programme in the Southern Region

Two orientation programmes were organized for NGOs and invited stakeholder institutions to help disseminate the activities related to low carbon practices among school children across south India. Budgeting, material distribution and activities to be undertaken by the implementing agencies formed the focus of this programme.

The Queen's Baton travelled through a number of important cities in the south Indian states during which the NGO partners carried out the programme along with school children and local governments in each city. The initiative generated significant enthusiasm among school children and members of local communities during the relay of the Queen's Baton. Along with taking part in the relay, school children participated in the planting of saplings in the project sites.

This programme generated knowledge about low carbon practices among school children as well as local communities.



16.1 Training and Capacity Building for ESD

16.1.1 International Advanced Training Programme in ESD in Formal Education 2010

This programme aims to provide an opportunity to professionals working in/with the formal education sector to exchange and share their knowledge and experiences in ESD. The programme focuses on Asian and Southern African countries. The effort is to reach out to and capacity build institutions, through small institutional teams that participate in this five phased, nine month training programme. The programme was sponsored by Sida (Swedish International Development Agency) and coordinated by Ramboll Natura AB, Sweden, in partnership with SADC-Regional Environmental Education Centre in South Africa and CEE, India.

The 2010 programme, ninth in the series, was attended by 13 institutional teams from Asia and 14 from Southern Africa. An institutional team comprises of a participant, a co-participant and their supervisor. The Asian teams of the 2010 batch represented ministries of education, teacher training authorities, curriculum development agencies, universities, NGOs working for formal education and ESD, and others. The participating countries from Asia for the year were Bangladesh, Bhutan and China. In September-October 2010, all participants attended a three week face-to-face programme in Sweden. This phase of the programme included a number of sessions on ESD and formal education, visits to Swedish schools and institutions practicing

ESD and interactions with Swedish experts in ESD.

The two weeks Asia regional programme was conducted during January 4-14 at CEE Ahmedabad. For this programme, each participant was joined by a co-participant. This phase focused on 'change projects in ESD and formal education' that each institutional team had decided to undertake towards partial fulfillment of the programme. The change projects range from reviewing curriculum to developing teacher training material to critiquing education policy in the context of ESD and related topics. The institutional teams, with guidance from their supervisors, then implemented the projects.

Under this programme, CEE conducted National Workshops on ESD in Formal Education in the participating countries, viz., Bangladesh, Bhutan and China.

16.1.2 The Green Teacher Diploma in Environmental Education: A Distance Education Programme in EE for In-service Teachers

The Green Teacher Diploma in Environmental Education is a distance learning programme designed by CEE India, in partnership with and with support from Commonwealth of Learning (COL), Vancouver, Canada. The programme offers practicing teachers and environmental educators an opportunity to empower themselves with the requisite knowledge and skills to effectively transact EE concepts in the classroom. The course is a unique way of strengthening practicing teachers' skills in EE, besides providing the much required opportunity to teachers for sharing their experiences with each other.

In 2010, about 50 professionals enrolled for the programme, which was offered through the five study centres in the cities of Ahmedabad, Bangalore, Delhi, Guwahati and Pune. Two contact sessions were conducted.

The Green Teacher 2011 programme was announced in February 2011. This will be the seventh batch of the programme. Till date, over 400 professionals have enrolled for Green Teacher, of which over 250 have successfully completed the Diploma.

16.1.2.1 Green Teacher Programme - Lucknow Study Centre

The second contact session was organized for the Green Teacher participants of Lucknow study centre. Along with the session, counseling was also organised for the participants to guide them on their projects.

16.1.2.2 Green Teacher Programme - CEE Southern Region

In the southern region, as part of the Green Teacher programme, the following activities were carried out.

2009-2010 Batch: 16 teachers

- Conducted the second contact session in EE/ESD for the 2009-2010 batch course participants, guided them on their course end projects, conducted the terminal examination and viva on their projects and announced results
- Organized an exclusive Green Teacher programme for 13 teachers of Silicon City School, Konanakunte, Bangalore. This included organizing six one day

contact sessions over seven months, counseling and guiding the teachers on their assignments, helping them to plan and organize course end projects, conducting the terminal examination and announcement of results.

2010-2011 Batch: 14 teachers

- Conducted two contact sessions for the new batch, counselled and guided the students on their assignments and projects
- As in earlier years, organized an exclusive Green Teacher programme for 10 teachers from The Smart School, Magadi Taluk, Bangalore. So far, eight one day contact sessions over a period of seven months have been organized and the participants have been guided on their assignments and projects.

16.1.2.2.1 Whole School Approach to Green Teacher Programme

Both the Silicon City School and The Smart School programmes have been attempts in making the Green Teacher programme a "Whole School Approach". This attempt has elicited a good response in both the schools, with greater number of teachers and students participating in the schools' environmental awareness programmes. On World Environment Day 2010, the entire staff and students of The Silicon City School, led by Green Teacher Programme participants, organized and showcased several EE activities relating to Biodiversity, Energy, Rainwater harvesting, Pond ecosystem, Waste management, Climate Change and Ozone depletion in the school. These activities were kept open to the neighboring

community and drew tremendous response and were well appreciated.

16.1.2.3 Green Teacher – CEE Central Region

Green Teacher Diploma programme in EE for the teachers were coordinated by CEE Pune for the Central Region (for batch 2009). Efforts to publicise the programme in the schools of Pune was undertaken with the help of interns and also inserting a press note in the newspapers. The participants enrolled for this programme went through the contact sessions on EE and ESD. Two of the participants from Hyderabad took up projects on Zoo Education in their home town focusing on development of interactive material for children and one teacher from Pune took up a project on water conservation at school.

The same publicity methods were used for the 2010-2011 batch which led to teachers' enrollment. The first contact programme was oriented to the *Paryavaran Mitra* programme to create a synergy with it. The sessions focused on the five themes of *Paryavaran Mitra* and a sixth theme of urban mobility. The sessions laid emphasis on various aspects of action oriented projects which could be taken up by the participant teachers covering the themes suggested under the programme.

16.1.3 Training Programme on ESD for Teacher Educators in Cambodia

During July 19-24, 2010, CEE organized a week long training programme in EE for teacher trainers in Siem Reap, Cambodia. This week long interactive programme aimed to:

- Support teacher trainers in understanding environmental education - its scope, objectives, purpose and importance in the school system – better;
- Familiarize teacher trainers with a number of interactive and experience based teaching-learning methods;
- Capacity build teacher trainers in using selected teaching-learning methods in their education classrooms;

A team of two staff members from CEE were in Cambodia to facilitate the two week programme, which was attended by a group of 10 teacher trainers.

16.1.4 Learning for Change: The ESSA Workshop

CEE, in partnership with the Swedish International Centre of Education for Sustainable Development (SWEDESD), organized a workshop titled 'Ecosystem Services, Strong Sustainability and Agency (ESSA) – Learning for Change'. The workshop was conducted in Ahmedabad, India on October 29-30, 2010. The premise of the workshop was the belief that in order to make ESD more effective, it is important to review and bring about a major change in both *how* we teach and *what* we teach. With the focus on Ecosystem Services, Natural sciences and Social sciences, the workshop aimed to develop methods and means that will strengthen ESD in different regions of the world, bringing each country a little closer to the goals of UNDESD. The two day workshop was attended by formal education practitioners from Europe, Africa and Asia.

16.1.5 Web-enabled Teaching and Learning for Environment and Development

16.1.5.1 Green Teacher *Online* Phase II

The Green Teacher *Online* programme entered Phase II. In Phase I, digitization of all four modules was accomplished. In Phase II, the CEE team worked closely with the team at Metalearn Pvt. Ltd Bangalore towards finalizing the learning management system for the programme.

The e-Learning Management System of the Green Teacher *Online* programme is now ready and will be announced in 2011.

16.1.5.2 Gramdoot: Mobile Technology to help farming communities

Led mainly by the team at the Rural Programmes Group and supported by the technology team at Networking and Capacity Building Group at the Centre, the idea of *Gramdoot* programme is to test the effectiveness of technology operated services in appropriately fulfilling the mandate of community development and empowerment. The *Gramdoot* team at CEE is experimenting with multimedia and voice-mail facilities towards reaching out to the identified communities in selected villages in Gujarat.

16.1.6 GIS at CEE

16.1.6.1 CEE *Ka Biscope*

The GIS Cell continued to offer 'CEE ka Biscope' (CKB): An ICT enabled fun-filled learning programme for school children. This year, in addition to grades VII and VIII, the CKB modules reached out to students of Grade IX as well. The themes dealt with

included Science, Social Science and Economics of Agriculture; Population and Consumption; Town Planning; Waste Management; Traffic Management; Carbon footprint; and Lifestyle choices.

The modules for each grade included GIS and ICT based lab sessions, classroom based sessions, field visits as well as interaction with relevant experts. At the end of the CKB module, students presented their work, research and findings to a panel of experts and were awarded CKB Certificates on completion of the six month CKB module.

16.1.6.2 *Samvednaa*

The project *Samvednaa*: An initiative towards building Model Green Colleges, progressed over the year. The three participating colleges - one each in Ahmedabad, Gandhinagar and Valod, Tapi district, Gujarat - undertook intensive implementation activities in the identified area within their college campus. The three colleges selected Solid Waste Management, Wastewater Treatment and Biodiversity Park as the themes, respectively. The student eco club members led the intensive implementation activity in their college campus. The project reached out to more than 15 college faculty and 150 college students. Application of GIS in planning, monitoring and implementing the green college action plan was a key component of the project.

16.1.6.3 Energy Clubs in Industrial Training Institutes (ITIs)

Supported by the USAID/SARI and implemented in partnership with the Directorate of Employment and Training, Gandhinagar, this project of the Centre

involved working with the key stakeholder group of ITI students, who have the potential of bringing about a major impact in the way energy is used and conserved in the industrial world. During the year, the 10 ITIs participating in the project through their energy clubs, were engaged in understanding sustainable use of energy and undertaking a variety of actions towards conserving electricity on their campuses. These ITIs, on an average, were able to achieve about 10-15 per cent of reduction in their electricity consumption. The GIS team of CEE coordinated this project, and also published two books – ‘Be Energy Wise: A Manual for Facilitators of Energy Clubs in it is’ and ‘Youth in Energy Conservation’, a compilation of stories of energy conservation efforts made by the young ITI students. These publications are available in both Gujarati and English.

The GIS team worked with each ITI team to support them in the use of the GIS techniques, in presenting their findings of the electricity audit on campus and in monitoring electricity conservation activities and campaigns in their institute.

16.1.7 ‘ICT and Education’ at the International Conference on Ethical Framework for a Sustainable Future

During November 1-3, 2010, the ICT and e-learning team of the Centre coordinated a workshop on ‘Reviewing, Rethinking, and Reorienting Application of ICTs for Enabling ESD’ at the International Conference on Ethical Framework for a Sustainable Future. The workshop aimed to:

- Share relevant experiences and good practices from across the world;
- Explore and clarify how the Earth Charter as an ethical framework and guide to action can be used most effectively in this area of development;
- Explore ways to develop the resources and tools needed to support the principles of Earth Charter in action.

The workshop was coordinate by Ms. Shivani Jain, CEE India and moderated by Ms. Fernanda Baumhardt, Communication and Media Task Force, Earth Charter. The keynote speakers included Dr. Neeta Shah, Director, Gujarat Informatics Limited and Dr. Bhatia, Chair, AV Code, Ahmedabad.

16.1.8 Training Module on EE and CCE

The Humana People to People India (HPPI) is based in Delhi and works in different states of India focusing on community development with solar energy illumination. This project is undertaken by HPPI in technical association with TERI under the campaign “Lighting up Billion Lives”. For its UP initiative, HPPI approached CEE North for providing technical inputs in planning environment education programme in schools. As part of the discussion, CEE North conducted a four day training module for the field team of HPPI to train them in implementing environment education programme in 100 schools of four project districts.

CEE North organized a four day training module on environment education and climate change education in August for eight HPPI field team members. The training

module aimed to develop in the participants an understanding on environment and development issues and the importance of environment education; plan teacher training programmes in their project locations and help them design an annual environment school activity calendar and action projects at school level. CEE gave regular inputs to the field team in taking up the EE programme in the project villages.

16.1.9 Climate Change and Education for Sustainable Development in Teacher Education

The role of teachers in bringing about extensive social changes needed for sustainable development has been greatly emphasized by several national and international commissions and committees. If our teacher education system has to play this role effectively, then its contents and methodologies need to be re-oriented. Our teaching and training methodologies will have to become more ‘constructivist’ and ‘transformative’ in nature, rather than just ‘transmissive’- i.e., preparing teachers to play a critical role in climate change mitigation and sustainable development through developing in learners a new learning behavior to change cultures, adopt new life styles, and develop new economies, technologies and social structures. Put differently, a transformation from a wasteful and unsustainable lifestyle to a more sustainable and eco-friendly lifestyle.

The project “Situating Climate Change and ESD in Teacher Education” is financially supported by the Indian Council of Social Science Research (ICSSR), New Delhi. It aims to develop a curriculum framework and

module in Climate Change (CC) and Education for Sustainable Development (ESD) to situate it in pre-service teacher training. The project has three specific objectives and is coordinated by Dr M. J. Ravindranath, CEE South, Bangalore:

- To outline and develop a framework for the incorporation of climate change and sustainable development in teacher education through a process of action enquiry and survey;
- To develop a Module on Climate Change that can be used to infuse concepts of Climate Change and Sustainable Development (CC-ESD) in teacher education curriculum; and
- To validate the module for its effectiveness, practicality and instructional outcomes.

The survey and action enquiry have been completed with a sample of slightly more than 60 B.Ed colleges in the southern region and a framework for situating CC and ESD has been developed. At present, based on the framework developed, a draft module covering the contents and pedagogy in CC and ESD is being developed.

This project when completed and published will be a unique attempt in curriculum construction and teacher education and would be of great use to teacher educators.

16.1.10 Earth Charter + 10 Conference: School Education and Teacher Training

The Earth Charter (EC) is a declaration of fundamental ethical principles for building a just, sustainable and peaceful global society

in the 21st century. It seeks to inspire in all people a new sense of global interdependence and shared responsibility for the well being of the whole human family, the greater community of life, and future generations. It is a vision of hope and a call to action. The Earth Charter is centrally concerned with the transition to sustainable ways of living and sustainable human development. As part of this, an International Conference “Ethical Framework for a Sustainable World” was held at CEE from November 1-3, 2010. “School Education and Teacher Training” formed one of the important thematic workshops of the conference.

The three days’ deliberations in the School and Teacher Training workshop helped the participants develop deeper understandings of the Earth Charter and its fundamental philosophy, the environmental values which it heralds, and the experience and practices of teachers and individuals in fostering the values.

The thematic workshop was coordinated by Prof. Charles Hopkins, UNESCO Chair for Sustainability at York University, Canada, and Dr M J Ravindranath and Ms. Preeti Kanaujia from CEE.

The participants, numbering more than 55, represented different countries, national and international organizations. They recognized that “the EC provides a useful framework that schools can use to structure a holistic approach for Education for Sustainability” and provides “an excellent framework for the integration of values and ethics into ESD”.

Important Recommendations made by the delegates

For Teacher Education:

- Greater promotion of the EC and a flexible framework for schools and teacher education institutes to adopt
- More research on the teaching of values and ethics in ESD
- Greater consideration of different approaches to ESD and how these link with the EC
- Greater emphasis on action research as a technique for promoting EC in teacher education

For School Education:

- The adoption of the EC as a framework for building an effective holistic approach to ESD
- Infusion of the principles of EC into the contents and methodologies of teaching
- Using EC principles as a base for designing projects

For the Earth Charter:

- Consideration of the fact that teaching values and ethics needs to be set alongside allowing young people to build their own ethics and values
- Consideration that the ethics and values reflected in the EC do not necessarily support all possible approaches to sustainable development
- A critical approach to learning must also allow for a critical approach to the EC

16.1.11 Capacity Building Programmes of CEE Himalaya

16.1.11.1 Promoting Community based Tourism in Manasbal, Watlab and Narinag: Capacity Building of Service Providers with Emphasis on Proper Disposal of Solid & Liquid Waste, Hygiene and Sanitation

INTACH J&K Chapter, CEE Himalaya and Hamdard Education Society, with financial support from Union Ministry of Tourism and J&K Tourism, conducted a series of five one day workshops at Manasbal, Watlab and Naranag from March 26-30, 2011. The first three workshops at Jarokha Bagh Guest House, Manasbal were for the villages of Kalusa, Gratbal, Safapora, Hajam Moholla, Kondabal, Rather Moholla, Kulpora, Waripora, Pahilipora and Baghwan Moholla, all situated near Manasbal. The workshop at Watlab addressed the villages of Watlab, Watlab Ghat, Zeermanz, Kehunasa, Aloosa and Ashtingoo. The villagers of Kaloosa, Naranag and Wanghat attended the workshop at Naranag.

The objectives of the workshops were to promote community based tourism and build the capacity of various sectors of service providers to enable them to attract tourists, handle them as per their expectations of hygiene and sanitation, and promote tourism in the area by offering good services at a competitive price.

Each workshop was attended by about 30 people who were identified from the area for taking a lead role. After the workshops, these trained youth will be used to train others in

the area, thus attempting to reach out to more and more people.

Tips on cleanliness, safe drinking water, healthy food, personal hygiene, keeping homes and surroundings clean, proper drainage, water absorbing pits, safe disposal of waste, safe disposal of excreta, water pollution, water borne diseases, sources of contamination, segregation of waste at source, composting, vermin-composting, reuse and recycling were discussed using CEE's education material which had been developed for the Kashmir context.

Gender plays an important role in water collection, storage, management and governance. CEE's South Asian Chapter of a travelling exhibition developed for the Gender and Water Alliance (GWA) with financial support from International Waters - Learning Exchange and Resource network (IW-LEARN) was effectively used for awareness on gender roles. The exhibition consisting of six panels on the themes Gender and Water - Insights, Innovations and Transformation; Engendering Access to Water; Gender, Hygiene and Sanitation; Gender and Water for Livelihoods; Gender, Disasters and Adaptation; Gender and Water Governance, were shown to and discussed with the workshop participants to create linkages with the socio-economic, socio-cultural and trans boundary political aspects of Kashmir.

World Health Organisation's (WHO) short films on water, sanitation and hygiene were screened and interpreted during the workshops. These films are on safe drinking water, water borne diseases, the use of sanitary latrines.

The menace of plastic bottles generated through the widespread use of packaged drinking water, and the negative impact of packaged drinking water on health, economy and environment were discussed. Success stories from Leh, Shimla, Sikkim, Shillong and other parts of the North East and the rest of the country were cited.

J&K Tourism and the Union Ministry of Tourism have supported the construction of 52 guest houses in the area under their supervision, maintaining the required standards of amenities to be provided. Based on the facilities available, the guest houses were ranked as A, B and C categories and subsidy provided to the guest house owners to encourage them to achieve higher standards. The effort is to encourage local people, especially the youth, to get involved in and make a living from tourism. This will help develop the area, improve the quality of life of local people and generate avenues of employment and income locally, thus engaging the people - especially the youth - in constructive activities and bringing peace and prosperity to the area.

16.1.11.2 Disposal of Solid & Liquid Wastes and Sanitation

CEE Himalaya was invited as the resource agency for a workshop held during December 18-24 at Mansbal. Organized by the J&K Chapter of INTACH, CEE and J&K Department of Tourism, the workshop was inaugurated by the Divisional Commissioner, Kashmir. Mr. Farooq Ahmed, Director, J&K Tourism was the Chief Guest. The Chairman, J&K Chapter of INTACH and other officers also attended the workshop. Dr. Abdhesh Gangwar, Regional Director, CEE North and North East was the

resource person for the workshop. Dr. Gangwar delivered a brief speech on Disposal of Solid & Liquid Wastes and also other topics like Health, Hygiene and Sanitation. He also made presentations on the topics besides practical demo and display of posters and other materials. The participants interacted with the resource person on related issues. Mubashir from CEE Himalaya also presented the resource material developed by this office to the participants. Manasbal Lake being a good tourist spot, the idea of this workshop was to build the capacity of the villagers, especially youth, to attract and manage tourism, for which sanitation and hygiene in villages is a pre requisite and a must have. A series of workshops have been planned in individual villages during the next quarter for which CEE will be a resource agency.

16.1.12 Training and Capacity Building Activities in CEE Tamil Nadu

16.1.12.1 Orientation and Training on Disaster Management

Around 700 National Service Scheme (NSS) students and teachers from across the country participating in the National NSS Mega Camp organized at the Rajiv Gandhi National Institute for Youth Development (RGNIYD), Sriperumbudur, near Chennai were given orientation and training on disaster management. The sessions conducted through lectures, demonstrations and hands on activities helped in understanding concepts related to vulnerability, risk, mitigation and related concepts. Disaster management would be incorporated as a routine topic in similar NSS camping activities.

16.1.12.2 Wetlands and Their Importance

CEE-TN was invited to conduct an orientation programme by the Post Graduate students of the Department of Zoology in Madras Christian College. Apart from the students of the Department, over 100 students from various other colleges in the city also participated in the day long programme.

16.1.12.3 Ecological Foot Print and Architecture

CEE TN was invited to conduct a training programme in Sathyabama University for over 600 students of various colleges in the city. The programme was organised to give an insight into Ecological Foot Print and the role of architects.

16.1.12.4 Developing an Environmental Policy

EuroKids International Ltd., an education services provider in the Pre-School segment and Anand Deep Enterprises, the Master Franchisee office for Tamil Nadu with over 80 preschools across state, invited CEE to support the framing of the Environment Policy for their schools in Tamil Nadu. CEE Tamil Nadu facilitated this with the major areas of focus as:

- Promoting awareness among children, parents and staff;
- Conserving resources - mainly water, energy and paper - through proper management practices within the schools;
- Encouraging commitment to programmes in recycling and waste management and to the purchase of recycled products in school;

- Factoring environmental considerations in the daily duties among all stakeholders.

16.1.13 Training Programmes in Goa

16.1.13.1 National Seminar on ESD

The Saraswat Educational Institutions Higher Secondary School, Mapusa, Goa, jointly with CEE Goa State Office, organized a three day national seminar on Education for Sustainable Development in Panaji, Goa. About 130 participants from across the country participated, including teachers and college students. The seminar was a mix of lectures, panel discussions and field visits to estuaries and mining sites. CEE Goa facilitated the field trips. Participants worked in groups to evolve educational strategies for the conservation of the estuarine ecosystems and abandoned mining sites in the state of Goa. The Hon'ble Minister for Environment, Government of Goa, Shri Aleixo Sequeira was the chief guest during the concluding session and spoke about government strategies to enhance public awareness and improved implementation of environmental laws in Goa.

16.1.13.2 Two Day State Level Workshop for College Teachers on Biodiversity and its Conservation

A two-day state level teacher training workshop on coastal biodiversity and its conservation was organized in association with Biodiversity Research Cell, Carmel College of Nuvem and College of Forestry, University of Agriculture Sciences, Dharwad. CEE Goa is in the process of developing educational material on Climate Change and its impacts on various ecosystems of Goa. A

preliminary draft of the material was shared and discussed with the participants. Along with the college teachers, students also participated. A session was organized where the Hon'ble Minister for Environment, Government of Goa, Shri Aleixo Sequeira chaired and interacted with the students and teachers. Students and teachers asked various questions related to the strengthening of environmental education in the school system and what role students, teachers and youth play in enhancing the quality of environmental education in schools.

16.2 Networking for ESD - Visits

16.2.1 Mr. Frans Lenglet, Director, SWEDESD

Mr. Frans Lenglet, Director of Swedish International Centre of Education for Sustainable Development (SWEDESD), Sweden came on a three day visit to CEE during May 27-29, 2010. Mr. Lenglet's visit to CEE was to understand CEE's work and explore possible areas for collaboration. During his meeting with the Director of CEE, the following areas emerged for possible collaboration:

- Action Research and Evaluation
- Supporting Urban Sustainability
- Ecosystem Services, Strong Sustainability and Agency - *Learning for Change*

16.2.2 Mr. Hideki Maruyama, ESD professional from Tokyo

Mr. Maruyama visited CEE to understand ESD in the context of non formal school education in India. He interacted with

colleagues involved in school education programmes, rural education, teacher training and capacity building at Ahmedabad and Delhi. He also visited a project involved in setting up class rooms in slum areas in Ahmedabad using innovative non formal education methodologies.

Ms Nadia Lausset, an ESD professional from Switzerland also visited CEE.

16.2.3 Mr. Paul Rose, BBC presenter and Antarctic Explorer

Paul Rose visited CEE on Thursday, February 23, 2010. He interacted with CEE staff and the students of CEE's Management Education Centre on Climate Change (MEC-CC) on climate change issues. Later Paul Rose gave a public lecture on "The Global Meltdown" at the CEE auditorium. He presented an optimistic approach on climate change asserting that access to the internet has opened up a world of information which is encouraging young people from developing nations to come up with innovative climate change ideas and solutions. The visit was organized in collaboration with British Council as part of their Talking Climate Series.

16.2.4 Ms. Shreerupa Mitra, Representative from USAID/SARI at CEE

Ms. Shreerupa Mitra, Social Development Specialist, USAID/SARI came on a two day visit to CEE in January 2011, to discuss the progress of the project titled 'Energy Clubs in it is' supported by USAID/SARI under their small grants programme (SGP). During her visit, she interacted with the Director of

CEE and also visited a couple of Industrial Training Institutes, where the aforementioned project was being implemented.

16.2.5 Students of Intercultural Communication to CEE

About 20 students of Masters in Intercultural Communication from the University of Royal Roads, Canada, visited CEE in October 2010. The visit was to understand the links between education, communication and the socio-cultural context through CEE's work in ESD.



17.1 Planning Meetings for Setting up of the Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP)

A UNESCO Category-I institute, Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP), has been set up by the Government of India in collaboration with UNESCO at New Delhi. This Institute places India in the category of select countries with a Category I Institute of UNESCO and is expected to serve as a platform for interaction on the themes of peace and sustainable development among policy makers, practitioners and experts from countries of the Asia Pacific region. The proposal to establish this Institute has been adopted at the 35th General Conference of UNESCO by acclamation on October 22, 2009.

In this regard, Government of India, in collaboration with National University of Educational Administration (NUEPA), organised two expert group consultations to deliberate on the institutional development plan, especially the programmes and activities to be taken up by the Institute within the next 2-5 years. This was followed by organising an International Consultative Meet in August 2010 to provide a wider forum for the sharing of rich experiences of different international and national experts and institutions and building partnerships. CEE participated as an expert institution in these meetings.

17.2 Ethical Framework for a Sustainable World - An International Conference to mark ten years of the Earth Charter

The International Conference, “Ethical Framework for A Sustainable World” was held at the CEE campus during November 1-3, 2010, in partnership with the Earth Charter International. The Ministry of Human Resource Development, Government of India (MHRD-GOI) was the co host of the Conference. The Ministry of Environment and Forests, Government of India (MOEF-GOI), United Nations Educational, Scientific, Educational and Cultural Organisation (UNESCO) and United Nations Environment Programme (UNEP) were partners at the Conference.

The Conference brought together over 500 participants. There were about 100 participants from all over the world representing a variety of stakeholder groups including government officials and representatives of UN agencies. Participants from India were from diverse fields including environment, school and higher education, human rights, gender, peace, religion, citizenship, social justice and others. The Conference was a forum for interaction of civil society, NGOs, corporates, academics and media.

The Conference was held to commemorate 10 years of the Earth Charter (EC). The Earth Charter, over the ten years since its formal launch in 2000, has gained recognition as a global consensus on the meaning of

sustainability, the challenge and vision of sustainable development, and the principles by which sustainable development is to be achieved. The purpose of Earth Charter+10 (EC+10) efforts was to reach a higher level of awareness and outreach of the Earth Charter; clearly position the Earth Charter initiative as an inspirational, dynamic, global civil society movement; and encourage a positive conceptualization of the future by using the Earth Charter as a framework to address key world challenges, issues and priorities.

The Conference was specifically held with a view to do the following:

- Strengthen efforts at making Education for Sustainable Development central to education practice and training;
- Clarify the role the Earth Charter can play in education; share experiences on the use of Earth Charter in education;
- Strengthen partnerships with the Earth Charter;
- Capture the spirit of the events related to EC +10 and to use the ideas to discuss and launch the vision for the Earth Charter for the next decade (2011-2020).

The Conference looked at the effective translation of the Earth Charter from principles to practice. Specifically, it sought to review and strengthen ways by which these principles and values can find resonance in different areas of life and work across different sectors from international organizations and business enterprises to formal education.

Seven plenary sessions, including the inaugural and concluding sessions, set the tone and pace for more focused discussions and interactions within the 10 Workshop Themes. The plenary sessions included key expert presentations on experiences of the application of the Earth Charter Principles.

The Conference was inaugurated by the Governor of Gujarat Dr. Shrimati Kamla. Shri Amit Khare, Joint Secretary, Ministry of Human Resource Development, Government of India (MHRD, GOI) addressed the audience on behalf of MHRD. The DG UNESCO, Ms Irina Bokova's address was read out by Dr. A. Parsuraman, Director UNESCO, Delhi who also addressed the audience independently as the head of UNESCO in Delhi. The second plenary had a keynote address by Professor Steven Rockefeller on the challenges and opportunities facing the Earth Charter Initiative. A special session at the second plenary was a video conference where Julia Martin Lefèvre, Director General, IUCN and Ashok Khosla, President, IUCN were beamed in live for comments on their insights and experiences with the Earth Charter, followed by an interaction with the audience. The third plenary of the Conference focused on the Ethics of Climate Change while the fourth and fifth plenaries were on Education for Sustainable Development (ESD), leading a discussion to explore the Ethical Framework in the context of ESD.

The plenary session of Day 3 of the EC+10 conference was held at the Sabarmati Ashram from where Mahatma Gandhi had once orchestrated India's historic and unprecedented freedom struggle. The panel of speakers at the plenary session included

Prof. Steven Rockefeller, Prof. Mary Evelyn Tucker, Forum on Religion and Ecology and Earth Charter International Council; Rabbi Soetendorp, Earth Charter Commissioner; Vishwaguru Paramhans Swami and little Avatarpuri representing Yoga for Daily Life; Sri Sri Ravi Shankar, Art of Living; Sister Valerine Bernard representing the Brahma Kumaris; Michael Slaby of the Jacob Soetendorp Institute for Human Values; Kartikeya Sarabhai, Director CEE, and Tridip Suhrud from the Sabarmati Ashram.

The concluding plenary saw workshop participants weaving through the strands of inspiring ideas and recommendations that they had deliberated over for days. Jim Taylor, Director WESSA, South Africa and Mamata Pandya, Senior Programme Director, CEE facilitated this process. They invited workshop representatives to share the key outcomes of their deliberations with the audience. This helped bring together the strands of discussion from each of the workshops, contributing to a rich tapestry of inspiring views that will help take the EC forward from Ahmedabad.

Workshops on specific areas explored how an ethical framework and specially the Earth Charter can be applied in that area. Best practices were shared and key issues were discussed. The ten workshop themes covered areas like School Education and Teacher Training; Higher Education; Non Formal Education; Information and Communication Technologies for Education for Sustainable Development; Business & CSR; Religion, Spirituality and Ethics; Cities, Communities and Urbanisation; Sustainable Livelihoods; Global Challenges and Global Governance; and Biodiversity.

A summary of the discussion at the workshops was posted on the Conference website each day. Each workshop came up with a final report on day three. In addition to this, each workshop also came up with a set of three recommendations they felt were the key ones which were shared at the concluding plenary session. The Overall Recommendations of the Conference was developed based on these recommendations from the workshops.

Two exhibitions - "The Seeds of Hope" and "Our Living Culture" - were set up during the Conference. Several stalls were also put up by partner institutions. The publications launched during the Conference were "Gandhi and the Earth Charter – Towards A Sustainable World"; "Explore Discover Think Act - the *Paryavaran Mitra* Publication"; "Multilateral Agreements: Legal Status of Secretariats". A special music album "Life Alert" inspired by the Earth Charter was also launched as part of the Conference special events. A special edition of CEE's ESD journal dedicated to the Earth Charter was launched at the ESD plenary of the Conference. The publication, "Earth Charter and Gandhi—Towards a Sustainable World" compiled by Kartikeya Sarabhai, Meena Raghunathan and Amishal Modi was released by Steven Rockefeller.

Youth Participation formed an integral part of the Conference. Youth not only volunteered and took up specific tasks as part of the various teams working on different tasks but also spoke as youth representatives in each of the plenaries. They also took part in the workshop discussions and expressed their viewpoint in the concluding plenary. Children participated in the Conference

primarily through the *Paryavaran Mitra* event but were also avid listeners in the plenaries and presented their work at the exhibition. Cultural programmes every evening brought in an element of festivity to the Conference.

The Conference had live streaming of plenaries during all the three days of the Conference. About 100 persons from over 20 countries participated in the Conference virtually.

The Conference consultations centred on identifying effective and creative ways of embedding the values and principles that constitute an ethical framework for a sustainable world into practice. As a result of the Conference, it is expected that there will be increased networking and the fostering of partnerships for integrating the EC principles in practice. The Conference created an effective forum for exchange of knowledge and experiences of applying the EC principles in ESD

17.3 International ESD Network

An international expert network was formed by InWent - Capacity Building International, Germany, on Education for Sustainable Development (ESD). The network has members from four countries, viz., Germany, Mexico, South Africa and India. Each country

is represented by institutions from government and non-governmental agencies working in the field of environment and sustainable development. CEE was invited as one of the expert institutions from India, where Ms. Preeti R. Kanaujia was nominated by the Centre as its representative in the network. This network had a meeting in South Africa in November 2010, where experts from four countries - Mexico, Germany, India and South Africa - were invited to exchange experiences, share approaches, join forces and extract synergies from their individual country.

During the ESD network meeting, three areas where the network will contribute were discussed. These areas are development of an ESD module for Training of Trainers for each country, facilitating an international leadership training programme on ESD and development of an ESD web portal on the work done by member institutions.

Along with the expert network meeting, an experience sharing seminar was also organized where network members shared their views and experiences as panelists. Ms. Kanaujia presented CEE's experience with formal education programmes and partnerships for ESD.

Children's Media Unit (CMU) is involved in instructional design of materials and programmes for EE and ESD, nationally and internationally. CMU works with all media - print, audio visual, exhibitions and new media. CMU also facilitates training and capacity building of teachers and ESD professionals.

18.1 Material Development for the Thrust Area: Education for Children

18.1.1 International Collaborations

CEE and the Environment Agency Abu Dhabi (EAD) have entered into an Understanding of Partnership which aims to facilitate sharing of CEE expertise and resources and its experiences in EE and ESD to support the programmes of EAD by material development and capacity building.

As part of this Agreement, Children's Media Unit (CMU) has been working closely with EAD as a key collaborative partner in the Sustainable Schools Initiative (SSI) of Abu Dhabi. This collaboration includes development of resource material and capacity building.

18.1.1.1 *Towards a Sustainable World: A Resource Book for Intermediate Teachers*

Towards a Sustainable World is a series of three books covering all the school levels - Elementary, Intermediate and Secondary. The series is to help teachers infuse education for sustainability through the five themes of Air, Water, Energy, Biodiversity and Climate Change.

The resource for the intermediate level teachers has been developed. It has three

parts: educating for sustainability; methods and approaches in educating for sustainability; and activities using a variety of approaches and methods organized under the five thematic areas.

The English publication is in the pre-production stage, while the Arabic translation is in progress.

Research and development of the two other publications for Elementary and Secondary levels is under way.

18.1.1.2 *Al Daleel Al Be-e: A Guide to Setting up and Running Environmental Clubs*

This Teacher's Manual has been printed both in English and Arabic.

18.1.1.3 *Eco Smart Business Game*

A board game Eco Smart Business, based on the concept of the popular Monopoly or Business Game, was developed last year for wide distribution by EAD to students in Abu Dhabi. The game has been produced in English and Arabic and distributed to over 60000 school children.

18.1.2 Easter Springer

Rajeswari N Gorana, Programme Coordinator CMU, and Preeti R Kanaujia, Programme Coordinator CEE North are co editors for a publication for Easter Springer. This publication is under the series *Schooling for Sustainable Development* and focuses on South Asia. The South Asia book attempts to provide a close insight into how EE/ESD is being integrated in the institutions in the region and being practiced by educators.

The book seeks to look at experiences and initiatives of each country in reorienting education (formal and non-formal) as Education for Sustainable Development (ESD). Efforts by individuals, NGOs, UN organizations; educational policies, government initiatives, programmes and projects that are facilitating ESD work would be captured.

The Book proposal and chapter abstracts have been shared with Easter Springer. Experts from countries in the South Asia - Bangladesh, Bhutan, India, Maldives, Pakistan and Sri Lanka - have been finalized for contributing to the book. The final manuscript will be submitted to Easter Springer by December 2011.

18.2 National Programmes

18.2.1 Planet Earth Dossiers for YES Bank

CMU developed and delivered 12 Facilitator dossiers for the YES BANK Limited's YES Community (YC) Initiative. YC is a community engagement platform that leverages its retail branch network to mainstream environmental and social issues amongst communities living around its branch locations.

The dossiers provide a step by step guide for facilitators for running the programme, including points for discussion, Fact Sheets and activity ideas. Copies of suitable films were also provided for distribution with each dossier.

As part of the initiative, an environment related event under the title Planet Earth was held at YB branches across India every month.

18.2.2 Explore, Discover, Think, Act: Paryavaran Mitra Action Ideas Book

The CMU team provides the core instructional design support for the resource materials to be developed under this major national initiative.

Mamata Pandya and Rajeswari N. Gorana developed the English prototype of the first publication for the *Paryavaran Mitra* Programme. This book has been translated into 15 Indian languages and is being disseminated in all the states and UTs of India to support the first phase of the school activities under the programme. The book provides a menu of 51 action ideas under five themes (Water and Sanitation, Waste Management, Biodiversity and Greening, Energy, Culture and Heritage).

The second phase of the *Paryavaran Mitra* programme will be supported by a Teachers' Handbook. Work on this comprehensive Handbook is on.

This forms the key resource material which will guide and support teachers and NGOs in implementing the programme in schools. It envisages active engagement of students in curricular and co-curricular activities in the transformation to *Paryavaran Mitra*.

18.2.3 Educating for Sustainable Development: A Resource Handbook for NGC Educators

CMU members were part of the core team to develop a manual for the Master Trainers of the National Green Corps. The publication is a detailed resource guide for planning and running a two day training programme on

ESD. It includes content as well as methodology. The power point presentations for the sessions are provided on an accompanying CD. The publication has been printed in Hindi and English and disseminated.

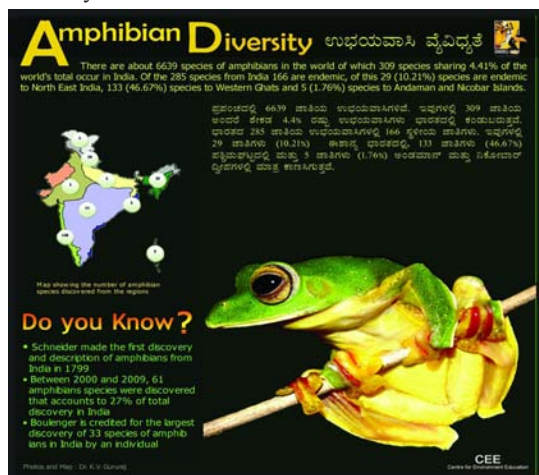
18.2.4 Macmillan Text books

Mamata Pandya has been invited to co-author the series of EVS textbooks for classes 1-5 to be published by Macmillan India Ltd. The textbooks are based on the NCERT syllabus reflecting the Curriculum Framework 2005. The manuscripts for Class 1 and 2 have been submitted to the publishers. Work on the remaining classes is under way.

The series will be in the market by the beginning of the academic year in 2012.

18.2.5 National Council for Educational Research and Training (NCERT)

Mamata Pandya was a member of NCERT's EVS Textbook Writing Committee for classes 3-5, from 2005-2008. These textbooks for classes 3, 4 and 5 are now in use across the country.



Following this, in 2010, NCERT's Department of Elementary Education, set up a smaller group to develop a Teacher's Handbook for EVS for the primary level. The Handbook was to meet the need to support teachers with a better understanding and transaction of the EVS textbooks based on the New Curriculum Framework 2005.

The Handbook is in the production stage and will be disseminated by NCERT.

18.3 Climate Matters – CEE TN

CEE Tamil Nadu has developed a manual in Tamil on Climate Change for the High School and Higher Secondary School students of the NGC Programme. The tailor made manual is designed to serve as a one-book library, and walk the students through the causes and effects of climate change, and also share tips and ideas for the students to perform simple research activities in their classrooms and at home to understand how climate is changing, why, and what can be done about this. Written in an age appropriate language, with interesting and colourful illustrations, the manual would break down the most difficult aspects of global warming and climate change, allowing young students to grasp them easily.

18.4 Educational Package on Biodiversity

CEE North developed a poster and a booklet for dissemination in a state level World Environment Day programme organized by the Directorate of Environment, UP. The package was formally released by the Minister Environment in a state level function organized by the Directorate. The poster developed for the occasion covered key

concerns linked to the International Year of Biological Diversity and is supplemented with an information booklet on biodiversity in the state context.

18.5 Publications of CEE Himalaya

18.5.1 *Az Sare Nau Tamer - Jahni Iztirab aur Uska Hal* (A Teachers' Manual on Psychosocial Care)

This publication in Urdu is an educator's guide to address the psychosocial care needs of children post disaster. CEE Himalaya has adopted and translated the teachers' manual "Rebuilding Hope- An Educators' Guide to Helping Children Cope with Stressful Situations" brought out by CEE Ahmedabad for use in the earthquake affected regions in Kashmir and elsewhere.

The manual contains useful tips on trauma and its treatment. It helps to diagnose whether a child is suffering from trauma and to what extent. It also provides some basic information on the mechanism of earthquake and precautions to mitigate disasters. A major part of the manual consists of attractive and

interactive activities that will enable children to express their anxieties and fear of disasters. These activities employing different mediums like art, games, poetry, songs, story telling and writing can be performed in small group settings. This book is dedicated to the people who lost their lives in the 2005 Kashmir earthquake and their near and dear ones. The publication so far has been disseminated in more than 3000 schools in Kashmir through psychosocial care programmes with students and teachers. About 600 teachers have been trained through 15 teacher training workshops.

18.5.2 *Paryavaran Mitra* in Urdu

The *Prayavaran Mitra* kit has been translated into Urdu by CEE Himalaya. The Urdu kit, in addition to Kashmir, can also be used in Urdu medium schools in Uttar Pradesh, Madhya Pradesh and Maharashtra.

18.5.3 Year Planner and Book labels

CEE Himalaya developed a year planner for 2011 on the DRR theme with tips on fire safety, earthquake do's and don'ts and safe evacuation. Book labels have been developed on the themes of natural disasters.

19.1 Human and Institutional Development

The Human and Institutional Development (HID) at CEE focuses on the strengthening of institutional mechanisms, systems and procedures so as to facilitate human resource development as well as institution building. While the point of HID action at CEE is practically every programme and support group/office, the efforts are coordinated and facilitated by the HID Facilitation Cell of CEE.

During the year, the 13th Meeting of CEE Management Committee was held during January 25-28, 2011. The agenda included CEE Finance, VI CPC equivalent and Annual Performance Assessment Report systems, as also the proposed Rules for Recruitment and Review of Core Staff, 2011.

CEE was able to utilize a good number of training opportunities for several staff members. Over 15 CEE staff members were sponsored for training programmes and workshops organized by a number of institutions including CEPT, International Design Centre, CHETNA, Ahmedabad Management Association and ADINET.

19.2 Support Services

Services that support CEE programmes and activities have been strengthened at Ahmedabad, the Regional Cells, and Project and Field Offices.

19.2.1 Staff

During the year 2010-2011, one staff member in the Scientist category resigned. The core staff category position stood as follows:

Category	No
Scientist	44
Technical	51
Administrative	57

19.2.2 Shishu

CEE continued to support *Shishu*, the childcare facility run by staff members.

19.2.3 Staff Cooperative and Credit Society

The Centre continued its support to the Staff Cooperative and Credit Society function.

19.2.4 Staff Welfare Fund

Vehicle, Consumer, Personal and Study loans were extended to the staff from this Fund.

19.3 CEE's Information Service Centre (ISC) - Activities during 2010-11

CEE's Library is known as Information Service Centre (ISC) and is located at CEE's headquarters at Ahmedabad. It has been established with a view to select, collect, organize, preserve, retrieve and disseminate information on Environmental Education (EE), Education for Sustainable Development (ESD) and related areas, to cater to the information needs of environmental educators, decision makers, researchers and the general public.

19.3.1 Collection

ISC has a rich collection of print and digital documents that includes books, periodicals (national and international), reports, maps,

charts, films, audio/video cassettes and CDs/DVDs. This collection covers a host of subject areas such as Agriculture, Art, Biodiversity, Botany, Climate Change, Conservation Management, Demography, Earth Sciences, Ecology, Economics, Education for Sustainable Development, Environment, Environmental Education, Environmental Engineering, Environmental Law, Forestry, Geography, History, Pollution, Social Welfare, Waste Management, Water Management, Women Issues, Wildlife, Zoology and others. It also has a very good collection of reference books and a special collection of children's books and periodicals too.

About 442 books and 23 CDs/DVDs have been added during 2010-11 taking ISC's total book collection to 18708 and CD/DVD collection to 501 respectively. ISC has been receiving 106 periodicals. This has also been made richer by adding four more periodicals in 2010-11.

19.3.2 Services

ISC continued offering various services during 2010-11 including Lending (to in-house users), Reference, Referral, Online Public Access Catalogue (OPAC), Inter Library Loan, Internet, and CD/DVD viewing. ISC also compiled a quarterly Book Review Alert for circulation among local

members for getting recommendations for titles worth procuring for ISC. Many bibliographies have been generated for various users proactively as well as on request during the reporting period. ISC also continued providing information proactively to the users through e-mail on e-documents, relevant online tools, websites, new arrivals at ISC and other related topics.

Apart from in-house users, ISC catered to the information needs of about 245 non-member users during the year, and about 450 queries were handled by the ISC staff including 92 requests for Inter Library Loan.

19.3.3 ISC as ENVIS Secretariat at CEE

CEE is an Environmental Information System (ENVIS) Centre on Environmental Education since 1992, and caters to the environmental information needs of educators and other interested individuals and groups through various means. ISC continued coordinating and performing various tasks for ENVIS related activities at CEE during 2010-11 such as documentation and reporting, maintaining and responding to queries and compiling yearly statistics of queries. ENVIS Corner has also been maintained at ISC and publications of various ENVIS Centres have been displayed at this Corner for reference by the visitors.

20.1 World Health Day

World Health Day was celebrated by CEE Himalaya on April 7, 2010 at Muslim Model School Qazipora, District Bandipora, Jammu & Kashmir. Over 200 students from the host schools and nearby schools along with their principals and teachers participated in this event. Students and teachers were joined by members of the community including 10 Sarpanchs and seven Sadar-e-Auqaf (representative of village committees) from nearby villages.

The programme began with a theme based presentation by the CEE team highlighting the adverse effects of urbanization on health. The Principal of DIET (District Institute of Education and Training) Bandipora, the Chief Guest on this occasion, while comparing the ecological scenario in the region at present and 50 years back, said that improper urbanization had significantly affected the beauty and natural resources of the valley. The Senior Physician from Block Medical Office, Bandipora also raised concerns about improper sanitation and drainage systems that affect the health of the people. He also shared some precautionary steps and first aid tips regarding health, hygiene and sanitation with the participants.

Students participated in speech and quiz competitions on the theme of the day "Urbanization and Health". They expressed their opinions on urbanization, environmental degradation, polluted water bodies, conflict and violence.

20.2 World Heritage Day

'Think before you Throw' was the message of the programme organized by CEE North

on April 18 to observe World Heritage Day at the Regional Science City, Lucknow. An interschool competition on 'Waste is Resource' was organized on the occasion which was attended by 20 eco-club schools of Lucknow.

During the competition, schools were given waste material to create a product within a stipulated time. School teams were allowed to use any three types of solid waste from the ten categories - ceramic, glass, paper, e-waste, polythene, packaging, metal, clothes, wood, natural material. Eco-club students have come up with products in three categories - utility, decorative and utility cum decorative products. Each school team was also given an on the spot task to prepare a recipe giving the material used and method of preparation of the product. An interactive session was organized along with the screening of the film *Story of Stuff*. A panel of judges from science, media and waste management field interacted with the school teams. The prizes were given in ten categories to appreciate the Handprint ideas of the school students.

20.3 Earth Day

CEE Himalaya celebrated Earth Day on April 22, 2010 in two districts of Jammu & Kashmir simultaneously. At the Government Higher Secondary School, Lone Hari, Kupwara district, more than 400 students (from classes 9-12) with 37 teachers and other staff members participated in the event. The celebrations began with a welcome followed by Tilawat-E-Quran and Naat. CEE team made a presentation highlighting local environmental issues, efforts being undertaken by various agencies and what more needs to be done towards achieving

sustainability in the ecologically fragile mountainous Kashmir. A rally was taken out on a route skirting the town, with students displaying placards with messages and chanting slogans to save the earth and environment, not to use plastics and chemicals, and to follow low carbon emitting lifestyles. Quiz and speech competitions were organized. A skit “As you sow, so shall you reap” was performed by 10 students disseminating the message that a good quality environment is a must for a good quality of life. Trees were planted on the occasion.

About 170 students from two more schools - Noorul Haq Public School and Al Ahad Public School – along with 15 teachers participated in another celebration organized by CEE Himalaya at Oxford Public School Palpora, Srinagar district. The programme began with a welcome by the Principal of Oxford Public School, who highlighted the importance of the day and hoped that everybody would take an active role in saving our environment. CEE representative briefed the audience about the Earth Day, its history and significance, and the Earth Day theme for year 2010 “Many Species - One Planet One Future”. He highlighted the importance of natural resources including forests, soil and local water bodies which, in Kashmir, are getting polluted. Deforestation and excessive use of chemical fertilizers cause land degradation which poses a grave threat to the earth system and future generations. He shared ideas on how we can contribute to conserve natural resources and make the environment green. Students participated in a number of activities to commemorate the day. Winners of the competitions organized on this occasion were felicitated with prizes.

20.4 International Day for Biological Diversity

CEE Himalaya: International Day for Biological Diversity was celebrated by CEE Himalaya on May 22 in two districts of Jammu and Kashmir - Baramulla and Kupwara. In Baramulla, the event was celebrated at the Government Primary Schools, Education zone Julla, Salamabad, Tehsil Uri and in Kupwara the event was organized at the Government Middle School Bahadurkote, Education Zone Chamkote, Tehsil Karnah. Hundreds of students and their teachers participated in the events.

CEE team explained the importance and history of the International Day for Biological Diversity and the theme for the year, “*Biodiversity Development and Poverty Alleviation*”. The team highlighted the need for the conservation of local bio species like Morchella (gucchi), Olive, Saffron, Deodar and others, which are important resources of Kashmir but are declining day by day due to adverse human activities and due to climate change. The fauna of the state like Snow Leopard, Hangul, Markhour, Black Necked Crane, Black Bear and Sloth Bear are endangered and are included in the Red Data Book. CEE team also encouraged students to take up plantation and conservation of sanctuaries, national parks, botanical gardens and forest areas.

Drawing and painting, speech and quiz competitions were held during this event. Students were asked to draw pictures of nature and endangered species of flora and fauna of Kashmir. The drawings of students depict reducing forest area, which results in extinction of many plants, animals and their

habitats. The winners were felicitated with prizes.

CEE North: Awareness Programme at Dudhwa Tiger Reserve: A two day community awareness programme was organized by CEE North in partnership with WWF Dudhwa on International Day for Biological Diversity 2010. The communities residing around Dudhwa National Park participated in this which was held on May 21-22, 2010 at three locations reflecting the theme '*Biodiversity is Life Biodiversity is Our Life*'.

The first programme was organized at Primary School Balera on May 21 which around 120 community members from four villages attended. After a brief explanation about the significance of the day, a puppet show was presented which provided entertainment to the community as well as sent out messages to encourage the community to take part in the conservation efforts of biodiversity at the local level.

The second programme was organized at the Thakkar Bapa Ashram Vidyalaya, Gobraula on May 22 which around 100 community members from two villages attended. Some social issues like alcohol abuse, importance of family planning, sanitation and hygiene and health problems particular to women folk and children, were also covered in the puppet show. Forest officials also participated in the programme.

The third programme was organized at Bhagvant Nagar village, situated in the south boundary of Dudhwa National Park, where around 150 community members from two villages attended the puppet show.

Goa: As part of the International Year of Biodiversity, CEE in collaboration with the ICAR Goa, and supported by DSTE, organized a one day state level seminar on biodiversity and its conservation. The participants, over 75 in number, included scientists, teachers, progressive farmers and students. The Hon'ble Minister for Environment, Shri Aleixo Sequeira inaugurated the programme. The biodiversity of forests, agriculture, livestock, microbes and issues related to these were discussed. The roles of scientists and teachers in biodiversity conservation were deliberated at length. A compilation of articles related to biodiversity of Goa was released as a souvenir on the occasion.

20.5 World Environment Day - June 5, 2010

CEE Himalaya: The event was celebrated at different locations in the Northern and Himalayan region of India. About 500 participants including 310 students and 62 teachers and principals joined CEE in celebrating the event.

In J&K, the event was celebrated in Baramulla and Kupwara districts. Local specific environmental problems were raised through various activities like group discussion, quiz, speech and drawing and painting competitions, which were organized with students of six schools in Baramulla district. Beautiful and colourful posters on local environmental themes like '*Ped Lagao Mahoul Bachao*', '*Avoid Polythene*', '*Stop Deforestation*', and '*Clean Jhelum*' were drawn by students. The group discussion was based on the topic '*Should Polythene be banned or not*'. A group song by 12 students

was presented in the local Kashmiri language as “*Eqwat Samew, Mahool Bachauee*” which means Come Together and Save Environment. Towards the end of the day, more than 200 students from the participating schools, teaching and non teaching staff of the institutions and the CEE team held a road rally in the nearby market and around the school premises.

Students participated in the speech competition on the theme “How to save environment” in Tangdar, Kupwara. They presented innovative ideas to save environment through their speeches. Drawing and quiz competitions related to the theme were also organized at Tangdar.

A unique 15 day programme ‘Dream Green 2010’ was kicked off in Shimla in partnership with United Mass Movements for Eco-friendly & Equitable Development (UMMEED) to commemorate WED 2010. Six different events, some school-centric and others open to all, were part of the programme that geared up to promote proactive citizen involvement in protecting the environment and natural resources. The first, a poster making competition on the theme ‘Biodiversity is Our Life’, attracted participation of more than 200 children from three schools in Shimla on the inaugural day.

A public forum on “Making an Environment Friendly Society” was organized in collaboration with *Garib Utthan Sewa Samiti* (GUSS) at Tulsimath (recognized as the workplace of Tulsidas, famous Hindi poet), near Alakhnath Temple, Bareilly, Uttar Pradesh. The forum was attended by senior teachers, advocates, doctors and other prominent people of the area. GUSS

launched a cleanliness campaign and a plantation programme in the temple premises and nearby areas with the participation of the local community. CEE’s objective in conducting such a programme in a religious place was to connect human religious faith and belief to biodiversity conservation.

CEE North: *Paryavaran Mela*: CEE North, in association with the Directorate of Environment (DoE) and Regional Science City (RSC), celebrated World Environment Day by organizing a fun filled event – *Paryavaran Mela*. The *Mela* which started at 9.30 am with a formal inauguration by the Hon’ble Environment Minister, was attended by more than 300 people, mostly children (including slum children), parents and visitors to the Science city that day.

The *Mela* was focused on knowing biodiversity with fun which was reflected in the education corners like creative art and craft, green games, hands on and self expression. There were also stalls with exciting activities such as Snakes and Ladders, Identification of Birds, Odd one Out, Film Screening, Puppet show, Biodiversity Hunt and Quiz, My Message and much more. Children had an opportunity to try out new ways of learning and discovering hitherto unknown elements of biodiversity. Winners of the games received exciting prizes while children who won the biodiversity hunt and quiz received prizes sponsored by former Director of NBRI.

Goa: CEE Goa, with support from the Department of Science, Technology and Environment, Government of Goa and in association with Nisarga Nature Club,

Association of Friends of Astronomy and National Institute of Oceanography, organized a one day education and awareness programme on Biodiversity Conservation on the eve of Environment Day 2010. Events included a photography competition, drawing completion, a quiz on environment and development, film screening, and a panel discussion on Education for Sustainable Development. The Hon'ble Minister for Environment Shri Aleixo Sequeira inaugurated the programme and interacted with the participants through the day. The experts in the panel discussion made recommendations on the approaches to sustainability in Goa. CEE's Climate Change Education and Awareness Programme was discussed with the students and youngsters.

20.6 Ozone Day

An Inter-district quiz competition was organized on Ozone Day – September 16 - in one of the eco-club schools of Patna, *Rajkiya Kanya Uccha Vidyalaya*, Shastrinagar. The NGC schools from five districts, viz. Patna, Bhojpur, Vaishali, Nalanda and Saran were invited for the competition. In all, 12 teams from 12 NGC schools of these five districts participated in the competition. Around 80 Students and 18 teachers from these schools and the host school participated.

The competition was conducted in three rounds and the final round consisted of six teams namely Urja, Prithvi, Prakriti, Aakash, Jal and Sameer. The objective of the competition was to create an understanding among students about the issues related to Ozone layer protection. A session was conducted on *Paryavaran Mitra* Programme where school students and teachers were

given a brief orientation about the programme. Awards in the form of trophies and educational materials were given to the three winning teams.

20.7 International Day for Natural Disaster Reduction

The International Day for Natural Disaster Reduction was celebrated at Government High School Salamabad on October 13, 2010. Salamabad was one of the severely affected villages of Uri tehsil of district Baramulla during the 2005 earthquake. The Fire and Emergency Department of Uri demonstrated the technical skills necessary for fire fighting and conducted a mock drill on rescue operations. CEE team conducted a mock drill with children for safe evacuation from the school building in case of earthquake or fire and provided them first aid tips.

An activity "Hazard to Disaster" was conducted on this occasion to develop a basic understanding of disaster risk reduction (DRR) in children. Other activities organized on this occasion were extempore speech and drawing and painting competitions on the theme of the day "Making Cities Resilient, My City Getting Ready". Children expressed their views and concerns on local environmental issues and hazards like floods, deforestation, landslides and avalanche. Their drawings depicted earthquake scenarios and the devastation during disasters. Some of them sketched rescue and recovery operations as well. Winners of these competitions were awarded prizes. A group song was presented by students of Government High School Salamabad in local Pahari dialect carrying a message on saving the environment.

More than 150 children and 20 teachers from four schools participated in the event. CEE has reconstructed the building of the host school which was totally damaged during the earthquake. CEE is now developing this school as a Resource Centre for DRR education and preparedness by building the capacity of teachers and students through trainings and regular visits, organizing drills, providing relevant IEC material and involving parents and community during various events celebrated in the school.

20.8 International Mountain Day

International Mountain Day was celebrated by CEE in a remote tribal village Ramawari, Gund, located on the banks of the river Sindh in the Kashmir Himalayas. Ramawari village, which has some 450 odd households with a population of about 4500, is predominantly inhabited by the Gujjars and Bakerwals, the famous nomadic people of Himalayas who have mastered survival under harsh Himalayan conditions. On the bright morning of December 11, around 150 students along with their teachers and Headmaster assembled on the grounds of Ramawari Middle School to welcome their village elders. The Village Headman and other prominent elderly members including women participated in the celebrations which began with a cultural performance by the students on the theme “Mountain Minorities and Indigenous Peoples”. The participants in the age group of 8-14 years presented folksongs describing tribal life styles. These songs also had a blend of how indigenous people adapt to the local conditions. A few students spoke about their perception on climate change and their observations on various aspects like soil erosion on the banks of their river

Sindh and flash floods, and deforestation in the upper ridges of village Ramawari. The Headmaster appraised the gathering about climate change as a global issue of concern and how the impacts were visible locally in terms of less snow fall, unexpected floods or rise of water in the river, and less water during winters as compared to past levels.

Apart from the students, the women of the village presented a song in their language narrating the life a young girl passing through different phases of life. The Village Headman, who was the chief guest on this occasion, described how the climate change has affected the agricultural production in the village, such that they do not even recover the cost of the maize sown in their fields. Remembering the hard life they had to face in the mountains, he reiterated their dependence on traditional knowledge to cure common ailments because the nearest health center was located 3 km away from the village. Another senior villager described the profile of the village and briefly narrated the history of the village and the tribal population since hundreds of years there. He expressed his annoyance at the gradual erosion in the tribal culture observed during the past 20 years because the younger generations were not adopting traditional livelihoods due to modernization. The younger generation doesn't even like to use their traditional attire.

Through an interesting discussion with the villagers, students later documented the indigenous lifestyles in the past and how the practices have changed in their area with the passage of time. To help them be more focused, the discussions were organized in groups on selected themes and their findings can be summarized thus: The Gujjars and

Bakerwal is the third largest ethnic group in Jammu and Kashmir, constituting more than 20 per cent of the population of the state. Gujjars, together with Bakerwals, continue to be a unique community with their own social, cultural and linguistic identities. They spend most of the summer season in the picturesque upper reaches of Pir Panchal ranges relishing natural life in the lush green meadows and pastures. However, living in far flung and difficult areas has affected their cultural, economic and political empowerment and has led to their backwardness.

20.9 World Wetlands Day

A daylong celebration was organised by CEE Himalaya on the occasion of the 40th anniversary of Ramsar Convention at a village called Kulhama situated on the banks of Wular Lake, the Ramsar site in Jammu and Kashmir. Community representatives, fishermen, scientists, foresters and educators from CEE participated in the event which was a mix of awareness-raising talks, voices of the villagers, discussions, and recommendations followed by a rally.

To begin with, the CEE representative apprised the participants about the importance of World Wetlands Day 2011 as it commemorated 40 years of the Ramsar Convention. Linking the theme 'Wetlands and Forests', he highlighted the launch of the International Year of Forests 2011 on the same day and the importance of forests for the health of wetlands. Participants were told about various forested wetlands like mangroves, peat swamp forests, freshwater swamp forests and others, which are biologically different but are significant for

managing our freshwater stocks and provide us with many other ecological services including acting as carbon sinks.

Speaking about the need for protecting and saving forests, the local Forest Officer explained to the villagers how to keep lake pollution levels low. He further said the health of our wetlands, whether forested or not, is linked to the health of forests in our catchments. Losing and degrading forests means losing and degrading wetlands.

The Inspector of the Fisheries Department reminded the audience that Wular, once considered the largest lake in Asia, has been reduced to a depth of only 6 meters while its area is down from 200 sq km to only 24 sq km. Highlighting the importance of the lake, he further emphasised that local people directly depend on the lake for fish, fodder, vegetables and other necessities, and it contributes to the state and national economy. Unfortunately, the fish population is constantly decreasing due to pollution, overfishing and lack of water quality control. He called upon the local people to play their role in the conservation and rebuilding of the lake and preventing deforestation to stop subsequent soil erosion and sedimentation. The lake should be protected from direct disposal of untreated sewage and solid waste. He also called for a stop to the catching of small fish in order to improve the fish population.

Silting and pollution in the lake due to uncontrolled inflow of non- biodegradable waste and sewage was the main concern raised by the village headman. He also expressed worry about the lower yields of aquatic species used as vegetables. The lake

is known for extensive marshes of emergent and floating vegetation, particularly water chestnut, that provide an important source of revenue. The local school teacher appealed for a ban on large nets in the wetland area. Another local government official raised the issue of low fish production affecting livelihoods as the majority of the village population is dependent on fishing from the lake. Their agony is that the population is increasing whereas Wular Lake is declining, thus affecting the livelihoods of many.

At the end of the day, participants numbering around 150 took out a rally carrying placards and chanting slogans like 'save wetlands' and 'save forests'. The rally went throughout the village and got other villagers also involved. Members of the disaster management committees from nearby villages also participated in the rally.

Wular Lake, the largest fresh water lake in India situated in the lap of high mountains towards the north-eastern side, is home to several migratory and resident birds and above fifty aquatic animal species. The catchment area has coniferous forests, alpine pastures and orchards. An artificial island has added value to the lake as a favourite picnic spot. There is urgent need to intensify the efforts by the lake managers to revive the lake by taking measures like disinflation, deepening, afforestation in the catchment area, stopping untreated sewage influx, regulated and guided fishing and through community awareness and participation in the maintenance of the high quality of water. CEE Himalaya had earlier organised an awareness programme for the fisherman community of Wular Lake on the occasion of WWD 2007.

20.10 International Women's Day

March 8, 2011 was celebrated as the 100th International Women's Day across the globe. Austria, Germany, Denmark and Switzerland are the countries who initiated this tradition of celebrating a day for women for the first time on March 19, 1911. In 1975, March 8 was declared as the International Year of Women by the United Nations and the day has been celebrated as the International Women's Day since then. On the occasion of the 100th International Women's Day on March 8, 2011, CEE Himalaya organized a daylong programme for housewives, Accredited Social Health Activists (ASHA), *Anganwadi* workers, members of self help groups and village disaster management committees in a remote Himalayan village called Noorkhah. The objective of the programme was to make women aware of health, hygiene and sanitation, and provide tips on women's health, family planning and related issues. A practicing gynecologist working at Tehsil Hospital, Booniyar, was invited as the guest speaker. The women got an opportunity to discuss their problems with the doctor. The attending physician of the PHC who was also present on the occasion, spoke on hygiene and cleanliness at home and in the surroundings. The participants were provided relevant IEC material developed by CEE in Urdu which had tips on cleanliness, household and personal hygiene, waste management and sanitation.

20.11 World Water Day

About 220 students and 22 teachers from five schools assembled at Al Misba Public School Papachan in Bandipora District of

Jammu and Kashmir to celebrate World Water Day 2011 on March 22.

The programme began with the recitation of 'Tilawt-e-Quran' by the students from the host school. Mr. Abdul Raheem, a teacher in the school welcomed the students, teachers, guests, and introduced the members of CEE, the organizers of the programme. Mr. Mubashir Sultan Zargar, representing CEE, spoke on the background of World Water Day and its significance. Introducing the theme 'Water for cities: responding to the urban challenge' for the year 2011, he reiterated that the objective of observing World Water Day is to make people aware of the impact of rapid urban population growth, industrialization and uncertainties caused by climate change, conflicts and natural disasters on urban water systems. He also referred to the shrinking water bodies - lakes and rivers in the area – due to pollution, thus limiting the availability of potable water.

The Lake Manager from Wular Lake Development Authority highlighted issues affecting water availability like deforestation, degradation of catchment areas, reduced flow of water in rivers and streams, dumping of untreated solid and liquid waste leading to pollution of water and water sources from where drinking water is collected. He raised concerns about the change in the snow fall pattern and quantity, observed over the last 10 years which has resulted in the lowering of the ground water table of the area and loss of soil moisture, both affecting the local crop production.

Children too took an active role on this occasion. Six students from each school participated in a group discussion on water crisis in Bandipora town where above 20%

of the total population does not have access to safe drinking water. Lack of awareness and interest in the upkeep and maintenance of local water bodies amongst residents of the area emerged as a prominent issue through the discussion. Children highlighted the outbreak of water borne diseases like cholera, jaundice and diphtheria. Their debate ended with the commitment "Water for all and all for Water". They pledged to never pollute their water bodies and conserve water and other natural resources.

Later the children also participated in quiz and slogan writing competitions and prizes were given away to the winners. The day concluded with a small rally of children accompanied by their teachers, speakers and non-teaching staff which passed through the local market near the school displaying slogans written by the students.

20.12 Green Concerts

A green concert was organized in Marcella, Ponda, Goa to create awareness about biodiversity conservation. Professional singers sang songs related to environmental protection and biodiversity conservation. In between the songs, various messages related to biodiversity conservation were announced to create awareness in the audience about the subject. The concert was well attended by more than 400 people.

Carmel College for Women, Nuvem organized a one day green concert at the college premises. About 15 colleges participated with skits, drama and songs on environment and biodiversity conservation. The skits which were performed were judged and three prizes awarded.

Both the concerts were organized in association with CEE Goa.

20.13 Media Coverage

Some of the events conducted by CEE Himalaya were covered by the local editions of national papers. These include *Paryavaran Mitra* launch in Jammu, World Wetlands Day celebration and Livelihood Support to Earthquake Victims of J&K by CEE Himalaya. Given below are links to some of the articles on these:

Story on mushroom model villages at www.globalpressinstitute.org

World Wetlands Day 2011 report at <http://www.worldwaterday.org/page/3234>

Story on Disaster Management initiatives at <http://www.globalpressinstitute.org/global-news/asia/india/kashmir-admits-it-unprepared-strives-prepare-disasters>



22.1 Information and Facilitation Centre, CEE Ahmedabad

The Information and Facilitation Centre (IFC) was set up in January 2008 to serve as an interface with the people of Ahmedabad and with visitors to CEE and its sister organizations, providing an opportunity to orient them to Environment and Sustainable Development, including information on various schemes and programmes of the Ministry of Environment and Forests, Government of India.

In its fourth year, the IFC has developed and started carrying out programmes and activities which include orientation and hands-on experiential learning opportunities for various age groups through three hour to week-long packages. The IFC conducts a month-long summer programme for children, culminating on June 5, World Environment Day. Outdoor activities conducted through the year for school teachers and students include Nature trails on campus, bird watching and field trips to natural sites. The IFC has been actively involved in developing a campaign around the theme of "Safe Festivals". It also promotes eco-friendly

products, displays environmental publications and information about the latest publications. A database on the participants in IFC's various programmes and visitors to the IFC is prepared and updated on a regular basis. It has over 2500 local addresses listed to whom event information and other updates on special programmes at CEE and its sister organizations are sent.

22.1.1 Packages for Orientation to Environmental Education

These were offered to a varied group of visitors to CEE. Generally of three hours duration, these include a Nature Trail, Environment Education activities and games, and a film. Special components get added to this main package based on the profile of the group taking the package.

School groups

The IFC continued facilitating visits from schools of Ahmedabad. The student groups were varied as they included very young children from pre-primary as well as those from senior secondary classes.

University Students and Trainees at Professional Programmes

- As part of field education/exposure trip, a group of 40 students from an activity centre "Fun with English" visited CEE. The three hour session for them included nature trail, games and activities, stories and songs on environment.
- About 95 B Ed Students and six teachers from J.G. College of Education had an orientation session at CEE. The three hour session focused mainly on climate change, global warming and biodiversity.



Students were divided into groups and asked to make charts and give presentations on “Best out of Waste”. Both the groups had a debate on the reasons for climate change and its impact on human beings.

The group was also shown the *Prakriti* Environment Education bus where the themes broadly focused on five areas – Land, Water, Energy, Biodiversity and Climate Change. Information on the Green Teacher Diploma course and *Paryavaran Mitra* programme was also shared with the group. The session ended with activities and a half an hour Nature Trail.

Rachana School Visit: A two hour orientation session was conducted for Rachana School, Shahibaug on August 5, 2010. Over 90 students of grade VII along with their teachers participated in the nature trail, bird watching, environment related activities like the Web of Life and others. On the nature trail, the students were introduced to various aspects like how organisms adapt to their surroundings, and how they are interlinked and maintain a balance in nature. They could understand what a canopy is as they walked through the lush green campus. The students were very fascinated to see the vast biodiversity around them. Most of them were also very surprised to know that a bamboo tree dies once it flowers. Other topics discussed included ecosystems and rainwater harvesting.

Green Project - A Hand Print Action to Recycling Waste Paper: A group of 25 students, along with their teachers, from Riverside School visited CEE to understand the concept and use of paper recycling. The

session talked about how they could move from disposal to paper recycling in-house. A **‘Hand Print’ action towards sustainability** - the main objective behind this is to promote the habit of recycling in schools and using the resources more sustainably. Children also enjoyed a 45 minute nature trail and played participated in environment education activities which were taken up subsequently for discussion. The two hour orientation session was facilitated by CEE’s Information and Facilitation Centre (IFC).

Nature Buddies: Senior and Junior KG Students of Eurokids, Vastrapur branch had various sessions as part of their annual programme under Nature Buddies. The topics covered were, Air; Water – Sources, Forms, Uses, Water Cycle, Water Sports; Concept of Living and Non living things; and India My Country. A film on underwater animals was specially screened for them. While learning more about Indi, each child had a painting of their favorite national bird, animal, flower and even the flag. Various hands-on and creative games and activities were very specially designed for the group of 200 students.

Celebrating Children’s Day with Nature: More than 40 children had a unique opportunity to be close to nature and learn more about the different flora and fauna in the 14 acre lush green CEE Ahmedabad campus. Poiesis Achievement Foundation, a social organization focusing on development of children through their various programmes, celebrated Children’s Day by bringing their children on a nature trail. Children spotted a great variety of different birds. They enjoyed watching African mouthbreeder fish and were surprised to

know that it breeds eggs in the mouth. Children also understood the concept of food chain and interdependence with the help of 'Web of Life' activity.

In Brief: The number of groups who have attended the orientation programme facilitated by IFC:

Group	Number	No. of participants
Schools	12	650
University students and trainees		350
Groups supported by NGOs	2	70
Total		1070

Besides offering the orientation package, the IFC facilitated field visits of a school to Manekbaug plot and a natural site outside Ahmedabad for their project work. The IFC also facilitated linkages with other programmes within CEE such as connecting colleges to the SAYEN network in Ahmedabad.

21.1.2 Campaigns

Safe Festival Campaign

Diwali Safe Festival Campaign: Posters were put up at various places in the city highlighting safe festival celebration. Mailers were sent to people to raise awareness about the health hazards and pollution created due to crackers.

Products like, paper bags, candle stands, lampshades and traditional *diyas* were exhibited and sold at the IFC. These were procured from organizations like UTTHAN,

and were made by mentally challenged children associated with this organization.

Holi: A campaign was conducted to propagate the use of natural colours and create awareness about the harmful impacts of the synthetic colours sold in the market. Natural and herbal colours were sold from different outlets located at *Sundarvan*: Nature Discovery Centre, Vikram A Sarabhai Community Science Centre (VASCSC), Gulmohar Mall in Satellite and CEE's Information Centre itself. The colours were procured from *Arya Sanskriti* - organic products entrepreneurs in Ahmedabad. Posters were put up at different locations in the city and pamphlets with tips on making homemade colours distributed.

This year, IFC conducted the Holi safe festival campaign which was called *Prakriti ke rang*, *Prakriti ke sang* and held demonstrations and presentations for students from eight schools.

Makar Sankranti Festival Campaign - Save our Birds: Mailers were sent to all friends of CEE and other colleagues regarding the need to celebrate the kite flying festival safely so as to avoid hurting birds.

22.1.3 Summer Programme for Children

A special vacation programme for 80 children of 6-13 years age was conducted by the IFC. The month long programme was divided into four weeks, each coordinated by a subject specialist from CEE. The themes for each week were:

Week 1 - Fun with Nature's Creatures

Week 2 – Biodiversity around me

Week 3 – Disappearing Speciesgoing, going, gone...

Week 4 – Become a Green Ambassador

The programme included field trips, movie screenings, theoretical and practical session, activities and games. Participants were given certificates at the end of the programme. The children set up an exhibition of the products and materials they developed during the summer programme and conducted puppet shows on World Environment Day.

22.1.4 IFC Memberships

The Information Centre offers membership to the citizens of Ahmedabad that will entitle them to participate in various activities, get invited to popular lectures and events, and access to CEE's facilities like the library.

22.1.5 Information and Facilitation Counter, MoEF, New Delhi

The Information and Facilitation Counter at *Paryavaran Bhavan*, New Delhi has been run by CEE since December 2005. The IFC has the following facilities for visitors:

- A Helpdesk where staff provides broad-based information to visitors (both general public and officials) about the Ministry and its divisions; contact details of officers; directional guidance; MoEF's structure and organization, schemes, programmes, and other relevant information. In actual practice, IFC staff renders assistance to visitors not only regarding MoEF but also regarding the locations of various other Ministries and Departments in the CGO Complex, since most people alighting in the central courtyard of CGO see this information

facility first and come inside to make enquiries. More than 50-60 visitors are serviced on an average working day; this number swells during certain periods; e.g. during the vacations large numbers of parents and students come seeking information and material for class projects and exercises.

- A display and reference area for publications of MoEF and its ENVIS Centres
- A touch screen computer where visitors can browse MoEF information from its website
- Distribution service for MoEF Annual Reports, Funding Schemes and other publications. Some priced publications have recently been added and these too are available from the IFC against payment.
- Guidance regarding application procedures for import, handling and disposal of hazardous substances including batteries; EIA clearances for different projects; applications for research and funding schemes.
- Assistance in retrieving information about the status of various applications (for environmental clearances, project proposals for funding, grant applications under different schemes). The IFC staff also helps link up the visiting applicants to the concerned officers in various divisions so that clearance-related technical queries can be settled efficiently.
- Receiving and processing RTI applications from applicants (the "in-

person” channel). When required, IFC staff also coordinates with concerned divisions to arrange physical inspection (under MoEF custody) of records by applicants.

22.2 Conferences/Seminars/ Workshops Attended/ Conducted by CEE Members

22.2.1 Children’s Media Unit (CMU)

CMU team members were actively involved with the World Environment Day celebrations as well as IFC activities as resource persons.

CMU members participated in the different activities leading up to the **Earth Charter + 10** conference as well as during the conference.

Ms. Rajeswari N. Gorana was part of the rapporteuring team and worked with the chief rapporteur, Dr. Shailaja Ravindranath, in compiling reports of the sessions of the working groups and plenaries. These were the main inputs for the final recommendations of the conference as well as for CEE’s magazine *Ceenario* and the press notes.

Mr. Pankaj Gorana was involved in photo documentation of the event.

Ms. Mamata Pandya was part of the drafting committee for the final recommendations of the conference.

22.2.2 NCB

The team members at NCB were involved in contributing to some of the other projects and activities of the Centre. These include taking subject specific sessions in EE

programmes for students of the Aravalli Institute of Management. The NCB and GIS team also conducted sessions in other teacher training workshops at the Centre and also coordinated GIS based learning and activity corner during the World Environment Day event.

22.3 Individual Participation

Dr. Kiran Chhokar

- Participated in the *5th RCE Annual International Conference* held at Curitiba, Brazil, in May 2010, where she moderated a panel discussion and facilitated a world cafe group on research and communication.
- Participated in the *ASEAN Pattern Laboratory: Education for Sustainable Development* organized by CEREPDR (the Education Research Centre of Hanoi University), GAP International and SWEDESD, at Halong Bay, Vietnam, in October 2010.
- Gave the keynote speech at a seminar on *Higher Education and Sustainable Development: Emerging Challenges* at Banaras Hindu University, Varanasi, in December 2010.
- Contributed an invited article on Education for Sustainable Development in Higher Education in India for publication in the Global University Network for Innovation (GUNI)’s publication *Higher Education in the World 4: Higher Education’s Commitment to Sustainability: from Understanding to Action*.

Mr. Sujeetkumar M. Dongre

- Has been nominated as Member of the Steering and Executive Committee of Goa State CAMPA.
- Has been nominated as Member of the Board of Studies, Environmental and Value Education, Government of Goa.

Dr. Abdesb Gangwar

- Represents CEE which has been nominated as a member of the mission *Himalaya Paristhitiki Akshunta* (Mission for Intactness of Himalayan Ecosystem), constituted by UP government to protect the fragile ecosystems of the Himalayan range from climate change. This mission is headed by the Chief Secretary, Government of Uttar Pradesh and the eight sectoral missions are headed by the Principal Secretaries of the concerned departments. CEE is already a member of the advisory group of SAPCC (State Action Plan on Climate Change) and is part of the core group of the Mission for Strategic Knowledge for Climate Change. The workshop to launch the process was held at Lucknow on November 24, 2010, which was attended by government officials as well as experts from the private sector, research institutions, academia and NGOs dealing with various environment and development related issues.
- Participated in a workshop *Mountain Biodiversity & Impact of Climate Change with special reference to Himalayan Biodiversity Hotspot*, organized jointly by G. B. Pant Institute of Himalayan Environment & Development and

ICIMOD at GBPIHED, Kosi-Katarmal, Almora, Uttarakhand on December 6-8, 2010. He presented a paper *Addressing the Climate Change and Mountain Biodiversity Conservation through Education*.

- Was a guest speaker during *Why we are not able to save the tiger? Possible Solutions* organized by Tiger and Terrain on January 1, 2011 at Hotel Clarks Avadh to commemorate the first death anniversary of the legendary wildlife conservationist and tiger lover Late Mr. Billy Arjan Singh.
- Participated in a consultation meeting *Voices from High Altitudes: Mainstreaming in State Action Plan on Climate Change* organized by WWF-India on January 17 in Shimla.
- Was invited as a technical resource person for the state level programme of “capacity building and strengthening of vermi composting units in universities and colleges through solid waste management training” by Uttarakhand State Council for Science and Technology (UCOST). Three workshops were conducted as part of this programme: (i) at Government PG College Ramnagar, Udham Singh Nagar, Uttarakhand on February 27, 2011, with more than 130 PG College students, NCC, NSS cadets and IGNOU B.Ed students attending; (ii) at Petroleum University Dehradun for their degree students and faculty numbering 85 on March 3, 2011; and (iii) at MKP Inter College, Dehradun on March 4, 2011, where 100 students and teachers of the college and nearby schools participated.

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- Participated in a Validation Workshop on Climate Change Adaptation Methodology organized by Welthungerhilfe in Nepal, March 7-9, 2011.

Ms. Rashmi Gangwar

- Participated in a two weeks course *Protecting Mountain Biodiversity* from July 8-23, 2010 in Italy, organised under the International Programme on Research and Training on Sustainable Management of Mountain Areas (IPROMO) and Mountain Partnership with local support from the University of Torino. The course was attended by 29 participants representing 19 countries.
- The overall purpose of this third summer IPROMO course was to provide post-graduate the participants, who were mainly from areas characterized by degraded and overexploited mountain ecosystems, especially from developing countries, with scientific knowledge and better understanding of the importance of protecting mountain biodiversity and to enhance their ability to assess potential ecological and social impacts of different management policies. The course was held in various locations in the Italian Alps, representing different aspects of biodiversity: the higher Alps (Chisone Valley), then Sesia Valley close to the Mount Rosa, the South-western Alps close to the Mediterranean Sea (Tanaro Valley)
- Presented a paper on *Community Based Contingency Planning – Key to Resilience towards Disasters* during the *National Conference on Community*

Managed Disaster Risk Reduction (CMDRR) held at New Delhi. The conference was organised by Caritas India in collaboration with National Disaster Management Authority and SPHERE India

Ms. Rajeswari N. Gorana

- Was the resource person for the *Green Teacher* face to face contact session for the CEE West programme.
- Was the resource person for the session on *Sustainable Development*, for the Environment Module for the MBA students of Aravalli Institute of Management.

Ms. Shivani Jain

- Was invited to deliver the keynote address on ESD at the *Indonesia Teacher Congress* (Congress Guru Indonesia), held in Jakarta, Indonesia in May 2010. ESD was the theme of the 2010 Teacher Congress. Over 1500 teachers, teacher trainers and formal education practitioners attended the Congress.
- Presented a paper on the *Whole School Approach to ESD*, at one of the parallel sessions at the Congress mentioned above. This paper presented learnings and insights in teaching-learning for ESD, as gained and refined from the planning and conducting of a series of International Training Programmes (ITPs) in ESD in Formal Education, which is coordinated by CEE India for the Asian region.
- Shivani Jain Represented the Centre at the *Consultative Meeting on SWEDES*

Strategy 2010-2012 held in Gotland, Sweden in April 2010. The two day meeting, with representatives of ESD institutions from Africa, Asia and Europe, focused on the two year vision and programme plan of the Swedish International Centre of ESD.

Mr. Manish Meshram

- Participated in Librarian's Day and Seminar by ADINET on August 7, 2010 at Ahmedabad Management Association (AMA).

Ms. Mamata Pandya

- Represented CEE at the workshop on *Moving Images for Saving the Planet: Networking for audio-visual communication in Asia* held in September 2010 at Chiang Mai in Thailand. The workshop was organized by TVE Asia Pacific (TVEAP) and TEV-Japan in partnership with Thai Worldview Foundation (TWF) and with funding support from the Toyota Foundation.

The workshop's basic premise was that education and communication play a major role in ensuring that informed decisions and enlightened choices are made on sustainable development. The workshop had brought together 21 participants from 10 countries in South Asia and South East Asia at Chiang Mai in Thailand. It provided an opportunity for the partners to share their

experiences in versioning, outreach and dissemination TVE-Japan films on *Japan's Pollution Experience*, whose local language versions have been produced in eight countries of the region. CEE being a partner of TVE-Japan and having produced local language versions of nine of its films, Ms. Pandya shared the CEE experience in the context of producing and disseminating Indian language versions of the films.

Ms. Mamata Pandya and Ms. Rajeswari N. Gorana

- Were facilitators for the orientation programme conducted for the *Paryavaran Mitra* team from various CEE offices.

Mr. Ishwar C Poojar

- Participated as a resource person at the Regional Institute of Education, Mysore to develop curriculum enrichment material for the pre-university college lecturers on Biological Diversity related topics.
- Participated in the *Community Biodiversity Protocols Workshop* at Avissavella, Srilanka in his capacity as Member, Steering Committee, Community Knowledge Service – Asia.
- Has been selected as Member of the Technical Advisory Committee (TAC), for the UNDP Equator Initiative Awards for the year 2010.

CEE Governing Council

Chairman

Dr. Kirit S. Parikh

Chairman

Integrated Research and Action for
Development (IRADe)

Chairman

C-80 “Shivalik” Opp. Malavya Nagar
New Delhi 110 017

Nominees of the Ministry of Environment and Forests, Govt. of India

Dr. Tishyarakshit Chatterjee, IAS

Secretary

Govt. of India

Ministry of Environment & Forests

“Paryavaran Bhavan”

C.G.O. Complex, Lodhi Road

New Delhi 110 003

Ms. Gauri Kumar, IAS

Additional Secretary & Financial Advisor

Govt. of India

Ministry of Environment & Forests

“Paryavaran Bhavan”

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New Delhi 110 003

Representatives of the Nehru Foundation for Development, Ahmedabad 380 014

Smt. Mrinalini V. Sarabhai

Chairperson

Nehru Foundation for Development

Usmanpura

Ahmedabad 380 014

Representative of the Karmakshetra Educational Foundation, Ahmedabad 380 014

Dr. (Ms.) Mallika V. Sarabhai

Hon. Director

Darpana Academy of Performing Arts

Usmanpura

Ahmedabad 380 014

Nominee of the Department of Forests and Environment, Govt. of Gujarat

Shri S K Nanda, IAS

Principal Secretary

Govt. of Gujarat

Forest & Environment Dept.

Sardar Patel Bhawan

Block No. 14, 8th Floor

New Sachivalaya

Gandhinagar 382 010

Eminent persons in the fields of Environment, Education, Communication and Management

Shri Ashoke Chatterjee

B-1-002 Rushin Tower

B/h Someshwar 2, Satellite Road

Ahmedabad 380 015

Shri Prasad R. Menon

Chairman, Tata Consulting Engineers

Ewart House, 3rd Floor

24, Homi Mody Street

Mumbai 400 001

Shri S.K. Mukherjee

269 Sewalakalan (Majra)

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Dehradun

Uttaranchal 248 171

Prof. M.K. Prasad

No:62 “Perumana”

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Cochin 682 020

Dr. (Ms.) Shobita Punja

CEO

National Culture Fund

2nd Floor, Admin Wing

NGMA, Jaipur House

New Delhi 110 003

Shri Vinod Raina
Bharat Gyan Vigyan Samiti
YWA Hostel No.2
'G' Block, SAKET
New Delhi 110 001

Ms. Kalpana Sharma
Independent Journalist/Columnist
11 D Malabar Apartments
Off Nepean Road
Mumbai 400 036.

Dr. Mahfuza Rahman
No.202 Amity Apartment
S.K. Bhuyan Road, Dighalipukhuri
East Guwahati 781 001

**Ex-officio members from associate
institutions of NFD, Ahmedabad**

Shri Dilip V. Surkar
Director
Vikram Sarabhai Centre for Development
Interaction (VIKSAT)
Ahmedabad 380 054

Ms. Indu Capoor
Director
Centre for Health Education, Training and
Nutrition Awareness (CHETNA)
CHETANA
B-Block, 3rd Floor, Supath-II,
Opp:Vadaj Bus Terminus,
Ashram Road, Vadaj,
Ahmedabad 380 013

Shri Dilip V. Surkar
Executive Director
Vikram A. Sarabhai Community Science
Centre (VASCSC)
Navrangpura
Ahmedabad 380 009

Shri T.K. Balappan
Secretary
Nehru Foundation for Development
Ahmedabad 380 054

**Ex-officio members from Centre for
Environment Education**

Shri Kartikeya V. Sarabhai
Director
Centre for Environment Education
Ahmedabad 380 054

Standing Committee

Chairman
Shri Kartikeya V. Sarabhai
Director
CEE

Secretary or his/her nominee
Govt. of India
Ministry of Environment & Forests

Shri B.M.S. Rathore, IFS
Joint Secretary
Govt. of India
Ministry of Environment & Forests

Dr.(Ms.) Shobita Punja
CEO
National Culture Fund
2nd Floor, Admin Wing
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Shri S.K. Mukherjee
269 Sewalakalan (Majra)
47, Lane 5, Ashwani Enclave
Dehradun
Uttaranchal 248 171

Shri T.K. Balappan
Chief Administrative Officer (S&L)
CEE
Ex-officio Member-Secretary

Finance Committee

Chairman
Shri Kartikeya V. Sarabhai
Director
CEE

Financial Advisor or his/her nominee
Govt. of India
Ministry of Environment & Forests

Ms. Gauri Kumar, IAS
Additional Secretary & Financial Advisor
Govt. of India
Ministry of Environment & Forests

Dr.(Ms.) Shobita Punja
CEO
National Culture Fund
2nd Floor, Admin Wing
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Shri S.K. Mukherjee
269 Sewalakalan (Majra)
47, Lane 5, Ashwani Enclave
Dehradun
Uttaranchal 248 171

Shri D.M. Vora
Sr. Accounts Officer
CEE
Ex-officio Member-Secretary

CEE Offices Address List

Head Office

Centre for Environment Education
Nehru Foundation for Development
Thaltej Tekra
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Gujarat
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Regional Cells

CEE Central

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167/1 & 168/1, 'Nagras Road'
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CEE North East

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CEE West

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State Offices

CEE Andhra Pradesh

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C/o State Council of Educational Research
& Training (SCERT)
Alto Porvorim, Bardez
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CEE Tamil Nadu

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CEE Madhya Pradesh

B- 11, Chanakyapuri, Chunna Bhatti
'Kolar Road'
Bhopal 462 016
Madhya Pradesh
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Field Offices

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CEE Coorg

Neerkollie

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Virajpet 572 218
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E-mail: ceekodagu@ceeindia.org

CEE Madikeri

Lower Kodava Samaja Road
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Karnataka
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2nd Floor, HKADB premises
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CEE Kannur

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CEE Halvad

Kidi-Ingorala Village Road
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Project/Cluster Offices**CEE Waghodiya**

9-B, Narayannagar Society
Near Khetiwadi Bajar
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CEE Bilpudi

Vanseva Mahavidyalaya Campus
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CEE Himalaya

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“TILOTTAMA”

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CEE Udaipur

C/o. Samarthak Samiti

Inside Mangal Shree Garden

Purana Chungi Naka

Fatehpura

Udaipur – 313004

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CEE Ranchi

House No.- 1665/L4, 1st Floor

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Email id: ceeranchi@ceeindia.org

Contact No: 91-8877160985

Information & Facilitation Counter (IFC)**MoEF Information & Facilitation Counter – IFC (C/o CEE)**

Ministry of Environment & Forests

Government of India

Paryavaran Bhawan

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Telefax:011-24362064

Email:ifc@ceeindia.org, ifc-mef@nic.in

DéCee

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Nature Discovery & Campsite Offices**Sundarvan**

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Sundarvan Bakore

Taluka Khanpur

Post Bakore

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Sundarvan

Beyt Dwarka

Via Okha Port

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CEE Sri Lanka

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Mampe, Piliyandale, Sri Lanka

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Germany

Tel. +49-(0)221-300 70 636

E-mail: rixa.schwarz@ceegermany.org

CEE Thrust Areas

1. Education for Children
2. EE in Higher Education
3. Education for Youth
4. Communicating Environment through the Media
5. Experiencing Nature
6. EE through Interpretation
7. Knowledge Management for Sustainable Development
8. Industry Initiatives
9. Sustainable Rural Development
10. Water and Sanitation
11. Sustainable Urban Development
12. Waste Management
13. EE for Fragile Areas
14. Education in Biodiversity Conservation
15. Disaster Preparedness and Rehabilitation
16. Training, Networking and Capacity Building
17. Facilitating NGO and Community Initiatives
18. Initiatives for the UN Decade of Education for Sustainable Development
19. Research in EE and ESD
20. Collaboration and partnership at the international level in EE & ESD.

CEE Websites

About CEE	www.ceeindia.org
A platform for discussion on developmental issues of the city	www.amdavadma.org
Hand Print: Action towards sustainability	www.handsforchange.org
For the UN DESD	www.desd.org
For Youth	www.sayen.org
South and South East Asia Network for EE	www.saseanee.org
A nature discovery centre	www.sundarvan.org
About tigers	www.tigerindia.org
For educators and ENVIS Centre on EE	www.greenteacher.org
For EE Materials	www.edutechindia.org
UNDP GEF Small Grants Programmes	www.sgpindia.org
Biomedical Waste Management	www.bmwmindia.org
For Cleaner Production	www.cleanerproduction.org
Education and Communication for Mountain Ecosystems	www.ceeindia.org
Video Resource Centre	www.ceeindia.org
Programme and Activities of CEE Australia	www.ceeindia.org
Ethical Framework for a Sustainable World – International Conference	www.earthcharterplus10.org
Paryavaran Mitra Programme	www.paryavaranmitra.in

**Nehru Foundation for Development
Centre for Environment Education
Thaltej Tekra, Ahmedabad 380 054**

(Registered under the Societies Registration Act, 1860)

Regd. No. GUJ/1043 (Ahmedabad)

(Also registered under the Foreign Contributions (Regulation) Act, 1976

vide registration no. 041910044

with Ministry of Home Affairs, Govt. of India)

**FINANCIAL STATEMENTS
2010–2011**

CHANDULAL M. SHAH & CO.
Chartered Accountants

601, "Samruddhi"
Sattar Taluka Society,
Opp. Sakar - III,
Ahmedabad-380 014

NAME OF THE SOCIETY : NEHRU FOUNDATION FOR DEVELOPMENT CENTRE FOR
ENVIRONMENT EDUCATION [SOCIETY]

REGISTRATION NO.: GUJ/1043/AHMEDABAD

AUDITOR'S REPORT

We have examined the Balance Sheet as at 31st March, 2011 and Income & Expenditure Account for the year ended as above of the above Society. These financial statements are the responsibility of the Management of the Society. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the auditing standards generally accepted in India. Those Standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

We further report as under:

- (a) Accounts are maintained regularly and in accordance with the Provisions of the Act and the Rules.
- (b) Receipts and disbursements are properly and correctly shown in the accounts.
- (c) The cash balance and vouchers in custody of the Manager on the date of the audit were in agreement with the accounts.
- (d) All books, deeds, accounts, vouchers or other documents or records required by us were produced before us.
- (e) An inventory certified by the official of the society of the movables of the Public Society has been maintained.
- (f) Shri D. M. VORA – Sr. Accounts Officer appeared before us and furnished the necessary information required by us.
- (g) No property or funds of the Society were applied for any object or purpose other than the object or purpose of the Society.
- (h) The amount outstanding for more than one year Rs. 163.19 lacs. Amount written off during the year Rs. Nil.
- (i) Tenders were invited for repairs exceeding Rs. 5000.
- (j) No money of the public Society has been invested contrary to the provisions of Section 35.
- (k) There is no alienation of immovable property contrary to provision of Section 36.
- (l) Remarks : Nil

CHARTERED ACCOUNTANTS
Place : Ahmedabad
Date : 30th September, 2011

For CHANDULAL M. SHAH & CO
F.R. NO.: 101698 W

(K.H.Vasavada)
Partner
M.No. 12322

Receipts and Payments Account for the year ending on 31st March, 2011

RECEIPTS	Rs.	Rs.
OPENING CASH AND BANK BALANCES		22238838
<u>GRANT FROM MINISTRY OF ENVIRONMENT & FORESTS, GOVERNMENT OF INDIA, NEW DELHI</u>		
Grant received during the year:		
i. For Recurring Expenditure		62300000
<u>PROJECTS AND PROGRAMMES</u>		
<u>Out of Grant from Ministry of Environment & Forests, Government of India, New Delhi.</u>		
Sponsored Projects/Programmes		45909129
<u>Out of Grant from Locally Funded/Foreign Funded and Own Programme</u>		
Sponsored Projects/Programmes	86319578	
Out of Foreign Contributions	22529053	
Own Programmes	13794930	122643561
<u>OTHER RECEIPTS</u>		
Interest on Bank Accounts	853292	
Other Income	232671	
Misc. Income	564197	
Services & Products	12320834	
Recovery of Staff welfare Fund Loan	791347	
Royalty and Infrastructure Receipts	2167150	
TDS refund	779860	
Specific Fund- Staff welfare, Library books, Equipments etc	704097	
Consultancy, Overhead recoveries & Reimbursements	32426446	
Adv to NGOs settled	4066842	
Supplier's Adv settled	243850	
Adv for Others Settled	947884	56098470
Total Rs. ...		309189998

Sd/-
D.M. Vora
Sr. Accounts Officer
30 September 2011

Sd/-
Kartikeya V. Sarabhai
Director

PAYMENTS	Rs.	Rs.
<u>MOVABLE & IMMOVABLE PROPERTIES</u>		
<u>Acquired during the year out of Grant from Ministry of Environment & Forests, Government of India, New Delhi.</u>		
Immovable Properties	135838	
Movable Properties	<u>0</u>	135838
<u>Acquired during the year out of own Income & Project Grant</u>		
Immovable Properties	240071	
Movable Properties	<u>1558268</u>	1798339
<u>PROJECTS AND PROGRAMMES</u>		
<u>Out of Grant from Ministry of Environment & Forests, Government of India, New Delhi.</u>		
Sponsored Projects and Programmes		46164199
<u>Out of Grant from Locally Funded/Foreign Funded and Own Programme</u>		
Sponsored Project /Programmes	91864088	
Foreign Contributions	22856043	
Own Programmes	<u>32473162</u>	147193293
REPAYMENT OF BRROWING FROM BANKS		
<u>ESTABLISHMENT AND OTHER ADMINISTRATIVE EXPS</u>		
Salaries	53152999	
Sundarvan Nature Centre	4120237	
Journal & Periodicals	178913	
Other Administrative Expenses	13457902	
Travel	886140	
Honorarium to Consultants	39000	
Micro Processor Maintenance	<u>532180</u>	72367371
<u>Other Payments</u>		
Staff Welfare Fund Loan	75432	
Advances for Projects and Jobs in Process	1068873	
Advances to Sttaf (Net)	538168	
Tax deducted at source paid	192710	
Security Deposit	1018179	
Other advances for various Services	<u>13801942</u>	16695304
CLOSING CASH AND BANK BALANCES		23733953
Total Rs. ...		309189998

Date : 30 September 2011
Place : Ahmedabad

Chandulal M. Shah & Co.
Chartered Accountants
Sd/-
K. H. Vasavada
Partner
Membership No. 12322
(Firm Registration No. 101698W)

31-3-2010				31-3-2011
Rs.	ASSETS	Rs.	Rs.	Rs.
	<u>MOVABLE AND IMMOVABLE PROPERTIES:</u>			
	<u>Immovable Properties (At cost)</u>			
	Buildings:			
46457362	Balance as per Last Balance Sheet	49266926		
2809564	Addition during the year (Net)	375909		
49266926			49642835	
	<u>Movable Properties (At cost)</u>			
	Office equipments, Vehicles,			
	Library Books etc.,			
61636123	Balance as per last Balance Sheet	66525041		
5873854	Addition during the year (Net)	1558268		
67509977		68083309		
	Less: Written off/Disposed off/transferred			
984936	during the year	0		
66525041			68083309	
115791967				117726144
	<u>INVESTMENTS IN APPROVED SECURITIES: (At Cost)</u>			
1200000	In IDBI Bond - out of CEE Special Development Fund			1200000
	<u>INVENTORIES</u>			
9249304	Job work in progress			8501061
	<u>DEPOSITS</u>			
1792235	For Services, Rent etc.,			1916553
	<u>LOANS:</u>			
2557623	To Staff & Others			1713476
	<u>ADVANCES:</u>			
1710365	To Staff (One year old Rs.9,28,254/-)	3185211		
21368994	To NGOs, Suppliers and Contractors for Projects expenses (One year old Rs.76,28,297/-)	24741319		
7305773	To Others (One year old Rs.34,30,144/-)	5271284		
30385132				33197814
4746799	Income Tax deducted at source (TDS) receivable (One year old Rs.21,06,982/-)			7677219
	<u>AMOUNT DUE/RECEIVABLE</u>			
	<u>For Projects, Programmes, Workshops, Seminars etc.</u>			
35731608		31348100		
1098213	Receivable on Sale of Products and Services etc.,	3981417		
36829821				35329517
	<u>CASH AND BANK BALANCES:</u>			
22238838	As per Schedule "A"			23733953
224791719	Total C/f. ...			230995737

Balance Sheet as at 31st March, 2011

31-3-2010				31-3-2011
Rs.	FUNDS & LIABILITIES	Rs.	Rs.	Rs.
	<u>CORPUS FUND</u>			
807200	Balance as per last Balance Sheet	1288000		
480800	Addition during the year	0		
1288000				1288000
	<u>OTHEREARMARKED FUNDS</u>			
	<u>Depreciation Fund</u>			
8563657	Balance as per last Balance Sheet	10064589		
1500932	Addition during the year	1395643		
10064589			11460232	
	Any Other Fund:			
119731838	Balance as per last Balance Sheet	128138014		
9391112	Addition during the year (Net)	2651718		
129122950		130789732		
	Fund reduced by the cost of Assets written off/disposed off/transferred during the year	0		
984936				
984936				
128138014				
138202603			130789732	
				142249964
	<u>GRANT BALANCES:</u>			
	<u>Ministry of Environment & Forests, Government of India, New Delhi.</u>			
3456710	Balance as per last Balance Sheet	2740492		
30323750	Grant for recurring expenditure sanctioned and credited during the year	62300000		
4027000	Grant for Infrastructure Development sanctioned and credited during the year	0		
37807460		65040492		
82500	Less: Provision of grant receivable (08-09) written back			
37724960		65040492		
36630	Add: Sale proceeds of movable assets disposed off during the year	0		
37761590			65040492	
	Less: Amount transferred to earmarked funds against Non-recurring expenditure incurred during the year	135838		
4743218				
	Less: Amount of grant transferred to Income & Expenditure account to meet the recurring expenditure incurred during the year	62300000	62435838	
30277880				2604654
2740492				
72464579	Projects, Programmes, Workshops, Seminars etc.,			64692162
214695674	Total C/f. ...			210834780

Balance Sheet as at 31st March, 2011

31-3-2010			31-3-2011
Rs.	FUNDS & LIABILITIES	Rs.	Rs.
214695674	Total B/f. ...		210834780
	BANK OVERDRAFT (Secured against hypothecation of FDR as Collateral Security)		
6354353	State Bank of Saurashtra, Satellite Road Branch	6001938	
2460114	Indian Overseas Bank, Drive-in Road Branch	<u>2460114</u>	8462052
<u>8814467</u>			
	CASH CREDIT (Secured against hypothecation of FDR as Collateral Security)		
<u>4474414</u>	Indian Overseas Bank, Thaltej Branch (Secured against hypothecation of FDRs as Collateral Security)		3725128
	LIABILITIES		
33119917	For Expenses	13121269	
1499117	For Security Deposits	503612	
<u>1549553</u>	For Others	<u>33451485</u>	
36168587			47076366
264153142	TOTAL Rs. ...		270098326

Notes on Accounts as per Schedule "B"

The above Balance Sheet to the best of our belief contains a true account of the funds and liabilities and of the property and assets of the society.

Sd/-
D.M. Vora
Sr. Accounts Officer
30 September 2011

Sd/-
Kartikeya V. Sarabhai
Director

31-3-2010				31-3-2011
Rs.	ASSETS	Rs.	Rs.	Rs.

224791719	Total B/f. ...			230995737
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INCOME & EXPENDITURE ACCOUNT

21203119	Balance as per last balance sheet	39361423	
	Add/Less: Excess of Expenditure/Income over Income transferred from Income & Expenditure Account		
18158304		258834	
39361423			39102589

264153142	TOTAL Rs...	270098326
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As per our report of even date.

Date : 30 September 2011
Place : Ahmedabad

Chandulal M. Shah & Co.
Chartered Accountants

Sd/-
K. H. Vasavada
Partner
Membership No. 12322
(Firm Registration No. 101698W)

Income and Expenditure Account for the year ending on 31st March, 2011

2009-10 Rs.	EXPENDITURE	Rs.	2010-11 Rs.
<u>EXPENDITURE ON OBJECTS OF THE SOCIETY</u>			
	On Programmes and Projects (Own activity as well as sponsored by Governmental and Non-governmental organisations)		
29591297	Own Activities	37411272	
84497609	Out of Local Funding	132117014	
23213647	Out of Foreign Contribution	22856043	
<u>137302553</u>			192384329
<u>ESTABLISHMENT EXPENSES</u>			
	Salary:		
51937638	Staff Salaries	65975016	
12	Remuneration to the Office Bearers	12	
<u>51937650</u>		<u>65975028</u>	
17313299	Administrative and other Establishment Expenses	17016531	
<u>69250949</u>		<u>82991559</u>	
	Professional Fees:		
132739	Legal Fees	266379	
54326	Audit Fees	50000	
<u>187065</u>		<u>316379</u>	
<u>69438014</u>			83307938
1500932	DEPRECIATION		1395643
<u>AMOUNT TRANSFERRED TO RESERVE OR SPECIFIC FUND:</u>			
180301	CEE Special Development Fund	210738	
95792	CEE Staff Welfare Fund	109773	
190000	Earmarked for CEE Infrastructure development	200000	
3020468	Earmarked for Immovable/Movable Properties	1182215	
<u>3486561</u>			1702726
0	Excess of Income over Expenditure carried over to Balance Sheet		258834
211586199	TOTAL	Rs. ...	211728060

Notes on Accounts as per Schedule "B"

Sd/-

D.M. Vora

Sr. Accounts Officer

30 September 2011

Sd/-

Kartikeya V. Sarabhai

Director

2009-10 Rs.	INCOME	Rs.	2010-11 Rs.
	<u>INTEREST EARNED:</u>		
1192635	On Savings Bank Accounts and Term Deposits with Nationalised and Scheduled Banks	1050322	
106840	Other Interest	104067	
1299475		1154389	
	Less: Interest allocated to Projects/Programmes and to Special Funds	632331	
830960			522058
468515			
19293071	OWN PROJECTS & PROGRAMMES		25793849
	<u>AMOUNT TRANSFERRED FROM:</u>		
30277880	Grant from Ministry of Environment & Forests, Government of India, New Delhi, to meet the recurring expenditure	62300000	
107711256	Grants from GO/NGOs for sponsored Projects and Programmes	154973057	
137989138			217273057
	<u>OTHER INCOME:</u>		
0	Donation	0	
207859	Sale of Publication & EE Products	312713	
396500	Fees & Other Contributions	154740	
33956191	Recoveries/Reimb. of Exps. from Project/programmes	33215946	
1258484	Miscellaneous Income	1777107	
35819034			35460506
18158304	Excess of Expenditure over Income carried over to Balance Sheet		0
211728060	TOTAL	Rs. ...	279049470

Date : 30 September 2011
Place : Ahmedabad

As per our report of even date.
Chandulal M. Shah & Co.
Chartered Accountants
Sd/-
K. H. Vasavada
Partner
Membership No. 12322
(Firm Registration No. 101698W)

Schedule 'A' attached to and Forming Part of the Balance Sheet as at 31 March 2011

SR
NO.

CASH AND BANK BALANCES

A. CURRENT ACCOUNTS

In the name of Nehru Foundation for Development-Centre for
Environment Education with:

- 1 ICICI Bank Ltd. Drive-in Road Br, Ahmedabad
- 2 ICICI Bank Ltd. Pune
- 3 ICICI Bank Ltd. Lucknow
- 4 ICICI Bank Ltd. Bhubneshwar
- 5 ICICI Bank Ltd. Delhi
- 6 ICICI Bank Ltd. Guwahati
- 7 ICICI Bank Ltd. Coimbatore
- 8 ICICI Bank Ltd. Hyderabad
- 9 ICICI Bank Ltd. Bangalore
- 10 ICICI Bank Ltd. Goa-Panaji
- 11 Central Bank of India, S.M.Road Branch, Ahmedabad.
- 12 Bank of India,- Gulbarga (CHAMP)

Sub-total "A" Rs.....

B. SAVINGSBANK ACCOUNTS

In the name of Nehru Foundation for Development-Centre for
Environment Education with:

- 1 Bank of India, Basaveswaranagar Branch, Bangalore.(A/c 6056)
- 2 Bank of India, Cantonment Branch, Bangalore.(A/c 8435)
- 3 Bank of India, Gulbarga
- 4 State Bank of India, Satellite Road Branch, Ahmedabad-Core
- 5 State Bank of India, Satellite Road Branch, Ahmedabad-Projects
- 6 State Bank of India, Satellite Road Branch, Ahmedabad-SDF
- 7 State Bank of India, Satellite Road Branch, Ahmedabad-SWF
- 8 State Bank of India, Satellite Road Branch, Ahmedabad-SGP/GEF
- 9 State Bank of India, Satellite Road Branch, Ahmedabad-CAPART
- 10 State Bank of India, Mota Dahisara Branch
- 11 State Bank of India, Halvad Branch
- 12 State Bank of India, WASMO Project
- 13 Corporation Bank, Virajpet Branch, Virajpet.
- 14 State Bank of India, Dharampur Branch
- 15 ICICI Bank Ltd. - in the name of CEE-ICEF Project Account, Delhi
- 16 ICICI Bank Ltd. - Karaikal
- 17 ICICI Bank Ltd. - DEL-RHSDP Project
- 18 HDFC Bank Ltd. - Srinagar Branch

In the name of Centre for Environment Education A/c. Foreign
Contribution with:

- 1 Indian Overseas Bank, Thaltej Branch, Ahmedabad

Sub-total "B" Rs.....

CEE-CORE Rs.	PROJECTS Rs.	CEE-FC Rs.	TOTAL Rs.
1181063	-	-	1181063
37653	-	-	37653
37119	-	-	37119
216193	-	-	216193
409093	-	-	409093
453242	-	-	453242
3925	-	-	3925
864455	-	-	864455
51607	-	-	51607
130895	-	-	130895
1041113	-	-	1041113
1571357	-	-	1571357
5997715	0	0	5997715

101127	-	-	101127
182288	-	-	182288
315299	-	-	315299
2442	-	-	2442
517207	-	-	517207
15019	-	-	15019
936881	-	-	936881
19647	-	-	19647
9993	-	-	9993
4602	-	-	4602
20878	-	-	20878
4783	-	-	4783
31286	-	-	31286
26828	-	-	26828
327	-	-	327
6305	-	-	6305
98184	-	-	98184
148203	-	-	148203
-	-	778794	778794
2441299	0	778794	3220093

Contd...

Schedule 'A' attached to and Forming Part of the Balance Sheet as at 31 March 2011

SR
NO.

CASH AND BANK BALANCES

C. FIXED/SHORT TERM DEPOSIT ACCOUNT

In Term Deposit Account in the name of Centre for Environment
Education with:

- 1 State Bank of India, Satellite Road Branch, Ahmedabad
- 2 Indian Overseas Bank, Thaltej Branch, Ahmedabad
- 3 Bank of India, Gulbarga, South

In Term Deposit Account in the name of Centre for Environment
Education A/c.Foreign Contribution Fund with:

- 1 Indian Overseas Bank, Thaltej Branch, Ahmedabad
- 2 State Bank of India, Satellite Road Br. Ahmedabad

Sub-total "C" Rs.....

D. CHEQUES ON HAND

E. CASH ON HAND

TOTAL "A" TO "D" Rs.....

Sd/-
D.M. Vora
Sr. Accounts Officer
30 September 2011

Sd/-
Kartikeya V. Sarabhai
Director

CEE-CORE Rs.	PROJECTS Rs.	CEE-FC Rs.	TOTAL Rs.
244007	-	-	244007
305000	-	-	305000
300000	-	-	300000
-	-	6647721	6647721
-	-	7017537	7017537
849007	-	13665258	14514265
-	-	-	0
-	-	-	0
9288021	-	14444052	23732073

Date : 30 September 2011

Place : Ahmedabad

Chandulal M. Shah .
Chartered Accountants

Sd/-
K. H. Vasavada
Partner

Membership No. 12322
F.R.No.101698W

Schedule “B” Notes attached to and Forming Part of the Accounts for the Year 2010-11

1 Significant Accounting Policies followed:

- 1.1 The accounts are maintained on accrual system of accounting subject to following exceptions.
- a. The amount advanced to various Governmental and Non-Governmental agencies for projects and programmes activities are shown under the head “Advances to NGOs and Others for Project expenses” and the same will be adjusted in the books on receipt of the statements of accounts from respective agencies.
 - b. In respect of insurance premium, rent and annual maintenance contracts, entry for expenses paid in advance is made whereas such other expenses are accounted for as and when paid.
 - c. Liabilities in respect of employees’ benefits such as gratuity, leave encashment, LTC etc., are accounted for as and when paid.
 - d. Advances given to employees for travel, for project expenses and LTC are accounted for as and when bills for respective expenses are submitted by concerned employees.

1.2 Use of Estimates

The preparation of financial statements in conformity with Generally Accepted Accounting Principles in India requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent liabilities on the date of the financial statements. Actual results may differ from those estimates. Any revision to accounting estimates is recognised prospectively in current and future periods.

1.3 Fixed Assets

Fixed Assets are stated at cost. Cost means purchase price and / or erection / commissioning charges of fixed assets and other charges directly attributable to the cost of fixed assets.

1.4 Depreciation:

The Society has started providing for depreciation on assets from the financial year 2003-04 based on the directions given by the Indian Audit & Accounts Department

Depreciation is calculated on Straight Line method on Society’s Own Assets and Assets acquired out of MoEF Grant except on Building. The depreciation is accumulated under the head Depreciation Fund.

Asset	Rate (%)
Furniture and Equipment	10.00
Computer & Peripherals	20.00
Vehicle	20.00
Library Books	10.00

Depreciation on additions has been provided for the full year irrespective of date of acquisition.

Depreciation provision has not been made on assets acquired out of Projects/Programme Funding.

1.5 Investments

Long-term investments are carried at cost less any other than temporary diminution in value, determined separately for each individual investment. Current investments are carried at lower of cost and fair value.

1.6 Inventories

Inventories are valued at lower of Cost or net realisable value.

The consumable stores and spares are charged to expenses at the point of their purchases.

1.7 Special Development Fund & Staff Welfare Fund

Special Development Fund & Staff Welfare Fund are created as per the scheme approved by the Centre's Standing Committee

- 2 The Society's buildings are constructed on the land of Nehru Foundation for Development.
- 3 Debit/Credit balances of parties are subject to confirmations. Necessary adjustment, if any, will be made in the accounts on settlement of the respective accounts.
- 4 Corresponding figures of the previous year have been regrouped to make them comparable with figures of current year, wherever necessary.

Sd/-
D.M. Vora
Sr. Accounts Officer
30 September 2011

Sd/-
Kartikeya V. Sarabhai
Director

Chandulal M. Shah
Chartered Accountants

Sd/-
K. H. Vasavada
Partner

Membership No. 12322
F.R.No.101698W

