

Annual Report

2018-2019



CEE

Centre for Environment Education

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FROM THE DIRECTOR'S DESK

For the past two years, CEE is in a process of transformation in the way it works and is managed. While its core activities and mission remain very much the same as when it was formed, the external environment has changed significantly. As the severity of the environmental crises deepens and there is increasing recognition of the global nature of many of these, the need for environmental education and of creating awareness, training and capacity building on issues of sustainability has put an increasing demand on CEE. The year 2018-2019 has been a hectic one with new and continuing projects in all the thrust areas of the organisation.

CEE has initiated several new projects with a focus on the Sustainable Development Goals (SDGs). One of the projects offered at the University level is the “SDG Handprint Lab”, a programme that aims to increase youth participation in achieving SDGs at the local level and combines the power of Handprint actions. For World Environment Day 2018, CEE developed an educational package for schools for UN Environment titled *Towards Responsible Use of Plastics: Reduce, Reuse, Recycle – A Manual for Schools*. The work on plastic pollution has led to a new project titled Plastic Tide Turners – a UNEP project with CEE and WWF-I as implementing partners, and Hanns Seidel Stiftung as our supporting partner.

Meanwhile, several of our ongoing projects are progressing well and impacting more people – be they students, community members or decision makers – while making a difference to the environment. On the school front, we have the Paryavaran Mitra – Earthian programme as well as several others like Gramshiksha and Eco-Schools. CEE continues to coordinate the Foundation for Environmental Education (FEE) programmes of Eco-Schools, Young Reporters for the Environment (YRE) and Blue Flag Certification in India.

The Interpretation Group has been implementing several projects in partnership with Forest Departments and other agencies in different states. Projects undertaken and completed this year include Pashan Lake (Pune), Ralegan Siddhi (Ahmednagar) and the Sajjangarh Palace (Udaipur), with watershed, cultural-historical, biodiversity and tribal components. A project with the Sanjay Gandhi National Park (Mumbai) is ongoing.

The Environment Management Group has been working to help industries inculcate sustainable practices in their activities while also conducting programmes to help them comply with new rules and regulations of the central government. A Climate Change awareness project with the support of GIZ involved a lecture series, held in four states: Himachal Pradesh, Punjab, Tamil Nadu and Telangana. While the Rural Programmes

Group continues with their projects Gram Nidhi, Aarohan, Jalsetu and Srujal, the Urban Sustainability Group has been working on several projects including road safety in Maharashtra, Gujarat and Assam. *Swachh Ganga – Swachh Kashi* in Benares and *Prajwala* in Rajasthan are notable ongoing projects in the thrust area of water and sanitation. CEE offices across the country continued to celebrate important days in the year dedicated to the environment and/or to sustainability, while CEE staff participated in workshops, conferences and other programmes organised by agencies in India and abroad.

The above mentioned projects and programmes are just a few highlights; you will read more about them and others in the following pages. We have also partnered with numerous organisations at the global, regional, national and local levels in implementing these projects and programmes.

The process of decentralised management of groups has had a positive effect on the organisation as a whole, while creative and optimal ways, such as redeployment of staff based on interest and skills, are being identified to manage staff requirement in the context of a hiatus in recruitment.

With the enthusiastic support and participation of our partners and staff, CEE will continue to contribute towards ESD and towards the achievement of all the SDGs.

Kartikeya V. Sarabhai
Director

1. EDUCATION FOR CHILDREN

1.1 Paryavaran Mitra Programme

Paryavaran Mitra programme is a national level initiative of CEE, in partnership with the Ministry of Environment, Forest and Climate Change, Government of India. It is a nationwide initiative to create a network of young leaders from schools across the country, who have the awareness, knowledge, commitment and potential to meet the challenges of sustainable development in their own spheres of influence. The Paryavaran Mitra programme primarily seeks to reach students from class 6 – 8 (age group 11-15).

The programme, initiated in 2008-09 as a campaign on Climate Change Education, has developed as the flagship school programme that brings together CEE's experience of three decades in Environmental Education (EE) and Education for Sustainable Development (ESD).

Paryavaran Mitra programme involves students in problem solving by engaging them in action projects. The action projects taken up by the students may or may not lead to immediate or significant improvement, but would definitely lay the foundation for sustained efforts through learning outcomes in the form of knowledge, disposition, competencies and behaviour. In Project Based Learning (PBL), an action project is an extensive task undertaken by a group of students to apply or illustrate classroom learning. This extends the boundary of education from information to experience.

Resource materials for the programme are provided to the schools to carry out action projects focusing on local environmental issues in the five themes of the programme, viz. Water & Sanitation, Biodiversity and Greening, Energy, Waste Management and Culture & Heritage. During the year 2018-19, the following activities were conducted as part of Paryavaran Mitra.

Paryavaran Mitra Puraskar: Exemplary work done by schools is recognised through the Paryavaran Mitra Puraskar (Paryavaran Mitra Awards). The annual award process was the major activity carried out in 2018-19 and saw entries from all over India in the school, teacher and student categories. The process of evaluating the entries involved creating new criteria and benchmarks for the awards which enabled taking the programme objectives from awareness to Handprint action. This year, five exemplars were recognised at the national level through a jury process.

Communication Media Website: Paryavaran Mitra website was regularly updated with several ongoing ESD initiatives. The dedicated 'Focused Initiatives' webpage gives a wide array of different activities/initiatives catering to different grade levels which any school can take up. The 'Campaigns' page is a catalogue of all the campaigns conducted so far as well as ongoing campaigns which schools can look for and participate in.

Newsletter: The bimonthly newsletter covers several Handprint actions from schools across the country and gives information on various new engagements as well as upcoming events. The newsletter is also a medium to provide teachers with ideas for Handprint actions to work with students in schools. More information on the programme can be accessed at: www.paryavaranmitra.in

1.2 Earthian – Paryavaran Mitra Programme

'Earthian' by Wipro is a nationwide initiative to deepen sustainability education within schools and colleges across the country. Through a chosen theme, the programme aims to engage teams of students and faculties from schools in a set of activities to understand water and biodiversity in their local context and explore sustainability linkages.

Wipro and CEE joined hands in 2013-14 to work together through the Earthian initiative of Wipro and the Paryavaran Mitra initiative of CEE. The partnership involved the schools in the Paryavaran Mitra network, particularly government schools with Hindi as the medium of instruction, in activities related to the issue/theme of water and biodiversity. This partnership programme was implemented in the states of Uttar Pradesh, Bihar, Rajasthan, Gujarat, Maharashtra, Chhattisgarh and Jammu & Kashmir.

The activities under the project involved development of an Earthian brochure and translation of the Earthian booklet into Hindi for dissemination in schools, and dissemination of Earthian material to schools in the Paryavaran Mitra network in the above mentioned states. It also included training of teachers from selected schools in these states to facilitate projects/activities on water and biodiversity in their schools and submission of entries from the schools.

This year, the programme was initiated in July and was implemented in seven states - Bihar, Chhattisgarh, Gujarat, Maharashtra, Rajasthan, Uttar Pradesh and West Bengal. Against a target of 1000 teachers to be trained under the programme, 1105 were covered through the training programmes. A total of 560 activity reports were received against a target of 450 from the participating schools. Eight school reports were selected for the final Earthian award out of the

total 10 awards conferred at Bengaluru. Also, one of the eight winner schools, Govt. Model School, Gopiballavpur-I Jhargram, West Bengal, received the TN Khushoo Ecology and Environment Award for 2018.

The state wise details of activities conducted under the programme follow.

Uttar Pradesh (UP) and Bihar

CEE North implemented the programme in the existing network of schools and also selected new districts for taking up the programme. To conduct teacher training workshops at the district level, CEE joined hands with local partner NGOs and master trainers. To reach out to a larger number of schools, CEE team identified and directly approached schools to host the workshops for students and teachers.

For the implementation of the Earthian-Paryavaran Mitra Programme 2018, a one-day teacher training workshop was organised by CEE across eight districts of Uttar Pradesh in the months of July and August. More than 550 teachers participated in the ten workshops. The workshops were conducted at Farukhabad, Badaun, Lakhimpur Kheri, Azamgarh, Mau, Agra, Mainpuri and Jalaun districts of Uttar Pradesh, in collaboration with schools, educational department, NGC master trainers and NGOs.

The objective of the workshops was to develop an understanding among teachers about environmental education and the concept of sustainable development, its curriculum linkage, components of 'Earthian' and Paryavaran Mitra Programme and the role of schools and teachers in participating and implementing these programmes in their respective schools and communities. Project brochures and flyers were sent to around 1800 schools in 23 districts of UP and 700 schools in 11 districts of Bihar.

Post the teacher training workshops, follow up visits to schools were undertaken to guide the schools in implementing the action projects. The schools participated in the programme with enthusiasm and there was a tremendous response from their end. A total of 352 reports were received from the state. The results were declared in the month of December and the felicitation ceremony was held in February 2019 at Bangalore, where one school from the state made it to the top 10 schools at the national level.

Chhattisgarh

This year, the strategy adopted in Chhattisgarh was to work with CEE's existing network of schools which included Paryavaran Mitra and NGC programmes. NGC Master Trainers were involved in disseminating information about the initiative in their respective districts.

Workshops were conducted covering four locations: Arang in Raipur, Patan (two workshops) in Durg, Raipur and Durg, in which 151 teachers from 142 schools were trained. A total of 69 reports were received from the state.

Gujarat

In Gujarat, CEE team actively worked with the existing school network under the Paryavaran Mitra programme. Website, Facebook, WhatsApp and the postal system were used to disseminate the information to schools. Orientation workshops were conducted with the objective of orienting teachers on the programme themes and to integrate sustainability education in school subjects. The 'Paryavaran Saathi' toll free helpline number was used for regular follow up and to reach out to teachers and respond to queries.

The office and network of CEE Sundarvan, Ahmedabad, was utilised for extending the programme to schools closely working with Sundarvan. Four orientation workshops were organised in Ahmedabad which enabled the team to enable the schools and teachers to take up the themes of 'Sustainability and Water' and 'Sustainability and Biodiversity'. In all, 212 teachers from 186 schools were oriented through the workshops. A total of 21 reports were received from the state.

West Bengal

In West Bengal, the strategy adopted was to collaborate with a local organisation 'Paribesh Unnayan Parishad' (PUPA) that works closely with the local schools. The organisation was instrumental in extending the reach to several local schools, and implemented the programme with dedicated support to schools from Kolkata and Sagar Island.

Teacher Orientation workshops were conducted at Kolkata and Sagar Island in July. The workshops were supported by CEE staff, and the programme objectives and details were discussed with the teachers during the orientation. About 60 teachers from 55 schools were oriented through the workshops. A total of 34 reports were received from the state.

Rajasthan

CEE Jaipur utilised the network of Kasturba Gandhi Balika Vidyalayas, besides other school networks which are involved in environment education programmes in the state - National Green Corps and Paryavaran Mitra. Training programmes were conducted for participants in five districts. Other potential schools, which were not a part of our existing network, were identified and approached directly.

Teacher training workshops were organised in August at Bundi, Banswara, Chittorgarh, Jaipur and Udaipur for capacity building of teachers on project based learning. Around 250 teachers covering 89 schools from 16 districts of the state participated in these workshops. The objective of the workshops was to develop an understanding among teachers on the concept of sustainable development, its curriculum linkage, role of schools and teachers in participating and implementing these programmes in their respective schools and communities. Participants were given resource material on 'Sustainability and Water' and 'Sustainability and Biodiversity' to carry out action projects in their school.

A brochure on Earthian 2018 was distributed to 2000 schools across the state. Follow-up visits were organised to schools in September and October to support teachers and students in implementing the action projects. Around 100 schools shared their reports on their projects on water and biodiversity.

Maharashtra

The strategy adopted in the state was to reach out to Paryavaran Mitra network schools and orient the teachers and students about the Earthian 2018 programme to look at water and biodiversity in depth in the school and also in the context of Maharashtra's various ecosystems. For the Earthian programme, facilitators from CEE Central Regional Cell visited the schools in the network of the Environment Service Scheme (ESS) programme of the Maharashtra State Environment Department. The main objective of the programme was to integrate sustainability education which involves both teachers and students. In all, 40 schools in Pune and Solapur were visited and 40 teachers and student groups were oriented about the programme. A total of 12 reports were received from the state.

1.3 Gramshiksha

Nayara Energy Ltd. had partnered with CEE Ahmedabad to initiate the Project Gramshiksha in 2016. The Gramshiksha project focuses on the education and holistic development in schools and communities in 15 villages surrounding the refinery, touching all ages between 6-35 years through multiple interventions. Over the years, Gramshiksha has been carrying out multiple interventions in primary as well as secondary education.

The ultimate goal of Project Gramshiksha is to prepare a model of a 'Literate Village', where literacy does not mean only formal education, but goes beyond that. Project Gramshiksha's major objectives were envisaged in a broad lifelong learning perspective that aims to empower people to realise their right to education, fulfil their personal expectations for a decent, healthy

life and work, and contribute to the achievement of their societies' socio-economic development objectives.

The following objectives were envisaged to guide the agenda:

- 100% children of age 6-14 years will get free, equitable and quality primary education in schools
- 100% dropout children in the age group of 16 to 25 years will complete their Std. 10 & 12 exams
- 100% illiterate adults from age 25 to 35 years will acquire basic literacy in Reading, Writing and Calculating abilities
- 100% villagers above the age of 18 years will understand the importance of education in life.

The project involves the following components:

- Primary/Elementary Education & ICT Education
- Secondary/Higher Education
- Open Schooling
- Adult Literacy
- Community Engagement

The major interventions and initiatives taken up under the project are:

- Summer Camps
- Enrolment Drive (Praveshotsav)
- Bal (Anand) Melas (Learning by fun)
- Bharat Ek Khoj-II (Flagship event with experiential learning)
- Remedial Teaching (Quality Education)
- ICT Education
- Secondary/Higher Education
- Open Schooling
- Adult Literacy
- Community Engagement
- Gramshiksha Kendras
- Community Library
-

The following are the project achievements during 2018-19:

Response to Primary Education activities was as follows:

- Average attendance rate has increased from 77.8% to 83.3%.
- Teachers/Students participation has improved; over 1800 students and 100 teachers have been actively engaged in programmes like Bharat Ek Khoj and Balmela.
- Over 35 teachers from 18 schools have been trained in effective utilisation of ICT in the school.

Response to Secondary and Higher Education activities are as below:

- Ensured 100% accessibility to secondary education through 16 NIOS (National Institute of Open Schooling) centres where 140 dropout students were enrolled and are continuing their education.
- Over 56 students completed their secondary education till date.
- 75 students are continuing their higher education through a scholarship programme.

Response to Community Engagement activities are as follows:

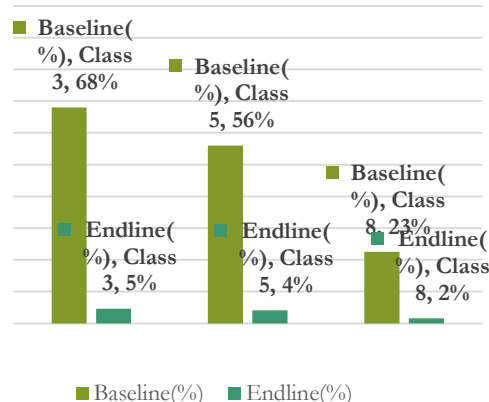
- Mobilised and trained 16 community volunteers, who are actively engaged in community/school interventions.
- 16 Gramshiksha Centres have been established across 15 villages, which help to meet the learning needs of all the age groups, from 6-35 years.
- 67 adults are attending literacy classes on a regular basis.

Indicators	2017-18	2018-19
Avg. Attendance	77.8	83.38
Student Learning Outcomes	<u>34%</u>	<u>72%</u>
Language	33%	73%
Maths	35%	71%
Class 3 Language	29%	70%
Maths	26%	64%
Class 5 Language	22%	68%
Maths	27%	69%
Class 8 Language	49%	73%
Maths	51%	79%
No of schools in A grade out of the total 18 schools	10	11
No of Gramshiksha Centres	5	16
No. of students enrolled in open schooling	110	140

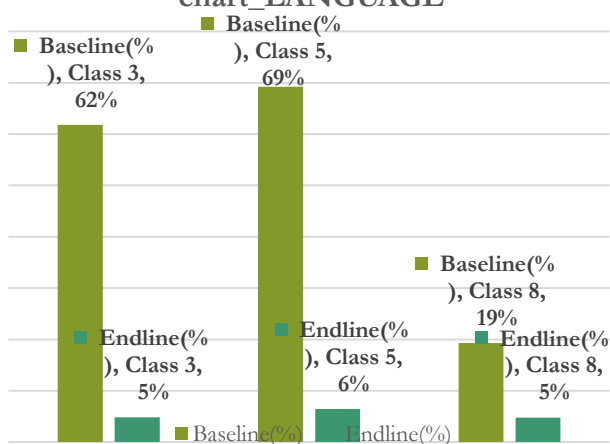
No. of students who completed secondary education	5	51
No of students who received scholarships	0	75
No. of youth groups created	0	15
No. of School Management Committees trained	0	18

Class_3, 5 & 8- Baseline Vs End line-Below Expected Level Progress Chart					
Math				Language	
Total 18 schools	Total Student	Baseline	Endline	Baseline	Endline
Class 3	432	294	20	267	21
Class 5	341	191	14	236	22
Class 8	440	99	7	85	21

Class_3, 5 & 8- Baseline Vs Endline-Below Expected Level Progress chart_MATH



Class_3, 5 & 8- Baseline Vs Endline-Below Expected Level Progress chart_LANGUAGE



A notable achievement during 2018-19 is that: Compared to the attendance for the month of August 2018, there has been an overall 12% increase in attendance in seven months, till March 2019, leading to an increase/addition of 25 learning days of children.

1.4 Eco Schools Programme

Eco Schools is an educational programme run by the Foundation for Environmental Education (FEE) which encourages young people to engage in their environment by providing them opportunities to actively protect it. It starts in the classroom and expands to the community by

engaging the next generation in action based learning. CEE is the national operator for the Eco Schools Programme in India.

Internationally, this programme is implemented in 69 countries. In India, this programme was formally launched during the year 2015. Through this programme, young students experience a sense of achievement at being able to have a say in the environmental management policies of their schools, ultimately steering the schools towards certification and the prestige which comes with being awarded the Green Flag. The programme follows a seven step methodology, and is being adopted for the primary level (classes 1-5) in India.

Eco Schools India has been implemented in 58 schools, all of who have received the resource material. The participating schools are carrying out action projects focusing on local environmental issues in five themes - Biodiversity, Waste, Energy, Healthy living and Water. The programme encourages schools to qualitatively enhance their learnings through project based methods and share their experiences. So far 19 schools have been awarded with the International Green Flag award.

International Green Flag Awardees

1. St. John's Universal, Goregaon, Maharashtra: 2015-18
2. Vidya Niketan English Medium School, Pune, Maharashtra: 2015-18
3. K.M.V. Red Hills High School, Bangalore, Karnataka: 2015-18
4. Government Lower Primary School, Pura, Kollar, Karnataka: 2015-18
5. Government Higher Primary School, Nosagere, Kollar, Karnataka: 2015-18
6. Government Higher Primary School, Thoralakki, Kollar, Karnataka: 2015-18
7. Seth Anand Ram Jaipuria, Ghaziabad, Uttar Pradesh: 2015-18
8. Army Public School, Bangalore, Karnataka: 2016-19
9. Nand Vidyaniketan, Jamnagar Gujarat: 2016-19
10. Sanctuary School, Kaigal, Karnataka: 2016-19
11. Delhi Public School, Bangalore, Karnataka: 2016-19
12. Vidyaniketan Public School, Bangalore, Karnataka: 2017-20
13. Seth Anand Ram Jaipuria, Ghaziabad, Uttar Pradesh: 2017-20
14. La Martiniere College, Lucknow, UP: 2017-20
15. Alpine Public School, Bangalore, Karnataka: 2017-20
16. Government Lower Primary School, Tholasanadoddi, Karnataka: 2017-20
17. UniqYOU International School, Idar, Gujarat: 2018-21
18. PSGR Nursery and Primary School, Coimbatore, Tamil Nadu: 2018-21
19. Shree Vasistha Vidyalaya, Surat, Gujarat: 2018-21

1.4.1 Eco Schools Activities

Litter Less campaign

Eco Schools participated in the implementation of the Litter Less Campaign, which is a joint initiative of the Wrigley Company Foundation and the Foundation for Environmental Education (FEE). The campaign entered its third phase in 2017 and will run in 15 countries until 2019. The Litter Less Campaign Phase III which is currently being implemented aims to engage and educate children and young people on the issue of litter, and encourage them to make positive choices. It also aims to reduce litter and effect long term behaviour change. Twenty five schools participated in the 2018-19 campaign.

Litter Less Lesson Plans for Teachers

These lesson plans have been developed by CEE India as part of the Litter Less campaign for FEE and Wrigley Company Foundation. The lesson plans enable teachers to guide classroom and outdoor learning on the wider challenge of litter and its linkages with our lifestyles.

Newsletter

A monthly newsletter covers several Handprint actions taken by Eco Schools. It is also a medium to provide teachers with ideas for Handprint actions.

Eco Schools Programme in Lucknow

CEE North oriented a new school from Lucknow which enrolled for the international Eco Schools programme in 2018, and guided them on following the seven step process. The orientation workshop was conducted in August for all the teachers of the primary section in the school. The school formed their Eco School Committee which then conducted an environment review of the school campus covering the five thematic areas, namely, water and sanitation, biodiversity, waste management, energy, health and hygiene. Based on the survey results, the CEE team facilitated the development of environment action plans in three thematic areas: waste management, water and biodiversity.

CEE North also helped in conducting an orientation workshop for teachers at a school in Ghaziabad, which was attended by over 18 teachers from the primary section.

1.5 School Level Climate Action Postcard Campaign

With the view that the future generation will have to live with tomorrow's climate, and that children and young people will be the driving force to achieve a climate compatible development, the Swiss Agency for Development and Cooperation (SDC) through its Global

Programme Climate Change and Environment (GPCCE) initiated a project to mobilise youth around the world.

SDC aimed to create a Guinness record by collecting 1,00,000 postcards painted by young learners of the age group 6-20 years from all over the world. The objective of the initiative is to spread the message among the world community - “We are the future, Give us a chance”, written on the largest postcard composed of the 1,00,000 smaller postcards, while also breaking the record of the World Advance Vehicle Expedition (WAVE) which had composed a postcard featuring 50,000 smaller postcards, in Marrakech during COP 22.

SDC has partnered with CEE to reach out to 20,000 young people to get the postcards painted. This campaign was carried out in 19 locations across India, covering five regions through CEE offices including CEE East, CEE Central, CEE North and CEE West. CEE achieved this outreach through its network of schools, teachers and NGOs, besides departments of education in a few states and by communicating the information to them through varied media. The Paryavaran Mitra schools, for instance, were informed through email, newsletter, Facebook page and WhatsApp messages about the campaign.

CEE designed and printed the postcards for dissemination among the schools. CEE also provided the participating schools background information regarding climate change issues, adaptation and mitigation; they were also provided relevant IEC material developed by CEE and informed about what they can do to address the issue of Climate Change at their level. Over 21,000 postcards were collected from schools with climate action messages painted on them. These painted postcards were displayed before the COP meeting to send climate action messages from children to the global leaders.

1.6 National Green Corps in Rajasthan

The National Green Corps (NGC) programme of the Ministry of Environment, Forest and Climate Change, Government of India, is being implemented in 33 districts of Rajasthan, with 250 eco-clubs in each district. Rajasthan State Bharat Scouts and Guides (RSBSG) is the State Nodal Agency in the implementation of the programme. CEE Rajasthan has been associated with the programme as State Resource Agency since 2001. The following activities were carried out for strengthening the NGC programme in the state.

Eco-club in-charge Training Programme: As an expert in the field of environment education and education for sustainable development, CEE was invited by RSBSG to facilitate the state level training programme of eco-club in-charges at Jaipur in January 2019. Around 100 teachers

participated in the training and were oriented about environmental education and the concept of sustainable development. National opportunities and programmes fostering education for sustainable development like Paryavaran Mitra and Wipro Earthian were shared with the participants. Participants were given resource material on 'Sustainability and Water' and 'Sustainability and Biodiversity' to carry out action projects in their schools.

State Steering Committee Meeting for Strengthening the Eco-clubs of Rajasthan: Based on its long term association with the eco-clubs of Rajasthan, CEE was invited by RSBSG to give their inputs to strengthen the programme in the state during the steering committee meeting held at the State Secretariat Jaipur, on June 14, 2018. This state level meeting was chaired by Mr. Y. K. Dak, Secretary, Forest Department, Government of Rajasthan. Officials from the state Forest Department, Rajasthan Pollution Control Board, Rajasthan State Biodiversity Board, Education Department and Rajasthan State Bharat Scouts and Guides were present in the meeting. Ms. Priyanka Sinsinwar, Programme Coordinator, CEE Rajasthan, shared the efforts of CEE to strengthen the eco-clubs through national programmes like Paryavaran Mitra, Earthian and others. She also shared information about the events being organised like WED 2018 and efforts put in to build the synergy of eco-club activities with the activities of organisations like UNEP as well as national priorities. CEE's efforts for capacity building of teachers, onsite-facilitation, nature camps and exposure tours being conducted for eco-clubs were discussed. Mr. Dak appreciated the efforts of CEE and its linkage with RSBSG for strengthening the programme in the state. He also asked CEE to design some programmes for the motivation of eco-clubs in collaboration with Rajasthan Pollution Control Board and Rajasthan State Biodiversity Board.

1.7 Continuous Engagement Programme in Rajasthan

Continuous Engagement Programme (CEP) is an initiative of Wipro for continued association with the Earthian awardees. Since 2013, CEE and Wipro are working together on the Earthian-Paryavaran Mitra initiative. To provide a different kind of educational experience, a two nights and three days nature camp for a group of 25 students and six teachers from five schools of Lucknow, Bhilwara and Durg was organised at Katarniaghat Wildlife Sanctuary, situated in Bahraich District of Uttar Pradesh. The Sanctuary is situated near the Indo-Nepal border in the Terai region of Bahraich and is a part of Dudhwa Tiger Reserve. The main wildlife attractions of the sanctuary include the Ganges River Dolphins, gharials, crocodiles, otter, turtles and various species of fishes found in the Girwa river. The tigers, leopards, hog deer, swamp deer, chital, barking deer, sambar, sloth bear, langurs, monkeys and wild boar are some of the terrestrial wildlife found in the sanctuary. The camp started with a round of introduction on day one through interactive games with the participants. The following activities were then organised

during the camp to kindle the interest of participants towards the invisible bio-cultural aspects of the forests.

Nature Walk in the surrounding jungle: To explore the forest, a nature walk was organised, in which the participants were introduced to the flora and fauna of the forest. Participants also learnt about the importance of the biodiversity seen in the forest along with the interdependence and interactions within.

A bird watching trail: in the forest was organised along with a local resource person from the forest department. This was aimed to provide them experiences that engage all their senses while observing nature and getting to know about forests birds. Participants experienced listening to the various sounds of nature, not only of living creatures like birds and animals, but also of abiotic components like air.

Interaction with Tharu community: A visit to a Tharu community village – Bisnapur - who live on the fringes of the forest was organised to understand the community and its complex role in and connections with the forest. The team met a Tharu family and interacted with them, during which participants observed their traditional systems of housing, eco-friendly lifestyle and local sustainable practices.

Campfire: In the evening, around a campfire, CEE representatives shared with the participants interesting stories and facts about the forest and also about Billy Arjan Singh who promoted tiger conservation. They discussed the threats faced by wildlife and forests and the role students can play for its conservation. The day ended with the game 'passing the eco-parcel'.

Jungle Safari: A jungle safari in an open jeep along with a guide from the forest department was organised inside Katarniaghat Wildlife Sanctuary to observe the grassland, forest and wetland ecosystems. This provided participants an opportunity to sight birds and animals in the wild and observe their behaviours.

The programme culminated with an experience sharing and feedback session, followed by certificate distribution. Students left the camp site cherishing a lot of memories and learnings.

1.8 Education for Children in Maharashtra

1.8.1 Environment Service Scheme (ESS) Maharashtra

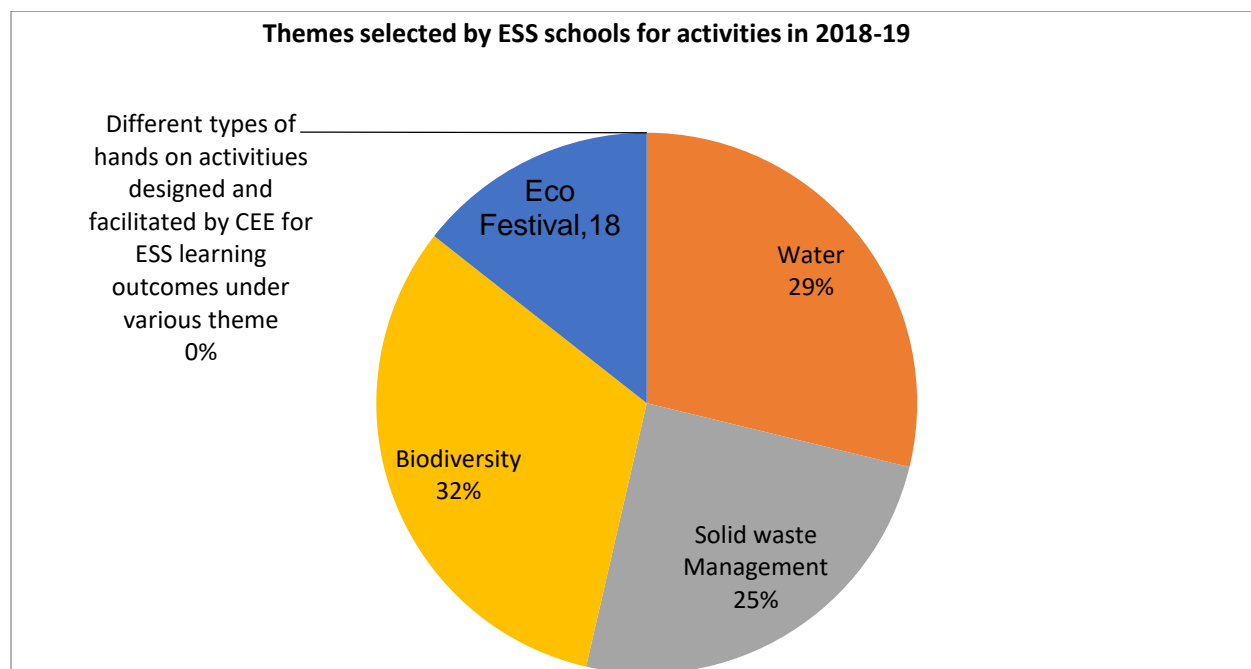
The Environment Service Scheme (ESS) is a programme of the Department of Environment, Government of Maharashtra, to create hands-on experiential learning about environmental

conservation amongst school students. CEE acts as the nodal agency to implement the scheme. Sixty schools from 12 districts are currently part of the programme.

The theme promoted for this year was 'solid waste management awareness at village level'. As part of this, CEE conducted teacher trainings and exposure visits for students. Twenty five ESS Units conducted awareness campaigns. ESS Units prepared and distributed Dry and Wet waste bins to each household to promote segregation at household levels. Seven ESS Units successfully set up plastic and thermocol collection centres at seven Gram Panchayats.

Six ESS Units selected the module on Bird Watching and visited Ujani in Solapur District. The objective of this activity was to develop nature observation capabilities, differentiate between migratory and local birds, and to interact with local fishers to understand issues related to the local water body. Student listed 69 different bird species at Ujani.

CEE also facilitated place-based learning about local issues related to soil, water, biodiversity, energy, waste management, etc. Some schools took up water sustainability campaigns. As part of the water theme, schools prepared village-level water availability status reports and formulated action projects with participation from the local government and community. The action projects include setting up rain water harvesting systems in the school buildings to recharging bore wells. Other projects included water conservation and management, school vegetable and herb garden, plantations, biodiversity register, etc.



1.8.2 Strengthening Environmental Education in Junior Colleges of Panvel

CEE Central has initiated a project to strengthen environmental education (EE) in the junior colleges of Panvel through project-based learning and action approaches. The project is supported by the Mumbai Metropolitan Region – Environment Improvement Society (MMR-EIS). This is expected to lead to enhancing the effectiveness and quality of environmental education in the XI and XII standards of schools in Panvel and enable youths to take up locale-specific environmental studies and citizen action projects.

CEE conducted a participatory assessment of the status of EE by interacting with more than 35 EVS teachers of 26 different junior colleges in Panvel Municipal Corporation. Challenges faced by EVS teachers such as time and session management, approach towards EE teaching, understanding of locale-specific issues and needs, confidence and experience of teaching EE, criticalities of implementation, monitoring by the Examination Board and student response were explored in the study. Along with challenges faced, teachers also shared their views on how to strengthen and develop better EE implementation techniques which were documented.

A toolkit was designed for capacity building of teachers in order to enhance their skills to implement Project-based Learning approaches. Twenty three teachers from 22 Junior colleges of Panvel participated in the training programme.

To motivate students and teachers, a competition was announced in Panvel Municipal Corporation. Ten teachers and 100 students in 25 groups participated in the competition by submitting project reports. A Green Action Mela was organised for teachers and students to showcase their projects, interact and learn from each other towards the end of the academic year. Thirteen different projects by students were showcased in the exhibition. The exhibition received a good response with over 250 visitors. Primary school students from Sanjivani International School also visited the exhibition. The students were excited to present their work and were well prepared to answer the queries by the jury as well as other students.

1.8.3 Swach Bharat Swach Vidyalaya WASH Initiative in Pune

In partnership with the Lady Bamford Charitable Trust (LBCT), CEE is working with 33 schools from Pune (Maharashtra), Jaipur (Rajasthan) and Vallabhgarh (Haryana) to improve their water, sanitation and hygiene conditions. The project was initiated in 2015.

During this year, CEE Central worked with the team of educators from the Trust to update the baseline conditions of the 33 schools. Further, a variety of IEC materials have been developed and capacity building workshops on water and sanitation conducted for educators and staff

from the schools and the Trust. CEE organised a special summer workshop around the theme 'Classification' to enable students to understand different life forms around them and scientific ways of classification. Students were taken on an exposure visit to the zonal office of the Zoological Survey of India. A case study document was developed with LBCT staff and teachers followed by a SBSV *Bal Anand Mela* in Pune.

A special meeting was organised to review the work of CEE and LBCT, which started with paying tribute to Dr. Vikram Sarabhai on his birth centenary. Education Department officials reviewed the student engagement initiative designed and developed by CEE. This collaborative approach was appreciated by the DEO.

1.8.4 Curriculum-linked SBSV WASH Initiative with CASP

CEE Central, in collaboration with Plan India and Community Aid Sponsorship Programme, developed a School Water Sanitation and Hygiene (School WASH) curriculum-linked IEC kit. The project underlined the effective use of school WASH infrastructure through curriculum linked IEC material for the school eco-system. The approach promotes engagement of students in water and sanitation activities which enable schools to educate the children in a focussed way on the advantages of good WASH practices. For this project, critical WASH links in the global, national and state documents relevant to the project objective were studied, while SDG Targets and National Curriculum Framework 2005 were used as reference documents. Sixty one messages on WASH were identified which were essential for behaviour change communication. Textbooks of Maharashtra state from Standards 1 to 10 were analysed to understand gaps in WASH related content, which provided the basis for the content framework for developing the WASH IEC Kit. The WASH IEC kit comprised of a Teachers' manual, Guidebook to IEC resources, Students' Activity Booklet for Standards 1 to 3, posters, a planner and stickers.

1.8.5 Citizens' Science Initiative Using Foldscope

As part of its Urban Programmes, CEE has been exploring several approaches for conservation of wetlands in cities and towns. This project aims to build a cross learning platform about the DeeporBeel wetland in Guwahati, Assam and the Pashan Lake wetland in Pune City, Maharashtra. DeeporBeel is a protected wetland under the Ramsar Convention of 1971 for the conservation and sustainable use of wetlands. Pashan Lake is a man-made reservoir on the Ramnadi River. Both wetlands face several common anthropogenic impacts. Foldscopes present a unique opportunity to introduce and inculcate an interest in microscopic creatures among children and adults, and thereby an interest in the environment.

At DeeporBeel, CEE has facilitated multi-stakeholder discussions and an inquiry-based approach to understand the range of social and environmental concerns. Experiencing nature is recognised as a powerful approach for environmental education and an imperative to develop a citizenry aware of the value of nature and biodiversity. To engage local communities and students in the issues related to DeeporBeel, the approach of citizen science to explore microscopic life in the lake, water quality testing and studies of invertebrates as bio-indicators using the Foldscope was used.

In Pune, CEE reached out to students from schools and colleges and, in November 2018, arranged an orientation on Foldscope assembly and usage. A field visit to Pashan lake was undertaken and water samples were collected at different locations, geo-marking the points of collection. The samples were then tested for presence of microbial life-forms.

A demonstration of the use of Foldscope was also given to CEE staff and interns engaged in school and community outreach. The complete process was documented, specifically focusing on the challenges faced while assembling and viewing with the Foldscope. CEE staff have integrated the use of the Foldscope and exploring the microscopic environment as one of the approaches to EE and showcase it at students' events, such as a Bal Anand Mela held in March 2019, in Talegaon Dabade, Pune District. A Microbe Key Card has also been developed, comprising information and identification of 10 commonly found microbes in fresh water.

1.8.6 Development of Curriculum on 'Zero Waste' for Secondary, Higher Secondary and B Ed Students

Goa Waste Management Corporation had constituted an expert committee to decide and develop a curriculum on 'Zero Waste' for various grades of school education including the teacher training colleges. CEE Goa helped the Corporation in developing the curriculum which is currently being used by the Directorate of Education to teach students at secondary and higher secondary level.

1.8.7 Training and Capacity Building of Pre-service B Ed Students

Based on the 'Zero Waste' curriculum, CEE, along with various experts, supported the Goa Waste Management Corporation in training the pre-service B Ed and D Ed students. Around 1000 teachers from six colleges were trained as part of this.

1.8.8 Srushti Mitra Awards

The Srushti Mitra Awards (SMA) of the Environment Department of Maharashtra Government is managed and coordinated by CEE Central. The fifth edition of the SMA was launched inviting entries under the eight categories covered in the award, from students and general citizens from all over Maharashtra. CEE prepared the project plan with timeline, including the plans for outreach to invite entries, for assessment and for the Awards event. The theme for this edition of the SMA is 'Environmental pollution' and award categories include children's literature, slide show, photography and slogan.

2. HIGHER EDUCATION

2.1 Journal of Education for Sustainable Development (JESD)

JESD is a peer-reviewed international academic journal published by SAGE twice a year. It has been edited and managed by CEE Australia since 2012. It provides a platform for presenting research, debating ideas and showcasing success stories in the emergent field of ESD.

During the current year, two issues – 12.1 and 12.2 – were brought out.

2.2 Regional Centres of Expertise (RCEs)

2.2.1 RCE Lucknow

CEE has established an RCE network on ESD in Lucknow in partnership with eight organisations. The key areas of action of RCE Lucknow are focused on biodiversity conservation and school education programmes. The target groups for these activities are students, teachers, NGOs, communities, youth, etc. CEE North, as the nodal point for RCE Lucknow, has initiated several ESD activities with its RCE partners in the region, which are described below.

- School events based on various environment related themes were organised where students and teachers from schools of Lucknow participated.
- A biodiversity focused ESD initiative is being undertaken in Uttar Pradesh with the help of formal education institutions such as the University of Lucknow, and non-formal education institutions like UP State Biodiversity Board, Education and Forest Departments, schools, scientific institutions, Lucknow Zoo and others.
- Students from University of Lucknow joined CEE North as interns and worked on various ongoing programmes.
- A session on Environmental Education was conducted for students from the University of Lucknow pursuing their diploma in Wildlife Sciences under the Institute of Wildlife Sciences. As part of RCE Lucknow activities, CEE team, working with the University, developed the 2-day module for conducting the sessions on EE, which covered the need and scope, target audience and techniques. Various classroom and outdoor sessions were also conducted during the module.

Inter RCE Collaboration with RCE Western Sydney

RCE Western Sydney and RCE Lucknow have joined hands for conducting a sustainability exchange programme between students from Western Sydney University and University of Lucknow, facilitated by CEE. As part of this, a study visit of students from Western Sydney University was organised in November 2018. The focus of the visit was on SDG 6: Clean Water and Sanitation, where students were provided an exposure to urban and rural issues.

2.3 SDG Handprint Lab

SDG Handprint Lab is a certificate programme offered by CEE. It is an initiative towards increasing youth participation in achieving the SDGs at the local level. The programme challenges the students to understand the goals and targets in a selected geographic area and think of solutions and Handprint actions that could lead to achieving the goals. Handprint actions are positive and tangible actions taken towards sustainability. Exploring the themes of the SDGs is an excellent way to get the students to link their education and skill with real life problems in the wider community and the environment. The programme aims to provide a unique learning environment to youth that involves an understanding of the SDGs, relating it to issues of a local area, using their skill and knowledge to conduct research and executing handprint activities.

CEE conducted the first SDG Handprint Lab programme as an elective course at the Charusat University, Changa in Kheda District, Gujarat, in 2018, involving 120 students from the 4th semester (2nd year) of the Chemical Engineering Department. The course follows a stepwise approach facilitating the students' journey from understanding sustainability, conducting field research, developing a strategy to finding solutions in the context of selected SDGs.

Presentations on the SDG Handprint Lab programme were conducted in four other institutes in and around Ahmedabad, and discussions on offering the programme in these institutes are under progress.

2.4 CEE-CEPT Summer School

Resilient Communities for Resilient Cities: Study of Design Projects and Processes in New York

This course, held during June 11-21, 2018, focused on appropriate resilient design strategies by studying neighbourhoods that are being designed through different resiliency approaches. This was undertaken through a study of design initiatives in New York that included architectural, landscape and planning strategies by Rebuild by Design and Department of City Planning, focusing on architectural and landscape design, and local area planning. The faculty comprising Ms. Urvi Desai (Associate Professor, CEPT University), Ms. Madhavi Joshi (Sr. Programme Director, CEE) and Mr. Ranjan Nambiar (Architect based in New York), along with 20 students visited and interacted with faculty at the New York University, 100RC, Mayor's Office, BjarkeIngels Group (BIG), SCAPE. The students studied the neighbourhoods in the Two Bridges area of New York to understand the approaches and strategies adopted for resilience, especially from the point of view of people's involvement in the process. Theory and facilitation was conducted at the Pratt University campus. The students prepared a detailed report on their

findings from their studies which was presented at the end of the course and submitted to CEPT University and CEE.

3. EDUCATION FOR YOUTH

3.1 South Asia Youth Environment Network (SAYEN)

SAYEN initiatives during the year focused on engaging youth in sustainability action on their campuses and in the community, and fostering new and strengthening on-going partnerships. SAYEN was recognised as the National Focal Point for the Young Reporters for the Environment (YRE) initiative of the Foundation for Environmental Education (FEE). SAYEN Secretariat supported the youth events organised at the Indian Institute of Technology (IIT) Kharagpur, IIT Mumbai, IIT Roorkee and Birla Institute of Technology (BITS) Goa, where guidelines on organising of events sustainably were shared with the institutes. SAYEN participated in the event organised at IIT Roorkee in March 2017. CEE continues to receive interns and the SAYEN Secretariat facilitates the process of placement of interns within CEE.

3.2 SAYEN Internships

Throughout the year around 120 interns and volunteers are placed in various offices of CEE. These interns are placed with the ongoing projects in various thematic areas. They are involved in communication material development, research, survey, field work, campaigning and fundraising activities. As a part of the ongoing partnership arrangement with KURVE Wustrow, a peace building organisation in Germany, CEE hosted two volunteers during the reporting year.

3.3 Young Reporters for the Environment (YRE) – India

The YRE India network of schools expanded to 80 schools this year and added cities like Hyderabad, Chennai and Bengaluru. The Litter Less Campaign 2019 saw participation of many new colleges and new activities taking place to reduce litter and spread awareness about waste management.

3.3.1 YRE National Operators Meet, April 2019

CEE, as a member country of the Foundation for Environmental Education, is implementing two programmes in the country: Eco-schools Programme for school children and YRE for youth. The National Operators' Meet for YRE was held in Shanghai in April 2019 and Ms. Madhavi Joshi, Senior Programme Director, Youth Programmes, represented CEE as the National Operator at the meet.

Part of the agenda of this Meet was to extend the age limit from 21 to 25 to be able to include university students in the programme and CEE was able to successfully lobby and increase the age limit to 25.

3.3.2 YRE Litter Less Campaign

The YRE Litter Less Campaign is a behaviour change programme aimed at reducing litter in public places and promoting sustainable consumption practices. This campaign is a part of both Eco Schools and YRE.

CEE has prepared lesson plans for the Litter Less Campaign globally which are being translated into more than 20 languages in other countries.

3.4 Participation in COY 14

Around 35 youth from South Asia attended the Local Conference of Youth (LCOY) held in November 2018. The COY 14 was aimed at setting up a dialogue between the youth of South Asian countries ahead of COP 24. Ms. Yugratna Srivastava, South Asia's Representative to YOUNGO, was also present in LCOY 14.

3.5 Plastic Tide Turners Campaign

CEE has been instrumental in implementing waste management programmes in different regions of the country. The Plastic Tide Turner is a behaviour change programme initiated by UN Environment in association with Clean Seas Campaign to reduce the use of single-use plastics. The programme aims to reach 50,000 youth and trigger a national movement to reduce the consumption of single-use plastics. WWF India is the national implementing partner for this programme in India.

3.6 Interns in CEE Rajasthan

To tap into the volunteer energy of youth and in recognition of the need to extend environmental education to youth, CEE provides internships for students/young entrepreneurs/innovators. These internship programmes serve as an opportunity to develop a cadre of professionals in the field of education for sustainable development (ESD), by capacity building of individuals who in turn will infuse these ideas in the organisation they work. Five students from Central University, Ajmer, Forest Research Institute, Dehradun and Poornima Group of Institutions, Jaipur, were engaged as interns under the Prajwala Project at CEE Rajasthan to provide them an understanding of sustainable development.

4. EXPERIENCING NATURE

4.1 Sundarvan – A Nature Discovery Centre

Sundarvan was inaugurated by the legendary ornithologist Dr. Salim Ali on October 28, 1978. This four acre Nature Discovery Centre, which was originally a mango orchard, is a unique facility created for experiencing and understanding nature, animals and birds. Fondly known as the 'Snake Park', Sundarvan has been conducting snake awareness programmes since its inception.

Sundarvan received 91,924 visitors, including 39,561(43.1%) children and 52,363 adults during the period. A total 16056 students and 1973 teachers from 299 schools visited Sundarvan during this year.

Reptile Awareness Programmes were conducted for park visitors on every Sunday. It was carried out for 24 schools on other days, where 2890 students and teachers participated. Birthdays of 12 children were celebrated in a greener way at Sundarvan during this year.

4.1.1 Events and Activities at Sundarvan

Sundarvan organised a workshop titled **Let's talk about Birds** during the months of June and July for college students, with Dr. Dhawal Mehta as a resource person. The workshop was aimed at generating awareness towards bird conservation, identification and field techniques in ornithology. The workshop was led by a team of wildlife biologists catering to a target group of undergraduate/post graduate science students. Around 80 students from different colleges participated in the workshop. The participants learnt about Evolution of birds, Classification of birds, Basics of bird watching, Bird identification, Field techniques and Monitoring of migration and movement patterns. Articles related to this workshop were published in several local newspapers.

Sundarvan organised another workshop titled **Let's talk about Reptiles**. The workshop was aimed at generating awareness towards reptile conservation, identification and field techniques in Herpetology. The workshop was led by a team of wildlife biologists and catered to a target group of undergraduate/post graduate science students. The participants could get hands-on experience in Identification of different reptiles, Classification of reptiles, Feeding habits, Special features or adaptations and Population estimation techniques. Several articles were published in local newspapers covering this workshop.

As part of the **Wildlife Week** celebration, Sundarvan had organised two Wildlife Quizzes for school students and the general public. In the first quiz, 11 teams from various schools, namely, St. Kabir School - Navarangpura, C.N. Vidyavihar, Shree Narayan Guru Vidyalaya and Thaltej

Primary School, participated in the quiz. This quiz was aimed to spread awareness on Wildlife Conservation and Nature Education. A film “Yogi Bear” was screened in Sundarvan, which was a fun movie with a great conservation message for kids and youth that all the national parks and forest areas should be conserved. A field trip to Bakore Forest was also conducted as part of the Wildlife Week programme with a group of 15 participants of various age groups, fields of interest and professional backgrounds. Located in Panchmahal Forest Range and Mahisagar District and supporting a rich biodiversity that includes more than 100 species of birds, the site has mountains that form part of the Aravalli Range and streams that fill up after monsoons. A small trek to Kaleshwari Archeological site, a short hike to a waterfall, bathing, discussing diversity and participating in craft activities, completed a day of connectedness to nature. The Wildlife Week celebration was also widely covered in the local newspapers.

Sundarvan organised a camp titled **Winter Camps at Sundarvan** during the period of November to January. The camp was for children of the age group 6-12 years, and aimed to generate awareness towards wildlife conservation with the concept of fun and learning with different activities. Activities like Bird feeding, Bat awareness, Movie screening, Night trail walk, Campfire and Bird watching were conducted. Kids learnt about different kinds of bats and their behaviour, nocturnal insects and basic identification of birds and call identification. Around 150 children participated in the winter camp.

4.1.2 Grants and Support for Education Programmes

Sundarvan received a grant from Gujarat Council of Science and Technology (GUJCOST) to carry out **Reptile Awareness Programmes** for college students. The workshop was conducted during February 18-22, 2019. A total of 203 students participated in the workshop from various fields like Zoology, Environmental Science and Engineering. The participants gained hands-on experience in identification of different reptiles, their feeding habits, special features or adaptations and population estimation techniques. A folder on snakes developed through this project was given to all the participants. Articles related to workshop were published in local newspapers.

Five one-day teachers’ orientation workshops on **Sustainability and Biodiversity** under the “Earthian” programme, funded by WIPRO Foundation, were conducted at Sundarvan for 160 teachers from different schools (government and private) of Ahmedabad. It was aimed at understanding biodiversity in a larger context, how intricately it is connected to all aspects of human and non-human lives, how food, health, shelter, technology, economics and eradication of poverty are closely related to it and are influenced by its presence or absence. An activity manual was circulated to all the teachers along with other material such as a biodiversity game chart.

4.2 Bio-cultural Nature Camp Programme in CEE North

Since 2013, CEE and Wipro are working together on the Earthian-Paryavaran Mitra initiative. To provide a different kind of educational experience, the Earthian winner school teams of the year 2017 from Uttar Pradesh, Rajasthan and Chhattisgarh, were invited to be part of a bio-cultural camp. Bio-cultural camps are focused on learning about the biodiversity and the cultural importance of the area. Such camps are an opportunity to stimulate joyful, enlightening insights and experiences – for ourselves, as well as for our children and youth. These programmes are aimed at inculcating in the participants an appreciation of nature, natural resources, indigenous people and their culture and its importance.

Such a camp was planned for schools at Katarniaghat Wildlife Sanctuary of Uttar Pradesh where the Tharu tribe lives in and around the sanctuary connected with the forest. The objective of the camp was to orient students to the unique biological and cultural aspects of the sanctuary, to expose students to the conservation and sustainability practices of the sanctuary and to develop an appreciation of the need for conservation of the biodiversity as a whole.

For the Earthian-Paryavaran Mitra winner schools of UP, Rajasthan and Chhattisgarh, a two-nights and three-day nature camp was organised in November 2018, with a group of 25 students and six teachers participating. CEE facilitated the nature camp sessions, trails and interaction with the tribal community.

5. COAST AND MARINE PROGRAMMES

5.1 Climate Literacy and Marine Litter Management (CLMLM) Campaign

CEE with support from GIZ and in collaboration with core partners Academy of Gandhian Studies (AGS) and Avvai Village Welfare Society (AVVAI), along with 12 other organisations implemented the Climate Literacy and Marine Litter Management (CLMLM) campaign across 250 coastal villages in Tamil Nadu, Andhra Pradesh, West Bengal, Odisha and Puducherry states along the east coast of India. CEE functioned as the secretariat and technical knowledge partner providing project management support, educational material development, training of trainers, design of the campaign strategy, tools and activities.

The campaign focused on empowering communities to better adapt to climate risk and reduce the marine litter burden on the ecosystem. Around 24 pilot demonstrations around the themes of reducing salinity ingress, water body reclamation, eco-restoration, natural bund strengthening, protection from soil erosion, waste recycling facility were implemented across these states to develop local infrastructure, build synergies and inter-linkages with existing policies and action plans on climate change and marine waste management. About 143 km of coastline was cleaned through public participation. Around 394 Gram Sabha meetings were held to build local partnerships around the theme of building climate change resilience. Overall, the project reached out to about four lakh community members. A pre and post survey on impact analysis revealed that the campaign had resulted in shifting the perception and awareness levels of the majority of the population towards investing in climate change adaptation, marine litter management, livelihood diversification, investment in insurance, learning life-saving skills and active involvement in participatory management of their local resources and area. One of the outcomes of the project was the development of the East Coast Forum (ECF) network comprising of the organizations involved in CLMLM project. The ECF aims to advance the gains of the CLMLM impact and provide institutional support to continue building resilience of the communities along the east coast of India.

5.2 Blue Flag Initiatives

The international Blue Flag programme of the Foundation for Environmental Education promotes sustainable development in freshwater and marine areas. It challenges local authorities and beach operators to achieve high standards in the four categories of: water quality, environmental management, environmental education and safety. Over the years, the Blue Flag has become a highly respected and recognised eco-label working to bring together the tourism and environmental sectors at local, regional and national levels.

CEE as the National Operator agency of Blue Flag India is promoting sustainable management of beaches and supporting coastal local governments and communities to make use of Blue Flag to improve their own local environment. Currently, beaches in 10 states/ Union Territories are being readied for applying to be awarded for the eco-label, with support from the Ministry of Environment, Forest and Climate Change, Government of India. Waste Management and beach cleaning are important components of the programme. The programme is implemented through CEE's partner - the Society for Sustainable Urban Development.

6. EE THROUGH INTERPRETATION

6.1 Ralegan Siddhi Interpretation Centre, Ahmednagar, Maharashtra

Ralegan Siddhi is located in Ahmednagar, Maharashtra and is home to Shri Anna Hazare, the well-known activist who has led several social movements in India. Shri Hazare's contribution to watershed management in the village is exemplary. It has led to the enhancement of the local ecology of the village that now supports many birds and animals. Many people from across the country visit Ralegan Siddhi to learn about the work done by him and also to get training in watershed management. The place also has a nature trail which leads to the top of a hill and provides a beautiful view of the entire village.

The Joint Forest Management Committee had signed an MoA with CEE to develop an interpretation centre that can provide information and educate the visitors about the village and its ecology.

Some of the exhibits prepared and installed by CEE at the Ralegan Siddhi Interpretation Centre were: photo-text panels, an outdoor 3D model of watershed management, an indoor display of watershed management with models, indoor models of wildlife of Ralegan Siddhi (mammals and birds), a 3D model of Ralegan Siddhi before and after the watershed management, a touch-screen interactive and outdoor signages.

The project was completed in June 2018.

6.2 Interpretive Facilities at Pashan Lake, Pune, Maharashtra

The Pashan Lake in Pune plays an important role as a wetland in that region and attracts a lot of nature enthusiasts. To educate people about how this lake serves as an urban wetland as well as supports local biodiversity, an interpretation centre has been set up at Pashan Lake.

The interpretation centre set up by CEE has several themes such as: Pune's biogeography; history, geography and ecology of Pashan Lake; importance as an urban wetland; life forms supported by the lake (resident and migratory birds, fishes, amphibians); challenges and threats; and conservation of the lake. The project was funded by Pune Municipal Corporation (PMC) and the exhibits created by CEE for the interpretation centre included photo-text panels, bird dioramas, photo collage, outdoor signages, directional signages, 'do's and don'ts' panel and standees.

The project was completed with the final installation of exhibits in September 2018.

6.3 Nature Interpretation Centre, Sanjay Gandhi National Park, Mumbai, Maharashtra

Sanjay Gandhi National Park is one of the few parks in the world which are situated amidst a bustling metropolitan city. This city forest is remarkable because of its location and the biodiversity it supports. It is home to a large number of flora and fauna, and has the highest density of leopards in the world. The Park also comprises two water bodies that supply potable water to the citizens of Mumbai.

The authorities of SGNP has planned to develop a Nature Interpretation Centre and a Cat Centre at the Park that will enhance the experience of the visitors.

Both of the centres will consist of photo-text panels, dioramas with life-size models, interactive panels, augmented reality and outdoor signages that will not only disseminate the information about the Park and its biodiversity to the people, but also educate them about the importance of its conservation.

The project is in progress and the fabrication of outdoor interpretation has started. The content for the photo-text panels has been completed and most of the dioramas are ready to be installed.

6.4 Nature Interpretation and Tribal Museum, Sajjangarh, Rajasthan

Sajjangarh in Udaipur is famous for its Monsoon Palace (also known as Sajjangarh Palace) situated on a hilltop. The palace provides a picturesque view of the Fateh Sagar Lake in Udaipur and the city itself.

At the base of the hilltop is the Sajjangarh Wildlife Sanctuary, which is home to many species of birds and animals. The palace is visited by many tourists, which provides a great opportunity to educate them about the cultural as well as the natural heritage of Rajasthan in general and Sajjangarh in particular.

A nature interpretation centre and a tribal interpretation is being set up at the Monsoon Palace which will depict the history of the palace, the biodiversity of Sajjangarh and the tribal life of Rajasthan with the help of table-top dioramas, photo-text panels, paintings, life-sized models, and augmented reality.

The work has been initiated and the content for the outdoor signages is being developed.

6.5 Signage System for Sabarmati Ashram, Ahmedabad

An interpretation project has been initiated to set up outdoor signages at Sabarmati Ashram, Ahmedabad. In all, 20 signages will be developed that will include directional signages for offices, Gandhi Ashram map, Ashram timing and signages for the facilities like drinking water, washrooms, etc.

6.6 Facilitation for Setting up Science and Environment Park

The Government of Goa, Department of Science and Technology, has decided to set up two Science and Environment Parks, one each in North and South Goa districts. CEE has been identified as a nodal agency to conceptualise the plan and implement the same in both places. The Park has two components, viz. a building for indoor science experimentation and seminars and an outdoor exhibit area wherein various science related instruments are placed for children to come, play and understand the science behind each of them. Once the park is ready, CEE Goa State Office will run it for an initial two years with support from the Department of Science and Technology, and later on make it a self-sustaining module.

7. ENVIRONMENT MANAGEMENT AND CLIMATE CHANGE

7.1 Environment Management Group (EMG)

The EMG of CEE implemented a number of projects in the field of environmental pollution prevention and control with a view to creating awareness and capacity building of stakeholders like individual industries, common facility operators, industrial associations, consultants and auditors, NGOs, students/faculties of technical and R&D institutes, universities and others.

The following are the projects undertaken by EMG during the reporting period.

7.1.1 Eco-industrial Development - GIDC Pandesara, Surat, Gujarat

EMG implemented four projects, viz. (i) CETP Pandesara performance up-gradation, (ii) Waste Utilisation Centre (WUC), (iii) Sustainable Textile Production and (iv) Improvement of the image of textile industries with enforcing agencies through enhanced compliance with reference to different environmental legislations.

CETP Pandesara Performance Up-gradation: EMG worked as the technical advisor for the augmentation of the CETP (Common Effluent Treatment Plant) performance to achieve the norms prescribed by GPCB (Gujarat Pollution Control Board). The EMG technical team studied the CETP operation and maintenance in depth during site visits and collected samples of the effluent at various stages of treatment. After a careful study of the analysis, the CETP management was guided for upgrading the existing primary and secondary treatment system of this CETP. The management implemented the EMG technical team suggestions, constructed two pre-primary tanks before the existing primary settling tank for removal of the excessive amount of suspended solids (SS), oil and grease (O&G). There is an improvement in the quality of treatment in terms of SS after the modifications.

In Phase II of the project, the focus is on strengthening the secondary treatment process by improving the bacterial biomass to achieve GPCB norms.

Waste Utilisation Centre (WUC): This project on the development of products from hazardous wastes is part of the circular economy initiative of the EMG. The group has prepared an inventory of industrial wastes based on their characteristics and drawn a sustainable plan for their utilisation. EMG demonstrated at lab scale, the development of various types of bricks/blocks from hazardous and non-hazardous types of industrial wastes, which have good material strength and are non-toxic in nature. The group was able to achieve the required comprehensive strength of up to 30% of CETP primary sludge of the textile cluster of GIDC Pandesara. The activity will lead to waste utilisation, conservation of the environment and increase in the life of TSDF (treatment storage and disposal facility).

Sustainable Textile Production: GIDC Pandesara has more than 115 textile industries. Implementation of this project for minimising the natural resources usage will make a positive impact on the environment as it will reduce consumption of water, steam and power drastically and ensure reuse of treated effluent. One the units identified for the purpose has started execution of the recommendations of EMG communicated to it after a study of the existing operations of this plant during field visits. The measures taken by individual industries and the estate as a whole will improve the image of industries before the enforcing authorities.

Improvement of Image of Textile Industries with Enforcing Agencies: The EMG technical team provided guidance to members of GIDC Pandesara from time to time about resolving the issues related to enforcing agencies and court matters.

7.1.2 GIZ: State Level Training Programme for Wastewater Treatment Technicians and Helpers

The aim of this training is to encourage and enhance the potential of workers and operators of ETPs, using the outputs developed by Sustainable Environmental-friendly Industrial Production (SEIP) and partners in order to improve workers' safety, professional careers and environmental protection, as well as to make the operation of high quality environmental technologies more sustainable. About 180 ETP/CETP technicians and helpers from Ahmedabad, Vadodara and Surat were benefitted through three different programmes held at industrial estates in the three cities. The participants were reviewed through a test and the top performers were suitably rewarded.

7.1.3 Monitoring of Kharicut Canal Wastewater Quality at Ahmedabad

The above canal, meant to carry water for irrigation, passes through different industrial areas. To address the issue of discharge of polluted wastewater into the canal and to assist GPCB to find out the actual cause of pollution, the Green Environment Services Co-op. Society Ltd. (GESCSL) requested EMG to monitor the quality of wastewater of the Kharicut canal from different locations along its flow. The results indicate that the quality of wastewater up to Vinzol Escape i.e. in the upstream and downstream of GIDC Vatva is satisfactory. In other words, there seems to be no unauthorised disposal of industrial effluent from GIDC Estate Vatva.

7.1.4 Monitoring of Technical and Legal Compliance of Bio-medical Facility, Gulbarga, Karnataka

The group visited the biomedical waste management facility during February 11-14, 2019 to monitor the legal and technical compliance of the plant and submitted a comprehensive report to CEE East (West Bengal, Odisha and Jharkhand) for execution.

7.1.5 Preparation of National Module on Advancing Air Quality for Clean Air Asia

EMG and CEE Central, in partnership with Clean Air Asia-India (CAA), has prepared the National Module for Advancing Air Quality in line with the National Clean Air Programme (NCAP) based on the Guidance Framework for Better Air Quality in Asian Cities, to provide the Indian cities with a roadmap to take significant steps in attaining better air quality. In a workshop held in March 2019, the technical experts from NEERI, GPCB, CPCB, IIPH, NIOH, CU-Gujarat, PRL and others were invited and the draft modules prepared by CEE were discussed. The modules were finalised after incorporating their suggestions. The modules lay emphasis on enhancing the knowledge base of key actors, and building the capacity of cities to prepare action plans for air pollution prevention and control and thus improve air quality. The module also advocates strengthening multi-stakeholder, multi-sectoral approaches for improved air quality management.

7.1.6 Technical Consultation for Designing of ETP

Parshwnath Industries, proposed to be situated at Khambhat, Gujarat, is to install a new plant of Dyes and Dye-intermediates. The industry invited CEE-EMG to review the ETP design and flow diagram developed for the treatment of wastewater in the new plant and/or suggest any other treatment, which is economically viable. EMG, after a study of the treatment system and literature survey, submitted a comprehensive report to the industry indicating modifications in the treatment methodology and another possible treatment after a field visit.

7.1.7 Air Quality Management Workshop for Industrial and Urban areas: Aerospectrum 2018

EMG, in collaboration with GPCB and NEERI, organised a workshop on Aerospectrum-2018, 'Gujarat Air Quality Management for Industrial and Urban areas' at CEE Ahmedabad on September 6, 2018. The purpose was to understand air quality issues and their impact on the ecosystem, and to develop mitigation strategies through identification of knowledge gaps to contribute to a deeper understanding of the local and regional scale of the impact of air pollution prevention and control. Around 165 participants from industries, common facility operators, industrial associations, local bodies, pollution control boards, policy makers, faculties of academia and research institutes, students, NGOs, auditors and consultants actively participated in the workshop. The resource persons were from IITK, NEERI, CPCB, CEE, EMG and TERI. After a discussion with the experts, EMG submitted the workshop recommendations to the FED-GoG and GPCB for further implementation.

7.1.8 E-waste Collection Centre

EMG, in collaboration with E-coli Waste Management Pvt. Ltd., started the E-waste collection centre at CEE Ahmedabad on June 5, 2018. It is estimated that more than 875 kg of e-waste has been collected during the financial year of 2018-19.

7.1.9 Poultry Waste Management

Poultry waste management is one of the grey areas which need attention. CEE, in partnership with M/s Hester Bio-Sciences Pvt. Ltd., addressed this issue for a research project in Ahmedabad about the possibility of converting it into a waste to energy value project.

The main objectives of the project were; (i) To research about poultry slaughter waste management nationally and globally – especially production, collection, management and disposal; (ii) To find out about the local technologies available for the treatment of poultry slaughter waste and types of by-products; (iii) To estimate the feasibility of setting up a process plant in Ahmedabad for zero waste meat shops.

About 190 poultry slaughterhouses were identified from which slaughter waste can be collected, and through a scientific process can be converted into a useful by-product.

On implementation of this project by a local body or any other project proponent, it will address the issues of environmental pollution prevention and control; increase the life of the MSW facility and employment generation by setting up of a common facility for treatment and safe disposal of the waste.

7.2 Climate Change Group

7.2.1 GIZ Lecture Series

The We4Climate initiative was jointly envisioned by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and CEE under the Indo-German bilateral project "Climate Change Adaptation in Rural Areas of India (CCA-RAI)". One of the first activities under this initiative was the programme "Enabling Climate Action through Knowledge Campaign: A Popular Lecture Series on Climate Change and Sustainable Development": a series of 16 lecture events organised in the Indian states of Himachal Pradesh, Punjab, Tamil Nadu and Telangana. There were a total of 2600 participants in the programme in the four states. The objective of this lecture series was to promote dialogue on climate change challenges and strategies for climate action through knowledge exchange and experience sharing between different stakeholders.

These participating stakeholders included government officials, policymakers, students, researchers, academicians, NGO representatives, practitioners and other interested persons.

The one-day lecture had two components: lecture sessions delivered by experts followed by thematic group discussions between the participants and experts. This approach was inspired from the Talanoa Dialogue, an inclusive, participatory and transparent discussion between different stakeholders adopted during the international climate negotiations. The participants, speakers and other dignitaries were also given a state-specific informative booklet briefly explaining climate change, its impacts in India and good practice examples from the project states. The highlights of these one-day events were compiled in a coffee table book at the end of the project, which was launched at COP24 in Katowice, Poland, in November 2018.

Himachal Pradesh: In Himachal Pradesh, four lecture events were conducted by CEE North and Himalaya during the period of August to November 2019. CEE and GIZ has developed small booklets which briefly explain the impacts of climate change in India and Himachal Pradesh and highlight a few case examples of best practices in the state to cope with climate change.

The first lecture event was held in Shimla in August 2018. Ms. Sunita Narain, Director General, Centre for Science and Environment, New Delhi, delivered the keynote address and spoke at length about the water crisis in Shimla and how Himachal Pradesh has been one of the foremost states to promote sustainable waste management in India. The Director, CEE Ahmedabad, talked about the role of education for empowering communities in tackling the adverse impacts of climate change and leapfrogging towards sustainable lifestyles and development.

The second state event was organised at Dr. Y. S. Parmar University of Horticulture and Forestry, Nauni, Solan, in August 2018. The speakers and workshop chairs were resource persons from DEST, Indian Meteorological Department, Dr. Y. S. Parmar University of Horticulture and Forestry and CEE.

The third event was conducted at Chitkara University at Baddi in September 2018. The Principal Scientific Officer, State Coordinator, HPKCCC, in his opening remarks spoke about the threats being faced by the region and people due to climate change. The chief guest of the event, the Pro Vice Chancellor of the University, in her address spoke about why we need to involve youth in planning climate action. The Former Special Secretary, MoEFCC, GoI and Distinguished Fellow at the Energy and Resources Institute (TERI), New Delhi delivered the keynote address at the event.

The fourth and last event was held at CSK University, Palampur, in November 2018. Faculty, NGO members, youth, students, teachers and other members participated in the event.

These events drew more than 1500 participants who took part in the climate change action dialogue and provided their inputs.

Punjab: The Delhi team conducted the Climate Change Lecture Series events in four cities of Punjab.

7.2.2 Conference of Youth

With a vision to increase climate change awareness among young people across the globe and equip them with the understanding and confidence to discuss international climate policy, the Conference of Youth (COY) is an annual international event organised by YOUNGO, the official youth constituency to the United Nations Framework Convention on Climate Change (UNFCCC). These LCOYs serve the purpose of encouraging young people from across the world to become a part of the climate action movement and providing them a platform to share their voices, concerns and recommendations with youth and international delegates at the global COY and UNFCCC's COP.

CEE has been organising LCOY-India since 2015 with participants from South Asian countries including India, Nepal, Bangladesh and Sri Lanka, gaining recognition from YOUNGO and UNFCCC and inspiring smaller youth movements. LCOY 14 was organised in India this year, which aimed at enhancing the youth's understanding on climate change and sustainable development, empowering them to contribute towards climate action locally, nationally and internationally, providing them a platform to share their experiences with likeminded peers, and giving them a space to let their voices be heard. Thirty participants from across South Asia participated and the key outcomes of the discussions from LCOY were submitted and incorporated into the outcome document for Global COY and critically discussed with UNFCCC's ACE (Action for Climate Empowerment) secretariat.

7.2.3 Adapt for Our Future

CEE organised a stakeholder consultation on February 26, 2019, as part of a larger initiative called "Adapt for Our Future" under the auspices of YOUNGO. CEE, being one of the implementation entities, highlighted youth-led actions from across India that further climate adaptation and provided recommendations through a youth perspective to advance climate action globally. The consultation witnessed participants from various research institutes, civil society organisations and universities.

The learning and discussions from this consultation are to be part of a review report compiled by YOUNGO for the global context on youth and climate change adaptation. The report is to be delivered as a background input to the Flagship Report on Adaptation being developed by the Global Commission on Adaptation (GCA) and is to be launched in September 2019, during the UN Secretary General's Climate Summit.

7.3 Earth Care Awards 2018

CEE has been the knowledge partner for the Earth Care Awards (ECA) promoted by JSW and Times of India in the South Asia region under their CSR initiative since 2008. These Awards recognise excellence in climate change mitigation and adaptation initiatives by industries, communities and for innovations and actions in urban contexts. The event for conferring the awards in the Eighth Edition was organised at New Delhi in April 2018. The Awards were presented by the Hon'ble Minister of State for Environment, Shri Harsh Vardhan.

CEE prepared a compilation of 59 case studies of the work done by awardees, as a print and electronic publication titled *A Compendium of Climate Action Stories: A Decade Of the Earth Care Awards 2008 – 2018*. The compendium was launched during the Awards presentation event by the actor Ms. Juhi Chawla.

8. SUSTAINABLE RURAL DEVELOPMENT

8.1 HEDPRO – Gram Nidhi

The Jasdan Field Office closely works with 55 active self-help groups (SHGs) who have been strengthened and capacity built through a variety of programmes undertaken in the villages of Jasdan over the years. Twenty Field Farmer Schools set up by ATMA (Agriculture Technology Management Agency) and 18 Farmers Clubs set up by NABARD are also functioning in these villages. All these village level institutions are involved in sustainable/organic agriculture, value addition to products, marketing of products, promoting new crop varieties and encouraging horticulture.

The women SHG members participated in eight fairs during the year. They continue to supply farm-based and non-farm based, wild products in both loose and wholesale forms. They have developed around 52 different products worth Rs. 40 lakh or more.

CEE organised a campaign to encourage farmers to adopt planting of drumstick saplings. As a prelude to this, CEE Jasdan team organised four farmers' meetings and one consultation. This led to the sale of two lakh saplings, with 700 farmers planting the drumstick saplings in over 1000 bigha land. CEE provides the market linkage to this initiative.

Over 150 farmers were supported in the online application process for taking advantage of government schemes. Application camps were organised in the villages for this purpose.

Every month, products worth around Rs. 1 lakh are sold in the farmers' mall. During this year, around Rs. 14 lakh were earned through such product sales. Products sold include organic fertilizer, seeds, medicines, tools and equipment.

During the year, a certification process for organic farming was carried out. About 130 farmers joined the certification agency, who subsequently purchased the farm produce from them.

8.2 Aarohan

Project Aarohan is a joint initiative of CEE and CLP India. Initiated in April 2017, the project has made a significant impact in the sectors of water, livelihood and education. The project is being implemented in 18 villages spread across four blocks, namely, Jasdan (District: Rajkot), Jam Jodhpur and Kalawad (District: Jamnagar), and Chotila (District: Surendranagar). Community mobilisation and awareness; institution building and strengthening the capacity of the various community groups in the context of the three thematic areas; and strengthening governance processes are the core strategies in implementing the project. Strategically, the project is

implemented through the Village Development Committees (VDCs), Self Help Groups (SHGs) and Farmers' Clubs, by strengthening their capacities through structured interventions.

The major focus of the current year was on ensuring rural water security through several interventions. Mapping of village water resources and preparation of water security plans through community participation was the first step. The area is water scarce and most villages face issues of access to and quality of water available. Augmentation of local water resources and creating required water infrastructure such as augmenting of existing wells, repair and building of new RCC storage tanks, deepening surface water structures such as the village ponds, creating recharging structures, cattle troughs, etc. was undertaken to solve the problem of drinking water for humans and cattle. Through the project, drinking water security has been created for 12,307 families, and for more than 15,000 cattle in the project villages. Participatory planning and social monitoring are key features of this process of creating water infrastructure for augmentation of local water resources.

In the context of livelihoods, 33 SHGs having 370 women members, 18 farmers' clubs having 880 members and 17 VDCs having 232 members have been formed. Promoting sustainable agriculture practices is one of the key components of the livelihood interventions. With SHGs, various forms of livelihood capacity building trainings and exposures are being conducted. Seventeen livelihood trainings and seven exposure tours have been organised as part of the capacity building component. Organic farming is also promoted among the farmers by organising demonstrations and providing kits for waste decomposer and vermicomposting in the villages. For strengthening the food and nutritional security, organic vegetable plots are also promoted among the SHG women. Apart from this, the SHG women are being provided skill based training in value added agro-products and off-farm skill based livelihoods. For better livelihood opportunities, market linkages have also been created.

As part of education, 18 Eco-club schools having 550 students have been formed. Monthly activities, nature camps, Bal Mela and summer camps are organised as a part of the Eco-club activities. Apart from this, two training programmes for teachers and an exposure visit for teachers and School Management Committee (SMC) members were also organised.

8.3 Jalsetu - Empowering Women Elected Representatives for Water Governance and Climate Change

CEE initiated the project 'Jalsetu' with the support of Hans Seidel Foundation (HSS) in February 2016. The programme addressed the actual and potential impacts of climate change on rural water security through empowering Elected Women Representatives (EWRs) towards effective

water governance, better understanding of local water issues and innovative solutions to address them. The programme was implemented in 20 villages from Morbi and Rajkot districts of Gujarat.

The project worked in three critical aspects crucial to achieving the Sustainable Development Goals (SDGs) – water security, climate action and gender equality - in a highly integrated manner. Rural water security always comes up as a clearly defined need at the community level, manifesting itself in several ways including challenges related to water for livelihood, domestic use and drinking. But the two key causes Jalsetu tried to address included potential impacts of climate change and the lack of effective water governance.

During the three years of the programme, the project worked directly with more than 100 elected women representatives and key SHG leaders from the project villages. To address the issues related to drinking water security, the project built on several of CEE's key learnings of about 30 years of experience of working in rural areas including at Jasdan, one of the Jalsetu intervention areas.

The process followed by the project included the following steps:

Sustainability Education ---- Empowering local institutions and communities ---- Experimenting with the solutions and Demonstrating ----- Handholding for action ----- Sustainability Handprint Action

The project explored solutions in:

- a. Empowering institutions and mechanisms of local governance at large, and specifically focusing on empowering the Elected Women Representatives (EWRs) to play a lead role in bringing 'water' to the forefront of village development discussions.
- b. Equipping the VLI members, in particular the EWRs, and the communities at large to implement solutions in the form of climate resilient water technologies and practice.

Following this strategy, a range of programmes were undertaken with multiple stakeholders including EWRs.

The programme was successful in raising awareness among the communities regarding water availability and its conservation. Demonstrations have been set up in both the village clusters. These demonstrations along with capacity building interventions have introduced a variety of techniques and technologies for conserving, harvesting and storage of water. Some of these demonstrations have started being replicated within the project areas and beyond as well.

There is a growing realisation that livelihood challenges cannot be solved unless water issues are addressed. Water security has started emerging as an important agenda of local

governance. Moreover, through various capacity building measures, the role of EWRs in panchayats in general and specifically in sustainable water management has started being recognised in the formal Panchayati Raj Institutional systems and in the community, which is an important outcome of the project.

An independent evaluation of the three years of programme activities and processes was conducted towards the end of the project. A concluding National Conference was organised at CEE involving subject experts, practitioners and community members, in November 2018.

8.4 SRUJAL – Enabling Access to Safe Drinking Water to All

CEE's Rural Programmes Group (RPG) conducted a needs assessment in 11 villages of Sanand, Bavla and Dholka talukas of Ahmedabad District, based on initial discussions with the CSR team of Baxter Pharmaceuticals Ltd., to understand the status of water availability, access and quality. The study findings were the basis for a proposal to work on interventions addressing the need to improve access to safe and clean drinking water, initially in five villages. The learnings from the needs assessment indicate that drinking water issues in the selected areas are related to both water quality and quantity and vary from village to village. Thus, there is no single solution that fits all villages. Lack of awareness about water–health issues, insufficient water availability, poor quality of water, pollution of water sources are some of the major issues being addressed through the project.

The project interventions are built around the following core strategies:

1. Water quality testing and community awareness about water quality and its impacts
2. Community participation in overall water resource management
3. Behaviour change strategy to address the issues related to water safety
4. Providing/creating alternate sources of safe drinking water

Project Objectives

1. To create awareness within the local community with respect to water security and safety
2. To strengthen the existing village level institutions and local community for participatory sustainable management of their water resources
3. To carry out detailed status assessment of local water resources and development of water action plan
4. To train and build the capacity of the community (emphasis on women and youth) with respect to installation, operation and maintenance of the systems to be established
5. To set up/construct water related infrastructure at village level

Activities in brief: The project strategy involves technical and scientific study to design solutions, involve community consultation and participation, create immediate and long term infrastructure for improved access to water, develop an educational intervention for behaviour change, and take ownership of the management of their resources.

Water quality testing: A scientific testing of water quality from all drinking and other water sources in the 11 villages was conducted, with the consideration of 28 key parameters and acceptable and permissible values set by the Bureau of Indian Standards (BIS). A water quality analysis sheet for 28 parameters was also prepared as an awareness generation tool for the community members to understand the details about water quality parameters. It includes introduction/definition about the parameter, sources of contamination, effects on health and remedial measures. Almost all the sources tested failed the quality tests and showed the presence of heavy metals, high TDS and other contamination.

Geophysical survey and community level workshop on water level action plan: To promote optimum use of water in a particular area, it is essential to know about the water dynamics of that area through technical studies. Water security in a village can be established by a thorough study of Geohydrological, Hydrogeological and Geophysical (Resistivity) Survey so that the geometry and behaviour of underground aquifers could be studied.

An assessment of aquifers' geometry, recharge, groundwater flow directions, discharge rate and water extraction rate is essential for the application of water management measures in a certain area. The parameters evaluated through the survey conducted in the project area included Permeability, Recharge, Ground water flow direction, Drainage, Hydrodynamic condition, Relationship with surface waters. Relationship with other aquifers, Regime of ground water and Ground water quality.

Quarterly Awareness Activity - Street Play: As the first entry point awareness strategy, it was decided that street plays could be an effective medium to introduce the project and the organisations involved, initiate a dialogue on the condition of water quality in the area, the need to address the issues and people's role in managing their drinking water sources.

Hardware intervention: During the needs assessment, it was highlighted that a water source and water storage structure needs to be provided in the project villages. Accordingly, based on consultations with the community, interventions such as Bore well, elevated water tank, Cattle trough and Community level RRWH were planned in the five project villages identified as the initial intervention villages out of the 11 studied.

8.5 Jaldhara se Jeevandhara

CEE Central, in partnership with Canara Bank, HSBC, OBC Life Insurance Company and Mahatma Phule Samaj Seva Mandal, Karmala, is implementing a project to strengthen sustainable agricultural practices in the drought prone villages of Aljapur, Kamone and Khadki in Karmala taluka of Solapur District, Maharashtra. The project is in its third year of operation. As part of the project activities, a check dam was repaired two years ago and now activities towards livelihoods and water conservation are being carried out to ensure sustainable use of water.

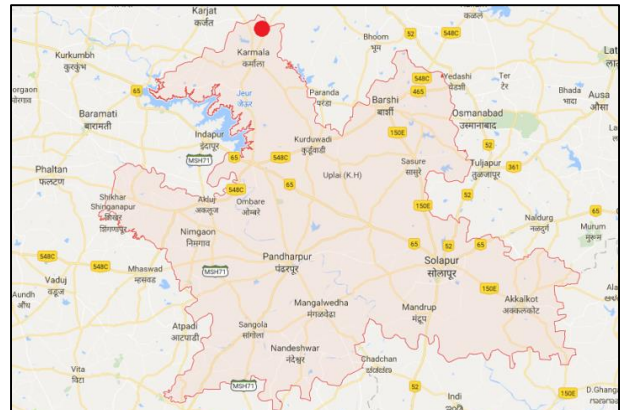


Figure 1: Location

The local women led Self Help Group (SHGs) have been trained to prepare pickles and jaggery for commercial sale to enhance their incomes. Three of the SHGs formed under this project are now registered under FSSAI and the UMED scheme of the government. The SHGs have started to market their products and have sold produce valued over Rs. 30,000 in the last year. This year, the SHGs are supported with machinery like pulses de-husker, flour mill, vermicelli making machine, etc. to support the marketing activities.

The community was facilitated to develop backyard gardens to supplement nutritional needs. Eight marginal and widowed women of the villages were provided with goats to improve their incomes. Three water filters were installed in the villages to provide safe drinking water.

8.6 Enabling Drought-free Villages through Integrated & Participatory Watershed Management in Nandurbar, Maharashtra

Nandurbar is part of the semi-arid tract of India, characterised by low rainfall in parts, rainfed agriculture, vegetation loss and erosion. It is also among the regions that are most vulnerable to climate change in Maharashtra and classified as an aspirational district. A project on drought-proofing and improved water management has been initiated in February 2019 in selected villages in Nandurbar through a CSR initiative with National Stock Exchange Foundation as part of the district adoption model of the Government of Maharashtra. The activities include de-silting of water bodies under the *Gaalmuktdharan*, *Gaalyuktshivar* scheme of the Government of Maharashtra, tree plantation and vegetation to stabilise soils, establishment of piped water supply schemes through convergence with district funds and community outreach and capacity building.

9. SUSTAINABLE URBAN DEVELOPMENT

9.1 Knowledge Management for Urban Groundwater

CEE Urban undertook a project on knowledge management on groundwater in Pune with support from Wipro Limited. Though groundwater is extensively used by the public for domestic, industrial and commercial uses, the governance and regulation of groundwater in urban areas requires strengthening to enable sustainable management. The project aimed to gather knowledge within the community including researchers and NGOs, to facilitate discussions at the city level for informed and better management and governance of groundwater in Pune.

Information on the current status of groundwater management, issues and concerns, was elicited through interviews of experts and group discussions among stakeholders and literature review of past reports and studies. A study was conducted to map the dug wells in the city and the water levels were measured for the identified wells for observations under the guidance of ACWADAM. This information, along with other primary studies, is being used by ACWADAM to map aquifers in the city.

A website is being developed to make this information available to citizens. The website also helps in gathering information about wells in Pune. A film documenting citizens' initiatives on rainwater harvesting and groundwater recharge has been developed with Mission Groundwater, a citizens' initiative. The film is available on CEE's YouTube channel.

A workshop was organised jointly with ACWADAM and Mission Groundwater to initiate and facilitate policy discussions on urban groundwater in Pune and to engage with key local authorities and government stakeholders. The project is being continued from the previous year. It is being implemented in collaboration with ACWADAM and Mission Groundwater.

9.2 Improvement of Road Safety in Maharashtra

CEE Urban collaborated with Parisar to support initiatives for the improvement of road safety in Maharashtra. A stakeholders' mapping was conducted for the road safety policy in Maharashtra and a strategy for engagement with the key influencers and stakeholders was prepared for the project. A range of activities were undertaken to enhance understanding about road safety, which is also recognised in SDG 3.6 and 11.2, including dialogues with decision-makers, outreach to NGOs and civil society, orientation of media personnel, developing communication materials and a website.

A workshop on road safety was organised for the media and NGO representatives titled "Will India Achieve Half by 2020?" in April 2018 at Pune. The objective of the workshop was to orient the media about the road safety scenario in India and Maharashtra, the changing paradigm of road safety globally, the behavioural risk factors with respect to road safety, the Safe Systems approach and initiatives to reduce the road traffic crashes and injuries. It focused on the Motor

Vehicles Act - Amendment Bill 2017 and the road safety action plan of Maharashtra. The aim of the workshop was to orient the media representatives on the need to streamline reporting to enhance public information about the Safe Systems approach, legislative reforms, implementation and enforcement.

A workshop for NGOs was organised in June 2018 at Pune. The focus of NGOs in the road safety space includes education and awareness, demand for improvement of infrastructure to make roads safer, rescue and emergency response and services, engaging with authorities at local and state levels, etc. Organisations from major cities of Maharashtra were invited for this workshop. The participant organisations shared their activities and approaches towards road safety.

A Road Safety Network was launched at the NGOs' workshop. The aim of the Network is to promote understanding about the Safe Systems approach, catalyse demand for effective legislation, and its implementation and enforcement for improvement of road safety at the state as well as at the local levels through the members of the Network.

A website was developed for the Road Safety Network to disseminate information and serve as a repository for the legislation and other government rulings for the reference of media and NGOs. Different materials like branding elements as well as posters on the road safety scenario, Motor Vehicle Amendment Bill (MVAB) 2017, a kit for media on road safety, handouts on safe systems approach and road safety network and standees, etc. were developed for the road safety network and for engagement with the stakeholders.

Social network channels on Facebook and Twitter were set up to engage with people and make them aware about road safety, the legislation and its enforcement. Meetings and communications with different Members of Parliament from Maharashtra were organised to seek views about how the MVAB 2017 would help in reducing road crash fatalities by half as per the national commitment made by India as a signatory to the Brasilia Declaration 2015.

9.3 Improving Road Safety Conditions for the Vulnerable Road Users in the City of Pune

CEE Urban and Parisar collaborated on an initiative to improve road safety for vulnerable road users (VRU) in the city of Pune with support from AXA Business Services. Activities undertaken by CEE include studies to improve road safety for students near 30 schools in Pune, facilitation of enforcement mechanisms for selected cycle tracks in conjunction with Pune Municipal Corporation and the Traffic Police, facilitation of road safety awareness activities among users, and design of a campaign to support use of helmets and engaging the community for road safety issues on a selected road in the city.

CEE approached the International Road Assessment Programme (*iRAP*) and sought support for assessing road safety around schools using 'Star Ratings for Schools', a tab-based app developed by them. *iRAP* arranged training for CEE's local team in Pune on using the Star Ratings for School app for assessment of road safety around schools, and to use the report to

identify and advocate for improvements in infrastructure. With the help of the app, 107 road sections were assessed around 30 schools in three clusters of 10 schools each in three localities in Pune. The assessment provided Star Ratings of these road sections on a scale of 5 Stars, with 1 and 2 Star ratings categorised as 'unsafe', 3 Star as acceptable level of safety and 4 and 5 Star ratings indicating a higher level of safety for that section of the road. About 48% sections were found to be unsafe, 29% were satisfactory and about 23% were found to be safe. The results were shared with the school principals, School Management Committees (SMC), Parent Teacher Associations (PTA), media and local authorities and through a paper presentation. A module for road safety awareness among students was developed and implemented in the selected schools. The remaining activities are being taken up through discussions with the local authorities.

9.4 Strengthening Road Safety Legislation at National and State Level in Gujarat and Maharashtra

CEE Urban has undertaken an initiative for 'Strengthening Road Safety Legislation at National and State Level in Gujarat and Maharashtra' with support from the Global Road Safety Partnership (GRSP). The project aims to support legislative changes for road safety improvements, such as through the Motor Vehicles Act Amendment Bill 2017. The amendments provide for removing the power of states to exempt wearing of helmets by two-wheeler riders, to mandate child helmets, and the use of seat belts and child restraint systems in four-wheelers, safeguarding of Good Samaritans, and providing passage to ambulances. It includes provisions for fixing the responsibility for unsafe road designs on road design and construction agencies, stricter and effective enforcements through use of IT based monitoring and deterrents like higher penalties.

A public and media campaign was launched to highlight the issue of road safety in Gujarat and the need for having an effective and stricter legislation through the MVAB. Social media channels through Facebook and Twitter were used for building public perception and understanding about road safety and the MVAB and to highlight attention on local road safety issues and effective enforcement for the key behavioural risk factors like helmets, seat-belts, child restraint system, drink and drive, distracted driving and speeding. CEE staff participated in and gave inputs from time to time in the strategy formulation meetings of GRSP partners for support to the passage of MVAB 2017.

A plan was drawn up to monitor media coverage on road safety issues in selected cities and states where GRSP grantees are active. The media monitoring reports are used for external environment assessment and to inform the public outreach strategy on road safety. Daily reports of news articles are being shared with the partners. Additionally, monthly and quarterly reports on trends of news coverage are prepared and shared with partners.

A panel discussion and press conference were organised on the World Day of Remembrance for the Road Traffic Victims on November 18, 2018, at Ahmedabad. The panel was chaired by Shri Kartikeya Sarabhai, Director, CEE and DCP Traffic Police, while road traffic activists and

representatives from Indian Institute of Public Health (IIPH) Gandhinagar, Mahila Housing Trust (MHT), UrbanLabs, and a family member of a road crash victim were part of the panel. The panelists discussed the road safety scenario in the city and emphasised the need for having a stronger legislation in the form of MVAB for increasing the road safety in the city and the state. The panel discussion was attended by representatives from the media from Gujarat and was well covered by the newspapers.

The Gujarat Chapter of the Road Safety Network was set up with partners from the state for state level initiatives for strengthening the legislations and improvement of road safety. Indian Institute of Public Health (IIPH) Gandhinagar, Mahila Housing Trust (MHT), UrbanLabs are anchors of the Road Safety Network (RSN) in Gujarat, with CEE as the state secretariat. The RSN is engaging with the key stakeholders in the state like RTO, Traffic Police, Road Safety Authority set up through the Gujarat Road Safety Authority Act 2018, 108 Emergency Services, CEPT, Ahmedabad Municipal Corporation, schools and colleges and other important stakeholders including NGOs, civil society organisations, local authorities from Gujarat and specifically from the three cities of Ahmedabad, Surat and Rajkot. Interns and students from different academic streams are mentored to take up studies and action projects on different aspects of road safety and to prepare a repository of information.

CEE as secretariat of the Road Safety Network in Gujarat is engaging with the authorities, local partners and other stakeholders. CEE is contributing state specific information on the website and social media channels of the Network.

In Pune, CEE is collaborating with city-level NGOs to advocate for improving road safety in Pune and to facilitate the preparation of a strategy championed by the Mayor of Pune with the local authorities and institutional stakeholders. Activities identified include making 100 junctions safer for pedestrians, developing an IT-based Accident Reporting System, etc. The NGOs will support the stakeholders to achieve their targets.

CEE participated in the Multi-stakeholder Dialogue on Legislation on Road Safety organised by WHO (World Health Organisation) at Delhi in December 2018 and attended the panel discussion of Members of Parliament on the MVAB 2017 and its passage.

9.5 Urban Resilience

100 RCs, i.e., 100 Resilient Cities, is a global initiative of the Rockefeller Foundation, wherein support is being provided to 100 cities around the world to develop strategic plans for urban resilience, in the light of certain anticipated shocks and stresses urban areas may face. The Pune Municipal Corporation is participating in this initiative. The 100 RC team and the strategy partner for Pune, Dalberg, identified CEE Urban as a local strategy partner to support the process of preparation of the Resilience Plan for Pune. CEE helped facilitate stakeholders' workshops and meetings, research inputs, and inputs to the plan in order to incorporate locally relevant sectors and issues towards enhancing resilience in the Pune region. Goals and key actions were identified for selected themes under environment and natural resources planning,

such as urban biodiversity, water, mobility, air quality, climate change, groundwater, circular economy, governance and citizen engagement.

9.6 Participation in SUM Net - Sustainable Urban Mobility Network India

CEE is a member of the SUM Net (Sustainable Urban Mobility Network India). During the year under report, CEE Urban undertook a study on IPT (Intermediary Public Transport) in three cities in Maharashtra. CEE representatives participated in the meetings and discussions of SUM Net at Bangalore and Goa, and through online forums.

9.7 Study on Intermediate Public Transportation (IPT) Modes

While the urban mobility sector is highlighted in smart city efforts with a focus on mass transit and encouragement of electric vehicles, the traditional IPT sector has lagged behind. Considering the need for stakeholder participation in the sector transformations underway, CEE Urban undertook a study on Intermediate Public Transport (IPT). Initially a framework for the study was developed, which helped articulate a range of issues with regard to social and environmental sustainability, such as the IPT sector as a means of shared transport, access, livelihood, etc.

The study, carried out in the cities of Pimpri-Chinchwad, Aurangabad and Kolhapur, explored local transportation scenarios in these cities, major modes of IPT, perspectives of key stakeholders, including unions and associations of IPT drivers, staff from the Regional Transport Officer (RTO), municipality and Traffic Police. The major modes (like the auto rickshaw), their modes of operations, main routes in the city on which they are operating, fuels they use, fare structure, regulations and governance like permits, fare-fixation methods, route allocation and the infrastructure (like designated stands), etc. were documented. The study confirmed that IPT is a sustainable mode of public transport, last mile connectivity, contributor to public safety, a source of livelihood, and even serving as first responders in emergency situations. However, IPT is not well integrated into formal transportation planning. The study recommends further work towards integration of IPT with and in relation to transportation planning, and urban street design through stakeholder dialogue.

9.8 Promotion and Outreach Programme for Rainbow BRT (Phase II) in Pimpri Chinchwad

The Rainbow Bus Rapid Transit system is operated by the Pune Mahanagar Parivahan Mahamandal Ltd. The infrastructure for this transit system is being developed in phases by the Pune Municipal Corporation (PMC) and the Pimpri Chinchwad Municipal Corporation (PCMC). CEE has been commissioned by the PCMC to develop and implement a promotion and outreach programme as new BRT corridors are established in the city.

In the period under report, the Nigadi Dapodi corridor was operationalised and launched in August 2018. Signage for the bus stations and the terminal were developed. Promotional material including radio jingles, films, hoardings and banners were prepared for this event and

for the sensitisation of communities. Earlier, outreach to schools and colleges was carried out to help students understand the need for sustainable mobility modes and introduce the features of Rainbow BRT. Studies of media reportage and public perception were taken up to understand people's opinions and needs, and for the promotion and outreach to develop this material. After the launch of the operations on the new corridor, extensive feedback surveys were undertaken and the results presented to the municipal authorities.

9.8 Non-motorised Transport Working Group at Urban Mobility Lab

In November 2017, NITI Aayog and Rocky Mountain Institute (RMI) announced a Grand Challenge to select India's first Lighthouse City for mobility solutions. A Lighthouse City serves as a testing ground for new, transformative urban mobility solutions. Pune has been selected as the first Lighthouse City and the Pune Municipal Corporation (PMC) is the initial host of the Urban Mobility Lab. In October 2018 the PMC and RMI organised a collaborative, facilitated process to accelerate progress on mobility solutions for Pune proposed by nine selected teams and four working groups. Staff from CEE Urban were part of the Working Group on Non-motorised Transport that engaged key stakeholders to identify barriers, and develop ways to progress on the working group theme.

9.9 BlueAir Campaign on Air Pollution

The Times of India-Bennett Coleman & Co Ltd (BCCL) organised a "BlueAir Campaign on Air Pollution" in schools in Delhi and other cities of India, which included awareness events and a competition for students on the topic 'indoor air pollution' inviting entries in the forms of painting, poster, poem, essay, slide show and video. Times of India invited CEE Urban as a knowledge partner to evaluate the entries and select those that may be awarded prizes and certificates. CEE Urban set the criteria for assessment and evaluated about one thousand entries received from the students on the theme of Air Pollution. The students and schools were invited to the awards event at Delhi and given prizes and certificates.

9.10 Orientation Module on Air Quality Adapted for India

Clean Air Asia partnered with CEE to adapt their publication 'Guidance Framework for Better Air Quality in Asian Cities' for use in India. The Guidance Framework was developed for conducting training and orientation of the city managers and administrators on air quality related aspects for the cities in Asian countries. It includes sections on ambient air quality standards and monitoring, emission inventories and modelling, health and other impacts, air quality communication, clean air action planning, and governance for AQ improvements.

The adaptation approach, created in discussion with Clean Air Asia, aimed to align the content to Indian policy and legislation, the National Clean Air Programme (NCAP) published by the Central Pollution Control Board (CPCB) and MoEFCC in 2018, standards and protocols, as well as considering the Indian governance structures, and actual examples of air pollution, mitigation, impacts and other aspects from the Indian context.

A major recommendation of the NCAP is to conduct local studies, build capacities of the cities and prepare Air Quality Action Plans by the cities. The adapted version of the Guidance Framework would be useful towards this. CEE organised a peer review workshop inviting experts in the sector where the draft version of the adapted text prepared by CEE was presented and discussed. The final version has been submitted to Clean Air Asia after incorporating the suggestions from the experts.

9.11 Climate Literacy in Pune

In partnership with the Pune International Centre, CEE organised a workshop on 'Climate Literacy and Action in Pune' in May 2018. The workshop focused on this core idea and questions: If Pune aims to be Carbon Neutral by 2030, what are the key sectors of interest, and the key actions to be taken in these sectors?, and How can the public be engaged in these actions at individual and collective levels? The morning session focused on the first question, with inputs on the identified key sectors: urban planning, electricity sector, transportation, buildings, carbon sinks and offsets, and on the nature of the education and public engagement initiative that may be taken up to strengthen climate action. In the afternoon session, the delegates, in a 'conversation café', brainstormed ideas for public engagement, and working with different segments of society. The ideas generated at the workshop are being used to develop civil society led initiatives for climate change education and action.

9.12 Safer Roads for Safer Childhood (SRSC) – Assam

This project is being implemented under the guidance of the Global Road Safety Partnership (a project of the International Red Cross (IFRC) and funded by the Foundation Botnar, a Swiss based Philanthropic organisation. The partners are Department of Home and Political Affairs, Government of Assam (represented by Jorhat Police) and Indian Institute of Technology, Guwahati.

The overall purpose of the project is to enhance road safety for the citizens of Jorhat city in general and for children in particular, especially around the school zones and in the route from home to school.

The objectives of the project are:

- i. To conduct a situational assessment of child road safety in Jorhat to guide project implementation
- ii. To develop and implement school road safety plans for five schools in Jorhat city to reduce injuries to children commuting to and from school
- iii. To develop child road safety policy recommendations for Jorhat city decision makers to regulate establishment of schools and school transport.

The activities undertaken as part of the project were: Establishing a project advisory committee; conducting a situational assessment of road safety in Jorhat with a focus on child road safety; developing school road safety plans for six schools; engaging key stakeholders for developing and implementing school road safety plans; implementing the education interventions of the school road safety plans; prioritising and implementing engineering interventions; supporting the police to improve their knowledge of child road safety and appropriate enforcement; creating public awareness through engaging the media; developing child road safety policy recommendations for Jorhat City/Assam decision makers to regulate establishment of schools and school transport; reviewing existing policy for establishing a school and for transport of children to schools; modelling the impacts of socio-economic characteristics of the study area on school related mobility; and developing policy recommendations in line with the city master plan.

The following were the outcomes of the project:

- A baseline survey for obtaining child road safety data of Jorhat was conducted to select six project schools. Discussions were held with all the relevant line departments and a presentation made to the District Road Safety Committee. Support from the DRSC has been garnered.
- Knowledge, Attitude and Practice (KAP) tests were conducted for teachers and students. A Handbook for teachers on Child Road Safety was developed. For developing School Road Safety Plans, discussions were conducted with school stakeholders.
- A module for school level stakeholders on child road safety planning was developed. IEC materials were developed for students.

9.13 Pathik

This project seeks to raise awareness about issues of walkability in Guwahati city. The objectives of the project are to develop sensitisation activities with educational institutions; hold discussions with primary road users; hold an exhibition on probable engineering and enforcement interventions; and ensure consistent media outreach and articles.

Project Activities

- i. CEE North East team visited four schools for sensitisation about pedestrian issues. The concept of walkability as well as the major outcomes of the walkability studies was shared with teachers and students.

- ii. CEE partnered with Guwahati College of Architecture and Planning (GCAP) for the project, as part of which a seminar was jointly organised by CEE and GCAP on walkability issues in Guwahati city.
- iii. A meeting with the Director General of Assam Police, Shri Kuladhar Saikia was held to apprise him of the walkability survey conducted by CEE North East. The detailed report of the study conducted in Phase I of Pathik project was shared with him so that similar surveys could be undertaken in Guwahati.
- iv. A survey of 50 primary road users was conducted to understand the problems faced by pedestrians.

10. WATER AND SANITATION

10.1 Ecosystem based Campaigns for Rivers: Clean Ganga Programme at Varanasi

Swachh Ganga - Swachh Kashi Initiative

National Mission for Clean Ganga has taken up the 'Ganga Action Plan Project (Varanasi)' under the National Ganga Council in Varanasi with the support of Japan International Cooperation Agency (JICA) through Varanasi Nagar Nigam (VNN) as the implementing agency. In this initiative where infrastructural improvement is one aspect, an important component is Public Awareness and Public Participation (PAPP). For this initiative, CEE was invited in 2016 to take up education and awareness programmes on ghats and in schools. A project office – CEE Varanasi - was established to implement the project activities. In 2017, CEE was given further responsibility for two residential zones which are close to the ghats.

CEE North is implementing the Swachh Ganga - Swachh Kashi initiative with support from Varanasi Municipal Corporation (VNN), where CEE is working with 100 schools, 32 wards and 86 ghats to raise awareness and sensitise people towards cleanliness and sanitation. Under the ghat and school initiative, CEE conducted awareness generation and sensitisation activities during the year 2018-19. The following activities were carried out as part of the project.

10.1.1 Clean Ganga Club Activities

CEE team has continued to work with the 100 schools and colleges enrolled in the programme. Various activities were conducted during the year for students and teachers on the formation and functioning of Clean Ganga Clubs.

Teachers Training: A teachers training programme was conducted in August 2018 for all the 100 schools to obtain feedback and guide teachers on the formation and functioning of Clean Ganga Clubs. The one day workshop was facilitated by CEE which enabled the sharing of programme details and discussing further plans of action with the schools and teachers. The workshop saw the participation of 86 teachers from 75 schools from Varanasi. The schools were also guided in conducting school and ghat level activities.

Green Action Projects by Clubs: CEE team guided the schools to develop their green action projects on the theme of waste management, greening and water conservation. Several schools were guided in plantation activities in their campus, setting up of segregation systems, starting composting and making products out of waste. Over 27 such projects were conducted in selected schools in the first round.

Ganga Chetna Abhiyan: To bring Ganga Club schools on to a single platform, the Ganga Chetna Abhiyan was conducted, where students were encouraged to showcase their ideas through a painting competition. This event was conducted In December 2018 and was attended by over

1000 students from 75 schools. The event began with a briefing followed by the painting competition, after which a debate competition was held where students were invited to share their thoughts on a specified topic. The students' presentation of their thoughts was followed by an open discussion involving the rest of the students. The chief guest of the event addressed the students and appreciated the discussions held.

Ganga Mela: As the annual event of the Clean Ganga Club schools, a Ganga Mela was organised by CEE in the month of December 2018. The main objective of the event was to encourage Clean Ganga Clubs to share their learning and experiences by showcasing their work in an exhibition. More than 500 students participated in the event from 50 Clean Ganga Club schools. More than 1000 community members and other key stakeholders also participated in the event. Overall, more than 2500 participants visited the mela and interacted with the club teams at the stalls. Different corners were designated to highlight messages related to cleanliness and keeping our rivers clean. The core themes of the programme were river biodiversity and its conservation, solid waste management and water conservation. Students and groups from various schools presented songs, dances and nukkad nataks during the event. Guests and visitors appreciated the efforts of the Ganga Club schools.

Environment Day Events: Several environment days were observed with Clean Ganga Club schools during the year, which included World Environment day, Sanitation Day and Wetland Day. Overall, thousands of students and teachers participated in these events.

10.1.2 Clean Ganga Ghat Activities

CEE has initiated awareness activities on the Ganga ghats since 2016. These activities included regular interactions with the stakeholders on the ghats such as vendors, tourists, priests, pilgrims, boatmen, washer men, youth and others. Vendors meetings were organised at various ghats to initiate a dialogue with them on concerns related to keeping the ghats clean. Various stakeholder groups were identified and meetings held with them to obtain their support and cooperation. During the first year, nukkad natak shows and distribution of dustbins were organised at the ghats. During the year 2018-19, CEE team continued with consultations at the ghats and meetings with vendors.

Visit to the Ghats and Consultations: CEE team regularly visited the ghats and met different stakeholders to discuss issues and concerns. These stakeholders whose livelihoods are associated with the ghats included boatmen, washer men, vegetable vendors, shopkeepers, etc. Feedback on the use of dustbins in boats was obtained, while discussions were held on saying no to plastic. The team also monitored the usage of facilities available on the ghats such as toilets, bathrooms and changing rooms.

Vendors and Stakeholders Meetings: With the survey and ghat visits, CEE team identified vendors and initiated consultations with them. CEE team has conducted 12 such vendor meetings at different ghats. During the year, three stakeholder meetings were also conducted including various people related to the ghats. Meetings were held to discuss and share activities

being undertaken on the ghats. Feedback was obtained from boatmen, vendors, barbers, priests and others on the use of dustbins.

Exhibition Stalls: CEE set up a stall at three exhibitions held at different ghats on various occasions during Ganga related cultural events. More than 3000 visitors interacted with the CEE team and volunteers about the Clean Ganga ghat initiative.

Awareness Rallies: For creating awareness about cleanliness and sanitation, CEE team had organised rallies to motivate community members and ensure their participation in maintaining sanitation and hygiene on the ghats and in the city. These rallies created awareness in people about sanitation, cleanliness and waste management, and encouraged them to take responsibility for these issues in their locality. Vendors were motivated to take part in the rally by highlighting the benefits of cleanliness to them. During the year, 24 such awareness rallies were organised with more than 3950 people participating.

Nukkad Natak: Nukkad natak is seen as an effective tool to raise awareness among community members, regular visitors and tourists. This year, the theme of nukkad natak was Beat Plastic Pollution. A local agency was contracted to conduct nukkad natak on the impact of plastic pollution on Ganga and how each one of us can contribute to protect the river. Over 25 such shows were conducted along the ghats and more than 6000 people watched these shows.

Ganga Bhajan Sandhya: River Ganga is deeply connected to our day to day life and culture. Varanasi is known for its cultural heritage and its love for music and art. Thus bhajan sandhyas were planned during the year to bring people together in one place to raise and discuss concerns about protecting Ganga. Two such events were held on the ghats in which over 2000 people participated.

Dustbin Installation on Boats: To address the problem of waste being thrown into the river by visitors who travel by boats, dustbin installation on boats was initiated. After awareness raising events conducted with boatmen, in which they were sensitised about the purpose of the installation and how they could contribute to minimising pollution in Ganga, over 500 dustbins were installed on boats.

No Plastic Vending Zone: CEE team, in consultation with the Nagar Nigam, selected three ghats with shops and vendors to run a 'no plastic vending zone' campaign. Clean Ganga Club students conducted awareness rallies in these ghats to sensitise vendors and consumers about stopping the use of plastics and disposable cutlery. CEE team developed communication material for display in permanent shops and temporary vending outlets. Cloth bags were also distributed to promote the use of alternatives.

10.1.3 Residential Zone Awareness Activities

CEE is covering two residential zones, namely Adampur and Kotwali zones, comprising 32 wards, for mobilising ward sanitation committees and conducting awareness and education

programmes and activities. During the year, CEE's Varanasi office project team conducted various activities and events among community members.

Special Events: On the occasion of environment and health related days, CEE team planned and conducted special events. In both the zones, events were organised during World Environment Day and National Sanitation Day, with the purpose of discussing the role and participation of the public in maintaining cleanliness in Ganga, water management, behavioural changes related to avoiding the waste of water and various water and environment related issues.

Nukkad Natak: In Adampur and Kotwali zones, CEE team organised street plays in all 32 wards. These Nukkad Nataks were conducted to raise awareness on making the wards open defecation free and promoting solid waste management, and also regarding waste management, cleanliness, sanitation and related issues. The shows were executed by Prerna Kala Manch, a local agency. IEC material was also distributed after the play and the CEE team made an appeal to the public to keep their surroundings clean. These plays helped in sensitising people towards maintaining cleanliness and adopting sanitation related practices.

Meetings at Wards: To ensure people's participation in maintaining sanitation and cleanliness in the wards, over 115 Ward Sanitation Monitoring Committee (WSMC) and 12 Zone Sanitation Monitoring Committee (ZSMC) meetings were organised in Kotwali zone, and over 250 ward level meetings and 12 zone level meetings were conducted in Adampur zone. Regular interaction at various levels in the form of monthly meetings were organised in all 32 wards of both the zones. The meetings discussed the activities of the committees and sanitation related issues. People's participation in keeping wards clean was also sought in these meetings and people could report problems they faced.

Awareness Meetings: Various awareness meetings were organised every quarter in both the zones to sensitise people and stakeholders about the initiative and on the cleanliness of the area. The main purpose of the meeting was to discuss the role of the public/community in maintaining the cleanliness of the Ganga, waste management, solid waste management, behavioural changes to prevent the throwing of garbage on the streets, use of dustbin, use of community toilets and various problems related to the ward. These meetings provided people with an opportunity to directly interact with officials, share their problems and also suggest measures to resolve them. Dustbins were distributed to vendors who had not been using them in their shops.

Members from various stakeholders/communities such as weavers/bunkar, washer man/dhobi, sanitary staff, dyer, gaddhidar, kasera society, various committees (i.e. Taziya, Durgapooja Samiti, Sardar, Vyapar Mandal), government officers, Community Toilet Complex staff and other NGO members were invited to participate in these meetings. Four such meetings were conducted in each ward during the year.

Announcement in Colonies: Announcements were planned in colonies to remind people on a continuous basis about the good practices related to solid waste management, open defecation

free, protection of the environment and keeping the Ganga free from pollution. Tricycles/rickshaws with recorded messages were used for this which moved around in the colonies and slums. The Rickshaw Announcement was organised by CEE with audio spots developed in the local language. The field team visited various wards of the zones with the rickshaws to create awareness in people regarding cleanliness related issues and appealed to the public not to throw garbage on the road or street. Ward level announcements were made in all the 32 wards.

Rallies/Padyatras: To motivate community people and ensure their active participation in keeping the ward clean, stopping open defecation, ensuring door to door garbage collection, and solving other problems of the ward, it was decided to organise two to three rallies in each ward every month. During the rally or Padyatra, community members themselves motivated others in the ward regarding sanitation and other burning issues by going door to door and convincing them. Ward Parshad members, Aganwari workers, sanitary inspectors, police Inspectors and ward members joined the rally and flagged off padyatras. In both zones, 48 awareness rallies were organised in different wards where more than 3000 people took part.

Training for Women Members of WSMCs/ZSMCs: A three-day training workshop for women's groups was organised by CEE with support from Varanasi Nagar Nigam in Kotwali zone, which aimed to develop the skills of the women's group members in making different types of cloth products. The main focus of the programme was to sensitise and train women towards the reuse of old cloth and making new things out of old cloth and waste paper such as different kinds of bags, file covers, mobile pouches, paper bags, etc. Discussions were held on solid waste management and reducing the amount of waste from the garbage discarded from homes. A local expert was invited to guide the participants in making different products.

IEC Material: Focusing on key communication messages, CEE visualised and developed the material required, which was then designed and shared with VNN. These were printed as required. A poster on the project was developed along with flyers and small booklets.

Stakeholder Meeting: CEE team conducted a stakeholder meeting with zone committee members and ward committee members of all the zones to ensure the active participation of the stakeholders for effective implementation of the project activities. The stakeholder meeting was organised with support from VNN/PMU and PMC. The topics of discussion were cleanliness, open defecation, use of dustbins and various issues related to cleanliness and solid waste management, as well as their role in keeping the wards clean. Officials of the project interacted directly with the public and heard their problems and suggested ways to resolve them.

Swachhata Ki Pathshala: In slum areas of the residential zone, CEE team initiated regular sessions with children called Swachhata ki Pathshala. Sessions were planned each month to promote cleanliness, sanitation and personal hygiene. CEE has developed a flip chart to engage students in learning the key concepts related to the theme.

10.2 Project Prajwala – *Swachh Balika, Swachh Vidyalaya*: Validating Scalable Models for WASH in Schools

The national evaluation undertaken by ‘Education for all in India’ pointed towards the problem being faced by Kasturba Gandhi Balika Vidyalayas (KGBVs) pertaining to Water, Sanitation and Hygiene (WASH). Since girls are a vulnerable category and need to develop an understanding of hygiene and sanitation practices, Rajasthan Elementary Education Council and National Stock Exchange Foundation proposed a comprehensive WASH intervention in KGBVs: *Project Prajwala – Swachh Balika Swachh Vidyalaya*. CEE is the knowledge and implementation partner for the project with UNICEF supporting the initiative as the technical partner.

The key objectives of the project are:

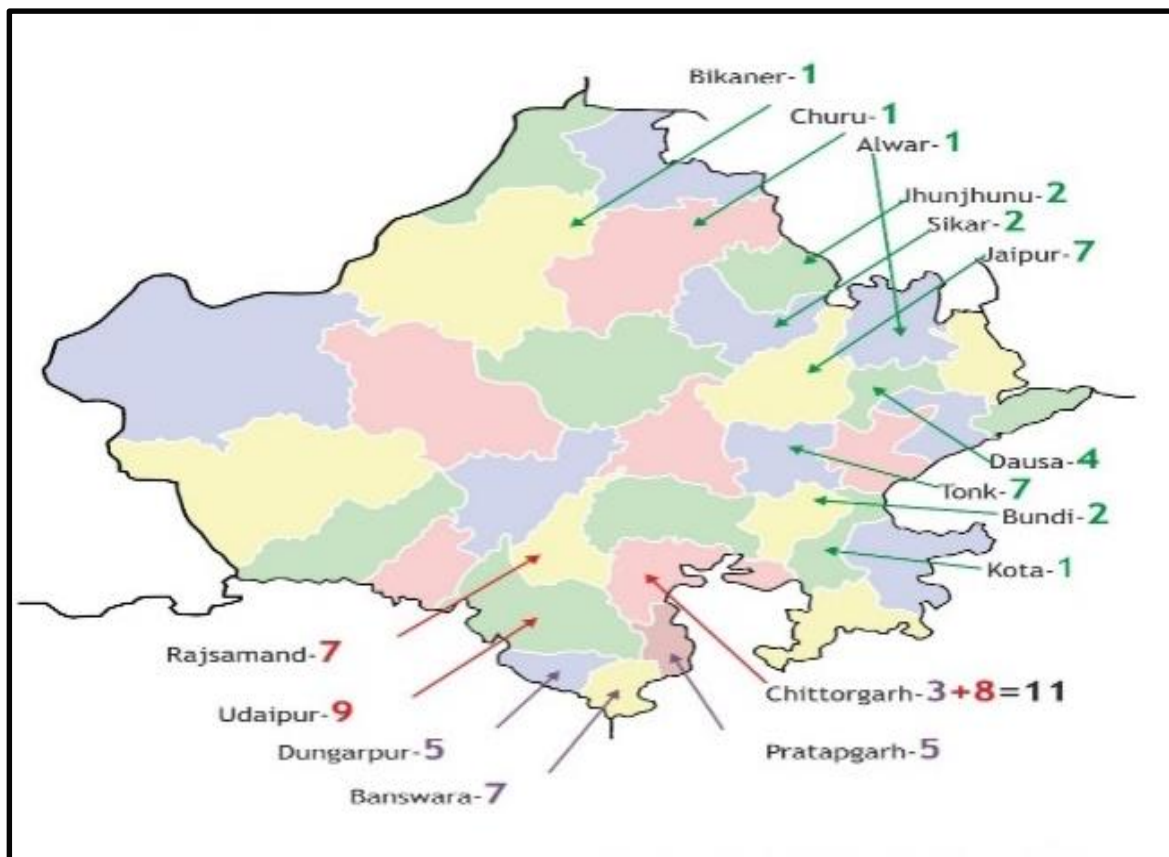
- Work towards awareness generation and capacity building on WASH (Water, Sanitation and Hygiene) and behavioural change amongst the students, teachers in KGBVs and communities around the KGBVs.
- Ensure WASH compliance at KGBVs with renovation and retrofitting of existing WASH facilities and setting up a performance benchmark.
- Develop an operation and maintenance protocol with continued monitoring for better sustainability.

10.2.1 Brief Methodology and Approach

The project aims and intends to support the government’s efforts under the KGBVs scheme by strengthening the existing government mechanism and reinforcing the importance of improved WASH in these institutions. The project contains both technical and human development components that are necessary for sustainable WASH practices in KGBVs. The technical components include augmentation of hand washing facilities, toilets/urinals and soap facilities in the KGBVs compound for use by children and teachers, while the human development components are the activities that promote conditions within the KGBVs and the practices of children that help to prevent water, hygiene and sanitation-related diseases.

For the field level implementation, CEE has prepared a school specific detailed project report and engaged local implementation partners - Key Resource Agencies (KRC/Implementation Partner) - through a selection process, along with self-implementation in some schools. The local KRC/Implementation Partner undertakes the software interventions required to meet the project deliverables. CEE provides technical and supervisory support to the KRC/Implementation Partner to ensure the uniformity of the process as well as the quality of the output. For hardware components, CEE has prepared a school specific detailed project report and will undertake the augmentation and retrofitting of WASH facilities accordingly. The benchmarking of the infrastructure is on the basis of the accepted WASH standards available, such as that of the UNICEF three star approach and Swachh Vidyalaya guidelines.

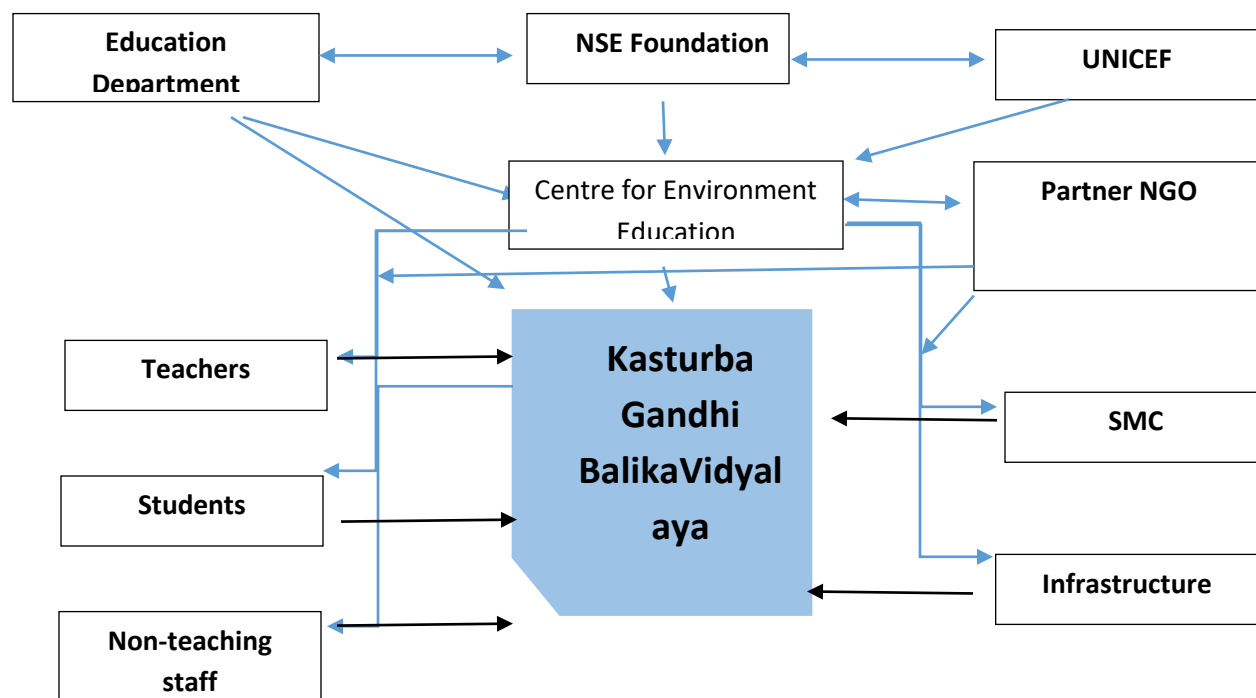
Coverage area: 72 KGBVs across 16 districts



Total Beneficiary Coverage

Sr. No.	Type	Description	No. targeted	No. achieved
1	Direct	School children (Age group 11–14)	7196	7192
2	Direct	Teachers	144	173
3	Direct	Non-teaching staff	360	360
4	Indirect	SMC	360	145
5	Indirect	Education Department	55	52
6	Indirect	Sanitation workers	72	72

10.2.2 Programme Model (diagrammatic/flow chart)



10.2.3 Innovative Tools or Approaches Adopted

Participatory WASH appraisal: innovative tool for benchmarking study: A benchmarking study was one of the key activities carried out under the project. The activity involving a data collection drive was then converted into an opportunity for participatory WASH appraisal in schools. The exercise began with a transect walk with teachers and students to understand the locations of various WASH infrastructure along with a discussion on its utility and allied issues. The technical team then assessed the available infrastructure from the lens of adequacy, accessibility, functionality and usage. A focus group discussion was carried out by the education and technical team with all key stakeholders like non-teaching staff, teachers, students, school management and available district level functionaries, to understand their view about the schools, issues they face while using these facilities, their processes for operation and maintenance (O&M) and using the facilities. The discussion also facilitated stakeholders to learn about the whole school concept. The physical observations which were noted in the data collection format and the learnings/outcomes of the discussions, were then compiled to draw up the WASH scenario. To gauge the WASH literacy among students, a KAP test was organised followed by a discussion focusing on the variances in their responses and their practices. A school specific detailed project report (DPR) was then prepared for 72 schools depicting the current scenario, gaps in practices and infrastructure, proposed designs and visuals with

specifications of child friendly WASH infrastructure, with due concern for children with special needs (CWSN), activities for inculcating adequate WASH behaviour among students and other users, proper upkeep and O&M, and school level action plan.

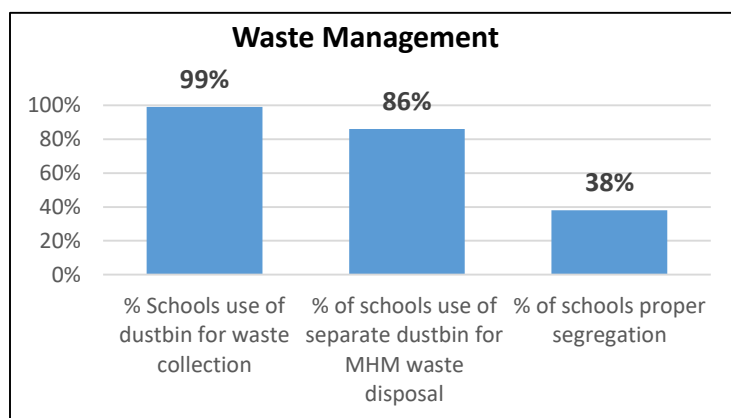
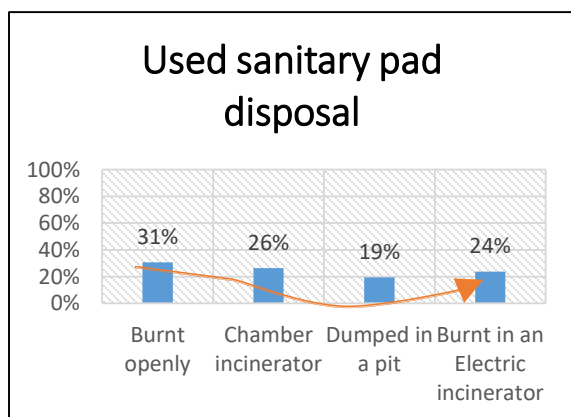
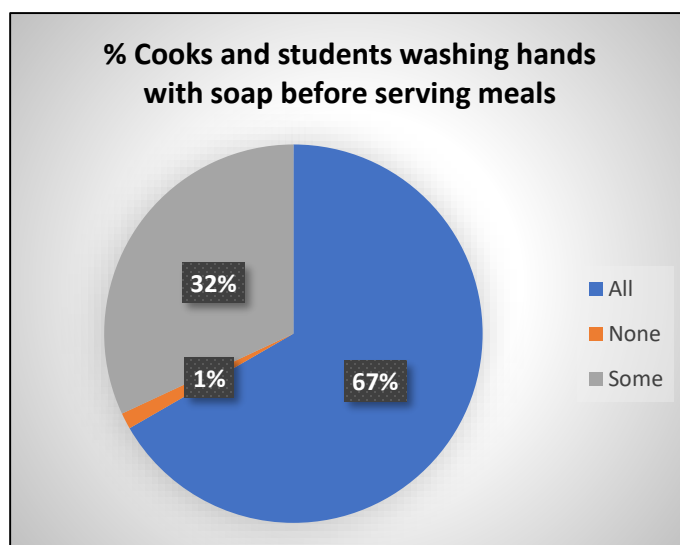
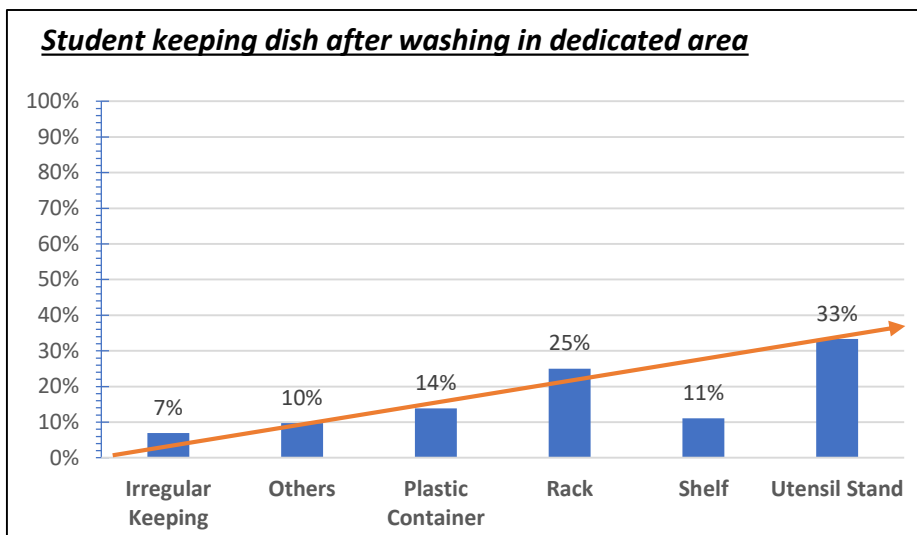
Night stay: An interactive way to facilitate WASH behaviours in a school day: The school time and space provide a wonderful opportunity for not only syllabus related learning, but also the development of life-skills through extracurricular and co-curricular activities. In line with this view, thematic sessions were planned with students to promote the skills of **exploration, discovery, thinking and action** among them for the sustainability of WASH initiatives. The field facilitators involved in behaviour change education facilitated the activities through an overnight stay at the schools, so as to make and document observations on the WASH practices by students, non-teaching staff and teachers, as KGBVs are residential schools with peak hours related to WASH activities being early morning. The observations made by the field facilitator helped to identify the issues which were then discussed. A set of activities were conducted to enhance the understanding of the concept, the need for change, and to build the capacity of the stakeholders to devise their own solutions in a practical, creative and participatory way. Thus the stay helped in creating an interactive learning environment for the target groups, as it enabled the target groups to connect the learning with their behaviour. This also helped to bridge the gap between the field facilitators and others, thus helping them to monitor WASH practices on one hand, while fostering behaviour change and strengthening institutional mechanism on the other.

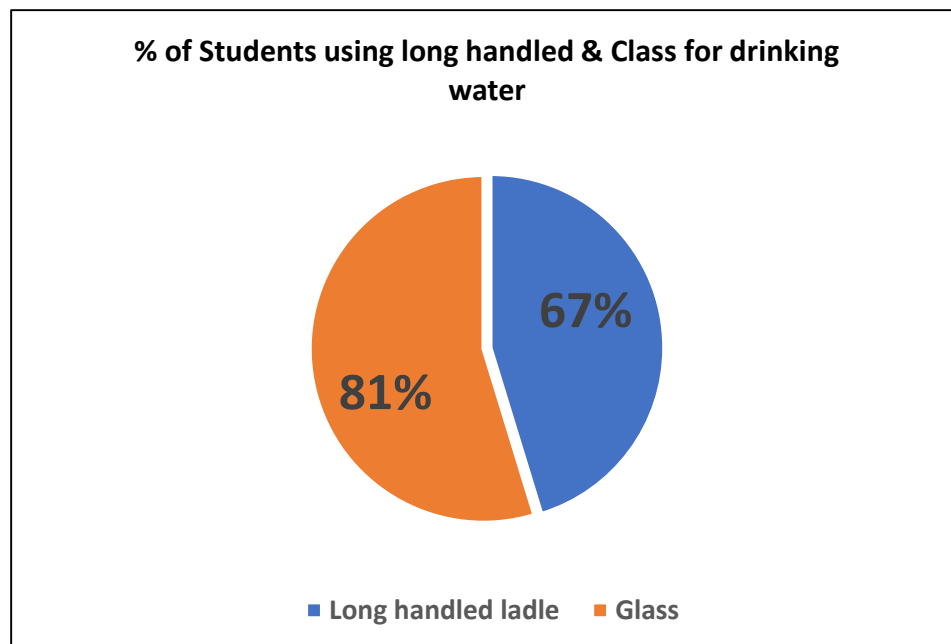
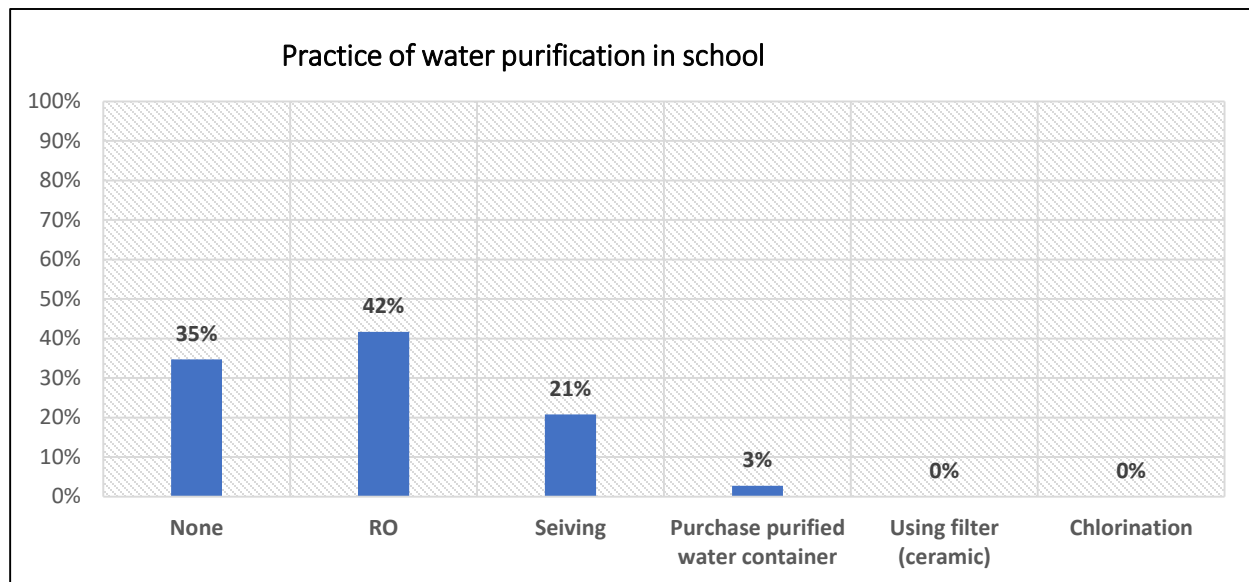
10.2.4 Quantitative and Qualitative Outcomes

- School specific detailed project report (DPR) prepared for 72 schools depicting current scenario, gaps in practices and infrastructure, proposed designs and visuals with specification of child friendly WASH infrastructure with due concern for children with special needs (CWSN), activities for inculcating adequate WASH behaviour among students and other users, proper upkeep and O&M, and school level action plan.
- A WASH kit developed and distributed in 72 schools. The WASH kit includes educational material for capacity building of each target group like teachers, non-teaching staff, students, adolescent girls and SMC members. It includes cognitive reminders, posters, observation booklets, progress registers, activity kits like water testing kit, seed kit, and accessories for improving cooking practices like gloves, apron and scarf.
- Capacity building of the Principal and Warden on WASH for participatory management, visualising WASH in schools, preparing school development plans and strengthening institutional mechanisms. About 173 participants benefitted via the interactive session and activities on WASH conducted during these training programmes.

- Regular thematic sessions on WASH throughout the year with around 7000 students to promote their understanding and inculcate adequate WASH behaviour via monthly visit and overnight stay for observation of practices and enhancing reflection among stakeholders.
- Focused interventions on the training of adolescent girls on MHM (Menstrual Hygiene Management) through formation of adolescent girl groups in 72 schools and orientation of 1000 girls on issues around MHM, breaking taboos and ensuring better menstrual hygiene management
- WASH Committees constituted in 72 schools as a student-led mechanism for the O&M of WASH facilities and practices. Orientation of around 1100 students/members of these committees so as to build their capacity/develop skills in participatory management, observation, etc.
- Training of 360 non-teaching staff on WASH and their support for facilitating WASH in schools
- Orientation of School Management Committees (SMC) in 29 schools on their role in developing school WASH plan and on the O&M of WASH facilities
- Showcasing of project activities at Kishori Bal Mela, an annual event of KGBVs, in 22 KGBVs on WASH in schools for promoting sharing and replications. The event was attended by district and block level functionaries of the Education Department, MPs/MLAs, District Collectors, teachers and students from other schools of the Block. About 30 government officers (Panchayat Elementary Education Officer and resource person) also participated in the teacher training programme on WASH.
- Regular interaction with key partners like the education department and UNICEF for aligning project activities with the state level plan and for building synergies with their initiatives like the roll out of MHM modules developed by the State Department of Women and Child Development and celebration of Global Handwashing Day in 54 schools along with UNICEF
- Improved drinking water management with use of long handled ladle for pouring drinking water in 67% schools, use of glass for drinking water in 81% schools and purification of drinking water practised in 66 % schools
- Improved kitchen practices and dining etiquettes with washing of vegetables before cooking by cooks in 96% schools, hand-washing with soap before serving food by cooks and students in 67% schools and replacing utensils in dedicated area after washing by students in 93% schools.
- Menstrual hygiene management (MHM): use of separate dustbin for MHM waste disposal in the sanitation block of 86% schools
- Waste management in the campus: use of dustbin for waste collection in 99% schools with proper segregation in 38% schools along with improved personal hygiene practices

with proper arrangement and cleaning of bedding in 96% schools and proper arrangement of shelf/trunk in 86% schools.





11. WASTE MANAGEMENT

11.1 Solid Waste Management Workshop in Schools – CEE North

Centre for Cultural Resources and Training (CCRT) requested CEE to conduct solid waste management workshops in schools of Varanasi as part of Swachh Bharat Abhiyan.

CCRT is an autonomous organisation under the Ministry of Culture, Government of India. As part of one of their initiatives, CCRT has established Interpretation Centres in selected schools of Varanasi. CEE was invited to conduct half day workshops for 10 of these schools. CEE North developed a three-hour module for conducting a workshop on issues related to solid waste management, especially keeping plastic pollution in mind. The interactive workshop was planned with an aim to help children understand issues related to waste and the 3Rs of waste management, and that waste is a resource. CEE team conducted workshops for 10 schools over five days in April, covering two schools every day. Over 1000 students attended these workshops, with an average batch of 200-250 students each. The Principals of all the schools have given very positive feedback and have also decided to take campus-level actions such as making the campus plastic free, starting composting, waste segregation, etc.

11.2 Workshops on Waste Management - CEE Delhi Office

The Delhi Office conducted workshops on practical aspects of waste management, paper recycling and garbage composting, at Hindu College and the Department of Education, Delhi University.

11.3 Study Report on Solid Waste Management and Women's Livelihoods in Pune

Considering the opportunity for livelihoods enhancement of vulnerable and economically disadvantaged women engaged in the waste recycling sector, as well as promoting Circular Economy, CEE partnered with the 3D Program for Girls and Women to undertake a study of the sector in Pune. As part of the study, different prevalent models of waste management in urban areas in India were reviewed, and interviews conducted with key stakeholders at the state- and city-levels. The study also drew upon the considerable knowledge of the sector with the waste pickers union in Pune, the Kagad Kach Patra Kashtakari Panchayat and SWaCH Cooperative. A report titled '*Solid Waste Management and Women's Livelihoods in Pune: A Desired Future*' was published in September 2018. The report describes the findings of the study and provides a blueprint for a desired future for SWM in Pune City through convergent action that also protects and advances the economic and social well-being of waste pickers in the city, 70% of whom are women.

Following the preparation of the report, CEE continues to partner with the 3D Program for Girls and Women, to facilitate the uptake of the recommendations in the report. Presentations of the key findings and discussions on the recommendations have been undertaken with Pune Municipal Corporation and the Pune Smart City Development Corporation Ltd.

11.4 Waste Management and Marine Plastics

CEE Central was invited to prepare sector overviews on different aspects of wildlife and ecosystems conservation, and on plastics and marine pollution for a major magazine and television channel. The sector overview of 'plastics and marine pollution' in India presented the legislative framework, current status, major initiatives and challenges, as well as recommendations for future action.

12. BIODIVERSITY CONSERVATION

12.1 Information Management, Education and Communication for Maharashtra Gene Bank Project

CEE Central, Pune, is implementing this five-year multi-partner project supported by Rajiv Gandhi Science and Technology Commission, Government of Maharashtra. The major activities taken up in the reporting period included development of a website, teachers' workshops, study and action projects by students, presentation of recommendations and information from the project partners and CEE to the process for preparation of the Maharashtra Biodiversity Strategy and Action Plan, and support to a Peoples' Biodiversity Register development process in one location in Aurangabad District.

Launch of project website: The Marathi version of the website www.gotul.org.in was launched on the occasion of the International Day for Biodiversity (IDB) on May 22, 2018. This site is conceived as an interactive platform about biodiversity in Maharashtra, and provides tools to support learning about bio-cultural diversity and sustainability, and disseminates information about the Maharashtra Gene Bank (MGB) project.

The website was inaugurated by Ms. Shalu Kolhe, a young community leader from Dhivar, the traditional fishing community from Gondia District, at a public seminar where representatives of partner organisations shared their experiences. They highlighted the need for and the way forward in developing a new science and economics of participatory conservation, and mutually benefitting interactions between education and biodiversity conservation.

An exhibition was organised on the occasion, displaying over 300 varieties of crops being conserved as well as other community-based conservation initiatives for the conservation of grassland, forests and fresh water biodiversity under the MGB project. Over 300 people attended the seminar and visited the exhibition. Refreshments on the occasion included traditional and rare healthy foods, viz. *Lakholi vade* (*Lathyrus sativus*) from Bhandara District, *Nachani* and *Jwari Ambil* (traditional fermented drink from finger millet and sorghum millet) and *Kavli Jwari Tak Lahya* (sorghum millet popcorn of *Kavli* variety, prepared with buttermilk and spices).

Anandshala Shibir: A methodology of Anandshala Shibirs, that is, residential workshops for school teachers and students, for orientation to teaching and learning about biodiversity has been developed under this project. Such Shibirs have been conducted in earlier years too. In 2018-19, a third round of Anandshala Shibir was organised with a focus on sharing of experiences related to biodiversity projects undertaken by students subsequent to the previous Anandshala Shibir of 2017-18. Considering the need for the three-day workshop and limited budgetary allocation, it was decided to restrict the number of

participants; so 27 schools which reported a minimum of three project topics by students were selected and invited in four batches to the workshops which were held at three different places – Pune, Toranmal (Nandurbar District) and Koka (Bhandara District). Special efforts were taken to get the students who had been part of the Shivar Feri in their neighbourhood to participate so as to conduct a comparative study against the baseline information documented in year one, i.e. 2016-17.

The sessions of these Anandshala Shibirs are given below; besides many refresher activities were also conducted.

1. Ice breaker session with collective story construction
2. Session on comparative study against the baseline study conducted in year one towards capturing any difference that could possibly be attributed to students participating in biodiversity education activities under this project
3. Session on documenting school project information on topics, resources used, costs and learning outcomes
4. Presentation cum learning discussion session by school students and teachers
5. Session on local bio-cultural histories documentation by students
6. Discussion session on teachers' past experiences of training programmes other than under MGB
7. Group work on understanding textbook linkages with biodiversity education projects
8. Session on language and cultural diversity through a group exercise on different names of farm fields based on soil types, location and other associations with plants, animals and human stories and local deities
9. Session on peer feedback on the first set of photo story images by students, PSMs and teachers
10. Feedback session

In addition to these, a special Anandshala Shibir was organised in August 2018 on the request of one of the partner NGOs, Lokpanchayat, for six schools which could not participate in the workshops organised earlier. The session plan of Anandshala Shibir 2017 was followed for this shibir. Four teachers (M) and 13 students (9M, 4F) participated in this shibir.

The Principal Investigator of this project and Programme Director, Mr. Satish Awate made a poster presentation during the annual monitoring committee meeting held on October 15, 2018 at IISER, Pune.

Special Photography and Understanding Media Workshop: In order to meet an emergent need for using non-textual visual media to document and communicate bio-cultural diversity, this special workshop was organised for select students, teachers and Paryavaran Shikshan Mitras (PSM). Thirty nine persons including students, PSMs and other interested representatives of 12 partner organisations and three teachers participated in this workshop in September 2018 at Patanadevi Wildlife Sanctuary,

Jalgaon District. The selected participants represented 18 different communities, including indigenous, scheduled tribe communities, viz. Phase-Pardhi, Korku, Pawra, Kokana, Bhill, Gond, Mahadev Koli, Dhivar, Andh, Navbaudh, Kalal, Kunabi, Sonar, Teli, Mali Muslim Kasar, Muslim Khatik and Maratha. Participants were introduced to camera settings of aperture, shutter speed, frame, white balance, ISO, etc., the techniques of framing, panning and developing photo stories. An exhibition of photo stories is being developed that is expected to present the perspectives of different biodiversity-dependent communities.

Field visits and Documentation: Field visits to 28 schools were organised during this year towards understanding the nature and status of school projects and photo documentation of the activities being implemented. A visit to seed saver women farmers in Akole taluka in Ahmednagar District was undertaken to document seeds diversity and challenges for seed conservation and education. A quality assessment exercise was conducted with these local variety seeds which highlighted the urgent need for quality control of local seeds by working with seed saver individuals and groups to build capacity in participatory selection and quality control.

Special Research/Study Topics underway: Participatory data collection and analysis work undertaken during this year included:

- a. Comparative study of baseline and changes in learning levels after the conduct of the shivarferi and school projects.
- b. Status of school projects, topics, methods, resource materials, costs and learnings in Maharashtra, with interviews of over 1000 students from across the state.
- c. Study of the diversity of local names to agricultural lands, with collection of 1112 different names from 34 talukas in 23 districts of the state.
- d. Study of food diversity and intergenerational change, as part of which the Paryavaran Shikshan Mitra team interviewed 761 individuals and collected information on daily diets and local cuisine on special occasions to ascertain diversity.
- e. Seed Germination Test by students, as part of which student groups from 24 schools learned how to conduct the seed germination test from trained Paryavaran Shikshan Mitras and then conducted these tests on seeds of 20 different crops such as rice, wheat, millets, pulses, beans, onion, oil seeds and herbs and spices.

Inputs to Maharashtra State Biodiversity Strategy and Action Plan (MSBSAP): CEE team participated in the consultative workshops organised by the State Biodiversity Board. In coordination with the MGB coordination group at IISER, Pune, CEE developed an input document with a description of the status and learnings emerging from the MGB project under the themes of agro-biodiversity, fresh water, grasslands and forest biodiversity and Communication Education and Public Awareness (CEPA), and submitted it to the agency developing MSBSAP.

12.2 People's Biodiversity Register (PBR) Development at Parala, Tal. Vaijapur, Aurangabad District

CEE team is engaged with a partner organisation Lokparyaya in PBR development work. This PBR is a comparative document – it compares the documentation process carried out by Lokparyaya team in 2008 with the status in 2018. CEE team has explored methods to involve schools in this process and has facilitated the PBR process especially in the areas of (i) Agro biodiversity and differences between the practices of Scheduled Tribal (ST) community farming and those of non-ST community farming; (ii) Aspirations of the new generation; (iii) Food diversity, status, problems and future; (iv) Indigenous (ST) communities and culture and history; and (v) Fish and crab diversity of the area. This PBR is scheduled to be published in late 2019.

12.3 Bio-cultural Diversity Mapping Workshop in Chandoli National Park, Maharashtra

Maharashtra Forest Department invited CEE Central to conduct a workshop in January 2019 for their field staff and community members on biodiversity resources. The participants were introduced to participatory mapping of biodiversity by involving youth and students. School projects linked to the local environment and culture, as well as developmental and conservation challenges were also discussed. A total of 66 persons participated in this workshop.

13. DISASTER PREPAREDNESS AND REHABILITATION

13.1 Disaster Risk Reduction in Flood Affected Areas of Uttar Pradesh

Bahraich District in Uttar Pradesh is highly prone to floods caused by the Ghaghara and Saryu rivers leading to heavy loss of lives and property every year. A project supported by Give2Asia was initiated by CEE, titled “Awareness and Training to help people cope with floods and improve their quality of life in Jarwal Block in Bahraich District of Uttar Pradesh”. Permissions were obtained from the Directors of Elementary Education and Secondary Education for conducting DRR Preparedness programmes in the schools of Bahraich, while permission from the Director of SCERT was obtained to conduct teacher training through the district DIETs.

13.1.1 Phase I Activities

Teacher Training Workshop on DRR Preparedness: One-day teacher training workshops (TTW) on Disaster Risk Reduction (DRR) Preparedness for the teachers of Jarwal Block of Bahraich District, Uttar Pradesh, were conducted in four rounds in the month of April 2018 at the Block Resource Centre, Jarwal Road. Over 234 teachers from different schools, one from each school, actively participated in the workshop. The TTW focused on educating teachers on various aspects of disasters and training them on bringing in DRR Preparedness in schools and the villages where their students come from.

Participants were updated on various natural hazards; do’s and don’ts before, during and post disasters; national and UP state disaster management acts; and the Sendai Framework for DRR. Flood, which is the most common disaster in the area, was discussed at length. Teachers were trained on how to be prepared for floods so as to minimise loss of property and lives during such disasters. The teachers also learnt about their responsibilities during disasters and the preparedness required to protect themselves and the school children. They were also trained on making school disaster management plans (SDMPs) and village contingency plans (VCPs).

Review Workshop on Disaster Management Plans of the Schools and Villages: A review workshop was organised by CEE Himalaya with SCERT in May 2018 at Nyay Panchayat Sansadhan Kendra, Purva Madhyamik Vidyalaya, Jarwal, Bahraich, to review and revise the School Disaster Management Plans (SDMPs) and Village Contingency Plans (VCPs) prepared by the teachers and students, with the participation of the School Management Committee, members of the Gram Panchayat and the village community.

Community level Awareness and Training Programmes: Trainings were conducted on improving existing livelihood practices; demonstration of appropriate technologies suitable for

the area; and introducing alternative livelihood options. Women from flood affected villages were invited to attend the two-day training on handicraft related skills along with DRR education. Programmes were also held for community members to introduce possible interventions for livelihood improvement and income generating activities.

A training programme for the Pradhan and the villagers was conducted in October 2018 in Khesua village, Jarwal Block of Bahraich District. More than 35 people actively participated in this including the Gram Pradhan, women, men and children. During the training, the issue of flood was also discussed. Education on DRR preparedness, improving WASH and skill development were addressed and discussed in detail by CEE. Experts from CEE Himalaya discussed the connection between the disturbances of nature and disasters. Mock drills were performed to train the community in taking timely action in the event of a disaster.

Based on the response to Phase I of the project, CEE team submitted a scale up plan of the programme for two more blocks of the district. Phase II was sanctioned by Give2Asia in November for one more year for taking up activities with schools and the community.

13.1.2 Phase II - DRR Awareness and Capacity Building Project

Under Phase II of the project, with financial support from Give2Asia and assistance from RCE Lucknow partner institutions, CEE North has initiated project activities in Kaisarganj and Hujoorpur blocks of Bahraich District to fulfill the various objectives proposed under the project. Strategies for project implementation and communication were discussed in order to increase the reach to a larger number of community members and schools in both the project blocks.

IEC Material: To train and guide teachers and volunteers in understanding DRR and as a planning exercise, a training module cum resource booklet was developed and printed in Hindi. For information and communication on disaster related preparedness, a pictorial poster was designed and developed for dissemination. For facilitating the volunteers' training, a pictorial flipchart was also designed and developed with messages on preparedness. Apart from this, guidelines were developed for awareness building on different disasters like fire, storm, hot and cold waves and preparedness for health and hygiene during floods.

Networking Meetings: Networking was used to approach various key departments to seek their support and to also facilitate various ongoing schemes in the project villages. Several rounds of visits, meetings and discussions were held with Basic Education Department, UPSCERT, District Administration Bahraich, Panchayati Raj Department and Block Development Officer. As a result of these, the required permission letters were obtained.

Teachers Training Workshop: A one-day training for the teachers of Kaisarganj Block was organised in February 2019 at the Block Resource Center (BRC) Kundasar, Kaisarganj, in which 56 teachers from primary and upper primary schools of the block participated. CEE team summarised the issues that emerged during the introductory session and spoke about the need for preparedness for all kinds of risks at the school level. Participants were given an orientation to the educational material provided in their resource kit.

During the various sessions, participants were briefed about different types of disasters and associated risks, and how to identify a risk and follow necessary preparedness. Participants were also briefed about the mental trauma that students would face and how to deal with it. A session on risk identification was also conducted for the teachers, which was followed by the participants being assigned group work for developing School/Village Disaster Preparedness Plans. The training concluded with a discussion on the roles and responsibilities of all the participants in the preparation and execution of the DRR plan.

Village Volunteer Training: A training programme for village volunteers was organised at Godahan Purva village in March 2019 by CEE North, in which the participants were briefed about the project, its objectives, activities and their role in DRR related awareness, preparedness and response. Village volunteers were guided to conduct a planning exercise for their village using risk analysis. A village vulnerability mapping was conducted in consultation with community members. The mapping exercise was based on highlighting the availability of resources in and around the village and also the identification of the risks and vulnerabilities for disaster proofing and pre-response. The workshop concluded with a discussion on the role of village volunteers as Aapda Sahayak. Post workshop, each volunteer will develop a village disaster management plan with the help of various stakeholders, the format for which has been shared by CEE.

School Orientation and Awareness: An awareness programme was organised in March 2019 in two schools situated in Mangalmela village of Godhiya No 2 village Panchayat which is a high risk flood prone village of Kaisarganj Block, that faces the devastating impact of floods and fire each year. Around 200 students and four teachers from Primary and Upper Primary sections of the school participated in this. CEE representatives conducted an interactive session after a brief introduction. Students were briefed on various disasters and associated risks, which were reinforced through playing the game *Riskland* with the students which they enjoyed and learnt from. Students were also briefed on the do's and don'ts during a flood. An awareness rally was also conducted with school children and teachers participating.

14. FACILITATING NGOS AND COMMUNITY INITIATIVES

14 GEF-UNDP Small Grants Programme (SGP) India

The SGP India Programme has been demonstrating community-based innovative strategies and technologies that could reduce the threats to the global environment, gather lessons from community-level experiences and initiate up-scaling of successful community-based innovations. In the year 2018-2019, Small Grants Programme (SGP) focused on building capacity of the NGO partners and facilitated Knowledge Management and Networking with various government and private stakeholders.

14.1 SGP National Meet held at New Delhi

SGP India organised a National SGP Meet - 'Journey of Sustainable Growth and Change' - on February 7-8, 2019. The two day meet was hosted by the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India. The workshop aimed to exchange and communicate the SGP learnings, the remarkable changes that have been experienced at the community level, and the participatory process adopted by the project partners across India in the implementation, innovation and scaling up of project operations.

Around 74 participants from 42 SGP partners across India and other stakeholders such as government officials and CSR agencies attended the event. Twelve SGP partners under various categories such as Community led Innovation; Gender Mainstreaming and Social Inclusion; and Private Sector Engagement, presented and discussed their project achievements and future plans.

14.2 SGP India - Glimpses of Activities Booklet

CEE has developed, designed and printed the *SGP India - Glimpses of Activities* booklet which consists of brief profiles of 31 impactful projects of SGP Operational Phase 5 (OP5).

The book was released by Shri C. K. Mishra, Secretary, MoEFCC, jointly with Ms. Nadia Rasheed, Deputy Resident Representative, UNDP; Shri A.K Jain, Additional Secretary, MoEFCC; Smt. Preeti Soni, Assistant Country Director, UNDP; and Shri. Kartikeya Sarabhai, Director, CEE.

14.3 New Website of SGP Launched

SGP India's new website www.sgpindia.org was launched in March 2019.

14.4 OP4 – SGP Review and Guidance Workshop

The 10th National Steering Committee (NSC) meeting, held at MoEF&CC, suggested that UNDP CO and CEE should facilitate participatory exercises to review and understand the performance in terms of sustained actions, achievements and measurable impacts made by SGP OP4 projects.

As part of the review, SGP partners from the East and North East Region completed their field exercises and they were invited to present and share their reflections, learning and achievement highlights.

In order to validate their evaluation findings and to build their capacity in some thematic aspects, a one-day guidance was organised at New Club House, Jayashree Textiles, Rishra, Kolkata, on May 5, 2018. It was a joint initiative of CEE and Aditya Birla Jan Seva Trust. About 28 participants from the selected NGO partners from East and North East Region presented their evaluation highlights and action plans in the workshop. The programme included sessions on Renewable Energy Solutions, Environment Friendly Technologies and Monitoring & Evaluation.

14.5 State Biodiversity Awards

Two SGP India Partners: Sujagriti Samaj Sevi Sanstha and DREAM Bahudeshiya Sanstha have received the State Biodiversity Award 2018.

Sujagriti has taken initiatives in reclamation of ravines through endogenous technology and in-situ conservation of local biodiversity in Morena District, Madhya Pradesh, and strengthening livelihood security. A major activity of this initiative is the conservation and use of Guggul (*Comiphora wightii*) plants which is an endangered species as per the IUCN.

DREAM Bhahudeshiya Sanstha (DBS) has initiated conservation of 2000 ha forest land in the Melghat Tiger Reserve by strengthening the livelihood of the local communities. They have introduced biogas models to reduce firewood consumption by 50%.

14.6 Geographical Indication (GI) Registration for 'Boka Chaul'

Boka Chaul, which is a native rice variety of Assam (North East Region of India), has been registered under the Geographical Indication Registry (GI Tag - Intellectual Property India). *Boka Chaul* is a precious natural asset of Assam that does not require fuel to cook. This indigenous rice variety is being conserved and promoted through the Small Grants Programme (SGP) implemented by Lotus Progressive Centre.

Nalbari based Lotus Progressive Centre and CEE jointly applied for the GI, the application process for which had started in July 2016. After a series of field studies, documentation, consultation meetings and analysis, the rice variety got certified on July 30, 2018. Assam Science Technology and Environment Council (ASTEC) acted as a facilitator for the application of the GI tag while support was provided by institutions like ICAR, Assam Agricultural University, etc.

Boka Chaul, also known as 'soft rice', is mostly cultivated in Nalbari, Barpeta, Goalpara, Baksa, Kamrup, Dhubri, Kokrajhar and Darrang districts of lower Assam. It is a winter rice or sali, which is sown from the third and fourth week of June. It is a group name attributed to the entity

product with whole rice kernels processed through parboiling the rice grains of a special kind of winter rice called *Boka dhan* or *Boka Paddy*. This native variety of rice is unique because it requires no fuel to cook and can be eaten by just soaking it in water for some time at room temperature. It is known for its nutritional values and is consumed during the summer because of its cooling effect.

14.7 Networking for SGP Partners

Two SGP partners: FM Welfare, Odisha, and Sarthak, Madhya Pradesh, were invited to present their SGP case studies during the WED (World Environment Day) 2018 workshop jointly organised by Central Institute of Plastics Engineering and Technology (CIPET) and MoEFCC.

- Two SGP partners: PLANT, Tamil Nadu, and CORE, Odisha, were nominated for and received the Earthwatch Institute's fellowship.
- SGP partners were introduced to the Indo Global Social Service Society (IGSSS) with CEE coordinating the project application on behalf of the SGP partners. Subsequently, NIRMAN, Odisha, has signed an MoU with IGSSS.

14.8 Upgraded Country Programmes (UCP) Global Workshop

Mr. Jaison Varghese, Programme Coordinator, attended the UCP Global Workshop held at Quito, Ecuador during April 16-19, 2018. The workshop reviewed the lessons, challenges and successes in implementing SGP Upgraded Country Programmes, and provided strategic guidance for project implementation, analysis of prospects and preparations for OP7.

14.9 SGP India's Case Studies in International GEF Publications

The following SGP India case studies were published in three International GEF-UNDP publications.

- a) Case study titled 'Fisherwomen Harnessing Solar Energy for Fish Drying' was published in GEF-UNDP Blue Economy case study booklet.
- b) Case study titled 'Mountain Bounties Prevent Land Degradation in India' was published in GEF-UNDP Gender case study booklet.
- c) Case study titled 'Improved Plastic Waste Management Supports Marginalised Women's Livelihoods' was also published in a GEF-UNDP publication.

15. TRAINING, CAPACITY BUILDING AND NETWORKING

15.1 Green Teacher Diploma Course on EE

15.1.1 Lucknow Study Centre

CEE North Regional Cell is one of the study centres for the Green Teacher Diploma Course, a one year diploma programme in Environment Education for in-service teachers and educators, offered in a distance mode. The study centre has been receiving requests for offering the diploma course in Hindi. CEE North has developed the course in Hindi which was offered to teachers from the year 2018.

The 2018 batch of the Green Teacher Diploma course, which was offered in both Hindi and English, started with the first contact session for the participants in July at the Lucknow study centre. The participants were from Uttar Pradesh and Bihar, from both urban and rural schools. The first contact session dealt with the theory of ecology, environment education methodologies and approaches, education for sustainable development and resources for environment education. The second contact session, which was held in November, focused on discussing the environmental education projects that the participants were expected to undertake with the students in their schools, as part of this blended learning course. The project ideas discussed included wetland conservation, water and sanitation, and biodiversity conservation. Through counselling sessions, the participants were provided guidance for the projects they executed.

15.1.2 Pune Study Centre

CEE Central is a study centre for the Green Teacher Diploma Course. The 2017-18 batch of the Green Teacher was enrolled in the previous year, for which the contact sessions, assignments and counselling sessions were conducted during the reporting year. Participants developed project ideas on environment education to be carried out in their schools. They were guided to formulate a project plan with learning outputs, timeline and resources required, for themes selected by them. The final evaluation of the batch was conducted in November which included a written examination, presentation of the project learning and outputs and a viva-voce. The result of the batch was declared based on the evaluation of assignments, projects, written exam and presentation. An information session about the Green Teacher course was conducted for teachers associated with Akanksha Foundation for seeking enrolment for the course. An alumni group has been created for sharing professional updates in the ESD sector.

15.2 Sustainability Exchange Programmes (SEP)

15.2.1 SEP in Lucknow

CEE North, as a lead agency for RCE Lucknow, designed and hosted a Sustainability Exchange Programme (SEP) for 20 students of RCE Greater Western Sydney. Students from Western

Sydney University (WSU) visited India during November-December 2018 for the exchange programme. The students and the four faculty members accompanying them were from the Teacher Education, Environmental Studies and Health Studies streams of WSU.

This programme is designed to provide the participants with an exposure to the social, environmental and cultural diversity of India in their respective fields, with a view to understand sustainability. SEP 2018 consisted of classroom sessions and field visits for urban and rural immersion, keeping the focus on SDG 6 on water and health. The subject sessions were held at the Institute of Wildlife Sciences in the University of Lucknow campus. The workshop included a combination of lectures, activities and demonstrations. Undergraduate students from University of Lucknow also joined the classroom sessions held at the University.

The sessions centred on core issues related to water availability, accessibility, quantity and quality, and its impact on health and the environment. These were dealt with in both urban and rural contexts, and were supplemented by visits to the river bank of Gomti, a slum area of the city, and visits to villages and schools.

The students interacted with the officials, NGO members and community members to understand issues related to water and health. They also visited schools in Lucknow to see the activities and projects schools undertake on environmental issues. This helped them understand the differences and similarities in curriculum and pedagogy in the education systems of India and Australia.

The group was divided into two batches, with one batch staying in Lucknow while the other went on the field trip for rural immersion, and then reversed. The rural visit included visits to two protected areas - Suhelwa Wildlife Sanctuary and Katarniaghat Wildlife Sanctuary. Cultural experiences such as a Heritage Walk in the old city area to see the monuments of Lucknow, a visit to Lucknow Mahotsav and to Agra, were organised as part of the programme.

The group was also given an opportunity to experience a special Bollywood evening to showcase a popular movie with dance and music, followed by a dance session on Bollywood songs. Hindi language sessions were arranged for them to learn a few common phrases and terms. The programme culminated in a valedictory session gathering the entire group together. The feedback of the students and faculty at the end of the programme brought out the impact the experience had on them. Many of them considered the experience a life changing one. They were impressed with the way schools and organisations find solutions to the challenges they face even with limited resources.

15.2.2 SEP in Ahmedabad

Communication for Sustainable Development (CSD) Group hosted two batches of students from Central Queensland University (CQU) during the year as part of the Sustainability Exchange Programme. This programme is designed to provide a holistic exposure to the socio-economic and environmental diversity of India with a view to promote sustainability and cross-cultural

understanding. The programme focuses on hands-on learning through field visits and working sessions related to the respective disciplinary areas of the participants.

Nursing Students – October 20 – November 3, 2018: A group of 10 nursing students and two faculty members visited Ahmedabad as part of the SEP. The objective of their visit was to gain an experience of the health care scenario in India. CSD arranged to place them in two private hospitals and visit a public hospital, besides a nursing college. Accordingly, they spent three days each in a multi-specialty and women's hospital, visited a public hospital and a nursing college.

The participants were divided into two groups, each consisting of a faculty and four or five students. The groups alternated between two hospitals in the city – Zydus Hospital (a multi-specialty hospital) and Brinda Women's Hospital. In these hospitals, they were able to observe the various departments, learn from the doctors and interact with the nursing staff on the challenges faced and how they are overcome.

A visit was arranged to the Gujarat Cancer Society Medical College and Research Centre as well as to LG Hospital which is run by the Ahmedabad Municipal Corporation, which gave them an experience of a trust-run and a public hospital. The group was then taken to Khyati Nursing College, where they could see the facilities, interact with faculty and students, and understand the nursing education scene in Gujarat/India. The staff of Khyati Nursing College and the team from CQU both made presentations on the nursing education in their respective countries and also interacted with the students and faculty.

The students had raised funds to contribute to one of the hospitals they would visit. This fund was used to donate an equipment to the Brinda Women's Hospital which was handed over at a special function organised at the hospital.

As part of cultural exposure, visits were organised to Adalaj Stepwell, Sabarmati Ashram and Sundarvan – A Nature Discovery Centre. An evening of traditional and pop music and dance of India was also organised with traditional lamps and sweets to invoke Diwali. The trip was rounded off with a traditional dinner at Vishala – a restaurant with a village ambience.

At the valedictory function, the students made PowerPoint and poster presentations on their learnings, takeaways and experience in Ahmedabad.

Environmental Science, Science and Digital Media Students – January 8-22, 2019: CSD group hosted another group of nine undergraduate students from Environmental Science, Science and Digital Media along with one faculty, from Central Queensland University, Australia, as part of SEP.

The group were taken on various field visits, notable among them being: Vikram A Sarabhai Community Science Centre, Ahmedabad; Thol Bird Sanctuary, near Ahmedabad; Sundarvan, Ahmedabad; the e-waste management facility of E-Coli Waste Management Pvt. Ltd.; and

Mahila Housing Trust, Ahmedabad. They also went on a two-day nature camp to CEE's campsite at Bakore, where they learnt more about the biodiversity of Gujarat, as well as visited an archaeological site and a waterfall nearby. A session on pollution was also organised for them at CEE.

As they were just in time for the celebration of *Uttarayan* in Gujarat on January 14, they enjoyed learning how to fly kites and experience local festivities on the terrace of a multi-storeyed building in Ahmedabad. Besides these, a Bollywood evening was organised for them at CEE with pop music and dance. They could also experience the traditional cuisine of Gujarat at a dinner hosted at Vishala – a restaurant with a village ambience and traditional food and entertainment.

At the valedictory session, the students made presentations on their experiences in Ahmedabad and their learnings and takeaways from the programme.

15.3 State level Capacity Building at Jaipur

The National Green Corps programme is being implemented in 33 districts of Rajasthan, with 250 eco-clubs in each district. Rajasthan State Bharat Scouts and Guides (RSBSG) is the State Nodal Agency in the implementation of the programme in the state. CEE Rajasthan has been associated with programme as state resource agency from 2001- 2017. As an expert in the field of environment education and education for sustainable development, CEE was invited by RSBSG to facilitate a state level capacity building camp of eco-club in-charges at Jaipur in January 2019.

Around 100 teachers participated in the training and were provided an orientation to environmental education and the concept of sustainable development through interactive sessions using multiple teaching-learning approaches like games, demonstrations, experiments, etc. The training camp was organised under four themes: Waste management, Biodiversity, Water and sanitation and Climate change. National opportunities and programmes fostering education for sustainable development like Paryavaran Mitra and Wipro Earthian were introduced to the participants. Participants were given resource material on 'Sustainability and Water' and 'Sustainability and Biodiversity' to carry out action projects in their schools.

15.4 NSE's Employee Engagement Programme on Environment Education

As part of its CSR supported initiatives, CEE is currently running the project 'Prajwala: Swachh Balika Swachh Vidyalaya' in Rajasthan in partnership with National Stock Exchange (NSE) Foundation (financial support), Rajasthan Council of Elementary Education (systemic support) and UNICEF (technical support). Extending the partnership, CEE organised an orientation programme for the employees of NSE on environment education.

As part of NSE's Employee Engagement Programme, a team of 17 staff from NSE and IFSC visited CEE on October 6, 2018. A presentation by CEE team took the participants through CEE

and its work in the field of EE and ESD and also briefed them on Project Prajwala, NSE's engagement with CEE. The team took a guided tour of the lush green campus of CEE, after which they were also introduced to CEE's initiatives and facilities including CEE's camping programmes, campus nature trails for students, CEE's pre-school programme: The Planet Discovery Centre, and the interpretation studio and workshop. The team also visited Sundarvan, a nature discovery centre – a biodiversity education and conservation initiative by CEE located at Jodhpur Tekra, Ahmedabad. At Sundarvan, they observed and learnt about various flora and fauna including fruit bats, birds, crocodiles, various species of snakes and tortoises. The Sundarvan visit helped the team understand more about the animal world and also remove many myths and wrong beliefs about animals, especially the snakes.

16. MATERIAL DEVELOPMENT AND PUBLICATIONS

16.1 IEC Material on Biodiversity: Resource Material on Wetlands of Bihar

CEE North was invited by Bihar Environment and Forest Department to develop a set of material on the wetlands of Bihar. CEE team initiated the work with a brochure showcasing the wetland spread and the key wetlands of Bihar. CEE team undertook the research by referring to all key documents, books, articles and reports on this topic while developing the content. This was followed by design and layout for the brochure, which was finalised with inputs obtained from forest department officials, and 1000 copies were printed. A poster and a set of stickers on wetlands is also being designed by CEE team to communicate the message of 'Save Wetlands'. The material is being developed in Hindi.

16.2 Case Study on Transformative Change in Pune

Mr. Avinash Madhale co-authored a case study "Pune: Civil Society Coalitions, Policy Contradictions, and Unsteady Transformation" along with Dr. Lalitha Kamath and Ar. Himanshu Burte (Faculty at School of Habitat Study, TISS). The case study is published in the World Resources Report, *"Towards a More Equal City"*. It examines the processes of transformative change and the conditions, both enabling and inhibiting it in Pune, the second largest city in Maharashtra state, India. Many initiatives across diverse sectors have had a positive, qualitative impact on sustainability and service provision in Pune, particularly in its solid waste and transport sectors between the 1990s and the present. These initiatives reflect important shifts in the local government's attitudes and systems towards greater sustainability and equity and have had a positive impact on many lives.

Pune's transformation towards sustainable transportation began in the early 2000s. It has included efforts to reduce dependence on private vehicles by improving public transport through the implementation of India's first bus rapid transit system and creating more inclusive street space by emphasising non-motorised transport generally. Improvements in Pune's solid waste management systems have explicitly linked environmental, labour-related and economic aspects of life in the city by including waste pickers in the formal waste management system of the city. This innovation has also led to new national-level policies. Civil society organisations played a key role in both sectors, aligning with the municipality to catalyse positive reforms for labour, the economy and the environment.

Case studies in the World Resources Report, *"Towards a More Equal City"* examine transformative urban change defined as that which affects multiple sectors and institutional

practices, continues across more than one political administration, and is sustained for more than 10 years, resulting in more equitable access to core services. The goal of “*Towards a More Equal City*” is to inform urban change agents – government officials, policymakers, civil society organisations, citizens and the private sector – about how transformative change happens, the various forms it takes, and how they can support transformation towards more equal cities.

17. INSTITUTIONAL DEVELOPMENT AND SUPPORT

17.1 CEE – Information Service Centre (ISC)

CEE-ISC has been established with the aim of providing and disseminating information on Environmental Education (EE) and Education for Sustainable Development (ESD) and related areas. It caters to the needs of educators, decision makers, researchers and members of the general community.

ISC has a rich collection of books, journals, periodicals, reference books and children's books in English, as well as in Hindi and Gujarati. The collection of books currently exceeds 20,000, while periodicals number around 25 and the CD/DVD collection more than 500. During the year, the subscriptions of journals and magazines were renewed though no new books were acquired.

17.2 Human and Institutional Development (HID)

17.2.1 Personnel

Recruitment: The unprecedented cash flow difficulty, coupled with the delay in revamping the much anticipated Centre of Excellence (CoE) Scheme, saw a spurt in trained staff leaving the Centre, which is a setback considering the amount of time, energy and financial resources invested in national recruitment, orientation and incubation. Some of the staff members who left are very senior and the loss, in many ways, is irreparable.

Considering the financial position, no new recruitments to fill the vacancies in core staff category were made during the period under report. Only project appointments were made.

Promotions/Upgradation during the Reporting Period: Under the Rules for Recruitment and Review of Regular Posts 1988 and RFTA 2011, the following staff members were promoted/inducted/upgraded during the period April 2018 to March 2019.

Sl no	Name	Designation/Level	Date of effect
1.	Mr. Ayub Shersiya	Scientist SF	1.1.2018
2	Ms. Bijaylakshmi Borpuzari	Programme Officer	1.4.2018
3	Mr. Vipulkumar Patel	Programme Officer	1.7.2018

4	Ms. Preetha Nair	Administrative Assistant	1.7.2018
5	Ms. Priya Nair	Executive Assistant	1.2.2019
6	Ms. Sumegha Parmar	Executive Assistant	1.2.2019
7	Ms. Kinjal Patel	Executive Assistant	1.2.2019

Details of core staff members who left the services of the Centre during the period April 2018 to March 2019 are given below.

Sl no	Name of Staff	Designation	Date on which the staff left
1	Ms. Savita Bharti	Programme Officer	30.4.2018
2	Mr. Dhiraj Gidwani	Sr. Prog. Coordinator	18.5.2018
3	Ms. Sukhprit Kaur	Programme Coordinator	1.6.2018
4	Ms. Saymanti Bandyopadhyay	Associate Prog. Officer	8.6.2018
5	Mr. Hardeep Singh	Administrative Asst.	25.6.2018
6	Ms. Nivedita Shridhar	Associate Prog. Officer	29.6.2018
7	Mr. Anilkumar Dayyae	Asst. Adm. Officer	29.6.2018
8	Ms. Divika Hinger	Associate Prog. Officer	2.7.2018
9	Dr. Pramod Kumar Sharma	Programme Director	13.7.2018
10	Mr. Nikunj Bhatt	Accountant	13.7.2018
11	Ms. Sangeeta Basa	Programme Officer	31.7.2018
12	Mr. Bijoy Goswami	Programme Coordinator	31.7.2018
13	Mr. S. Sivakumar	Park Manager	10.9.2018
14	Ms. Anita Thomas	Accountant	29.9.2018
15	Mr. Kunthal Gandhi	Accountant	29.10.2018
16	Mr. Ramesh Muniappa	Attendant	31.10.2018
17	Mr. Ashwin Kumar Wasnik	Programme Officer	1.11.2018
18	Ms. Kanal Dave	Office Assistant	31.12.2018
19	Mr. Kedar Champhekar	Programme Coordinator	24.1.2019
20	Ms. Meena Nareshwar	Programme Director	31.1.2019
21	Ms. Sneha Acharya	Office Assistant	31.1.2019
22	Mr. Pratik Gajjar	Technical Special Staff	7.2.2019
23	Ms. Sarita Thakore	Scientist SD	8.2.2019
24	Ms. Carol D'Souza	Programme Officer	29.3.2019

Retirement: April 2018 to March 2019

1. Dr. Abdhesh Kumar Gangwar, Sr. Programme Director, who had been serving the Centre for more than 27 years, retired on July 31, 2018.
2. Mr. Jagrooprasad Pal, Tradesman, who had been serving the Centre from its inception – for more than 34 years - retired on July 31, 2018.

Core Staff Strength: Considering the fact that no new recruitments to the vacant positions have been effected, the following is the break-up of the core staff positions as of March 2019.

Sr. No.	Category	Sanctioned	Filled under 1988 Rules	Filled under consolidated salary	Total
1	Scientist Category	64	13	25	38
2	Technical Staff Category	31	18	5	23
3	Administrative Category	57	29	18	47
Total		152	60	48	108

Reviews: Fifteen Annual Reviews and seven Promotional Reviews were held during the reporting period of April 2018 to March 2019.

Staff Welfare Fund Committee: The Staff Welfare Fund Committee disbursed the following loans from April 2018 to March 2019.

Sr. No.	Name	Amount (Rs.)	Type of Loan
1	Mr. Hitesh Kumar Vaza	2,00,000	Vehicle
2	Ms. Reema Banerjee	5,00,000	Medical
3	Ms. Preetha Nair	1,00,000	Education
4	Mr. Snehal Bhatt	2,00,000	Education
5	Mr. N. Sureshbabu	2,00,000	Vehicle
	Total	12,00,000	

17.2 2 HID Activities

Training and Development: The following staff members were nominated for training and exchange programmes during the reporting period.

Name	Name of the Programme	Location	Dates
Mr. Bijoy Goswami	NAAEE 360 degree fellowship	Warrenton, VA	July 8-13, 2018
Mr. Santosh Sutar (as Expert from CEE and head of the delegation of teachers from India)	Invitation programme for teachers from India	Japan	October 8-13, 2018
Mr. Vipulkumar Patel	JENESYS – India Japan exchange programme	Japan	December 4-12, 2018

Meetings of the Programme Directors Forum (PDF): Several meetings of the Programme Directors Forum took place to discuss strategies and ways to deal with financial difficulties during which possible interventions were suggested.

- One of the major exercises proposed and initiated was towards “Institutionalising of Group”.
- Groups have been strengthened by decentralised management, improved decision making, delegated authorities and bank accounts. Efforts have been made to provide dedicated admin and accounts services to groups.
-

17.3 Corporate Communications

The Corporate communications team executed the following activities for the organisation and its projects during the year 20018-19.

Enhance CEE’s presence on Social Media Platforms: CEE has many supporters, volunteers and stakeholders who are keen to know more about CEE activities, events and its various projects

and programmes. CEE team enhanced its presence on Facebook, Instagram and Twitter by posting and tweeting regularly. This enabled the creation of better engagement across the online audience. Social media was actively used to showcase CEE's work right from the grass root level to the policy making stage. Its presence at international conferences, workshops, etc. was also showcased. CEE Facebook page was used to promote COY2018, World Environment Day, CEE IFC's Summer Workshops and other activities, which created a lot of interaction and likes on the page. Currently CEE has more than eight thousand organic followers on Facebook and the numbers on Twitter and Instagram are gradually increasing.

Road Safety Network (RSN) & We4Climate Facebook Page: Besides the organisation's social media pages, the Corporate Communications team also managed project pages on Facebook for Road Safety Network (RSN) Gujarat to promote the passage of the Motor Vehicle Amendment Bill. It also promoted the Climate Literacy and Marine Litter (CLML) programme to create more awareness and engagement towards climate action.

Booklets, Brochures and Other Promotional Material: A booklet showcasing CEEs work, thrust areas and expertise was prepared during the reporting year. It is a crisp presentation of CEE's work across the country.

The team coordinated the preparation of an e-brochure for Odisha Rebuilding and Resilience after the cyclone Fani.

17.4 Compliance under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013

CEE orients all new recruits at the Centre on the provisions of the Act as part of the orientation programme.

During the reporting year, no complaints of sexual harassment were received at the Centre.

18. EVENTS

18.1 International Day for Biological Diversity (IBD) – May 22

CEE North: CEE North organised an event on International Biodiversity Day 2018 in Varanasi to create awareness among community members about the state of aquatic biodiversity in river Ganga and motivate them to work towards waste management and beat plastic pollution. The awareness meeting was conducted with support from Varanasi Municipal Corporation. An appeal was made to the community to follow and support the proposed waste disposal plan and its management to save the biodiversity of Ganga. After the event, participants and guests planted saplings of gulmohar, gudhal, ashok, satparni and jaamun in the nearby park. Residents living near the park and students of a computer centre nearby have taken the responsibility for taking care of the planted saplings.

CEE North was invited to participate in an exhibition during State level conference on International Biodiversity Day organised by UP State Biodiversity Board in Lucknow at Ram Manohar Lohia Law University. CEE North team displayed CEE publications and work related to biodiversity in a stall at the exhibition. Conference participants, forest officials and experts visited the stall and interacted with the CEE team.

CEE Himalaya: With support from ICIMOD and Give2Asia, CEE Himalaya and RCE Srinagar organised IBD 2018 celebrations in four states in India. The locations were Baramulla (Jammu & Kashmir); Uttarkashi (Uttarakhand); Bahraich (Uttar Pradesh) and Kokrajhar (Assam) in May, 2018. Several seminars and workshops were organised in Uttarakhand (Central Himalaya); Bahraich, Uttar Pradesh (Terai Region of Central Himalaya); and Kokrajhar, Bodoland Territorial Council, Assam (Northeast India). Over 500 participants attended these events.

In Baramulla (J&K), a special awareness programme was organised at Delina village, with a focus on the farming community whose livelihood depends on agriculture and horticulture. Free distribution of Soil Health Cards and Seeds were arranged for the local farmers on this occasion.

At the programme held in Bharangaon village, (Dunda Block, Uttarkasi District, Uttarakhand), the importance of biodiversity for ensuring a safe and protective environment was discussed with the participants. Loss of biodiversity – including destruction of important medicinal plants - due to forest fires, which also leads to depletion of glaciers was the topic for children. People were also apprised of the crucial role they play in building up and conserving the environment which will create a prosperous, stable and economically sustainable biodiversity.

In Uttar Pradesh, IBD 2018 was celebrated in the Gram Sabhas of Bambahura and Rewatha villages (Jarwal Block, Bahraich District). More than 100 people including representatives of the Gram Sabhas, women, men and children attended the celebration. The day-long programme in the village focused on biodiversity conservation, impact of biodiversity loss on human life and livelihood, DRR preparedness, improving WASH and skill development.

In Assam, celebration was conducted in “Tapovan” – a village community centre for the conservation of flora and fauna - Chakrashila Wildlife Sanctuary, Jornagara village, Kokrajhar. The distinguish guests shared their views on biodiversity and its conservation. This event involving community members was a small step towards the larger objective of protecting Chakrashila Wildlife Sanctuary in Bodoland Territorial Council, Kokrajhar.

18.2 World Environment Day (WED) – June 5

Indian Himalayan Region: The Indian Himalayas Climate Adaptation Programme (IHCAP), in collaboration with Swiss Agency for Development & Cooperation (SDC) and CEE India celebrated World Environment Day (WED) 2018 across the Indian Himalayan Region (IHR), at 12 locations covering all the states of IHR as well as three other locations in India. The WED celebrations included conducting a variety of activities with a range of stakeholders over one week. Activities were conducted by CEE independently as well as with its partners, dovetailing the state WED celebration event on June 5 and the functions organised by the State Nodal Agencies. CEE helped in mobilising varied stakeholders, thereby adding variety and value to the WED celebrations in the states.

On the WED 2018 theme ‘Beat Plastic Pollution’, CEE, with support from SDC and UN Environment (UNEP), developed a Tool Kit - *Towards Responsible Use of Plastics* - comprising a teacher’s manual, a set of three bi-lingual posters based on the 3 Rs (Reduce, Reuse and Recycle) of waste management and a student’s booklet. The Tool Kit was launched by dignitaries at all the locations. The Tool Kit was appreciated as it was found interesting and useful, and generated huge interest amongst all the stakeholders. There were immediate requests to translate it into the regional languages as well. CEE offered a menu of activities based on the priority of the respective states and in consultation with the WED organising committees in the respective locations. The activities were all planned around the WED theme of ‘Beat Plastic Pollution’. The WED celebrations at the 15 locations reached out to more than 43,000 people directly.

CEE North – Lucknow: To mark the celebrations of World Environment Day, CEE North joined hands with the Directorate of Environment, Uttar Pradesh, to conduct an awareness event. On the eve of WED, an awareness event and a river bank cleaning drive was organised at Kudia Ghat near the banks of the Gomti River. The participants of the event were school children of 10-18 years from various schools, teachers- in-charge, staff from both the organisations and the general public. Over 250 people participated in the event with great enthusiasm. The audience also included the visitors to Kudia Ghat, besides vendors on the ghat and devotees. A cleanliness drive was conducted after the formal session.

Varanasi: An event was organised by CEE Varanasi Project Office on the occasion of World Environment Day under the JICA Assisted Ganga Action Plan Varanasi Project. CEE team announced a campaign among the Clean Ganga Club schools and the residential zones for preparing paper bags and cloth bags using waste paper and old cloth. Students prepared bags during the event to sensitise people about the need to use alternatives to plastic bags. The paper bags made by the students were then distributed to nearby shopkeepers with an appeal to stop the use of plastic bags.

CEE worked with women groups from Adampur and Kotwali zones to make bags from old clothes. As part of this, a collection drive for old clothes was held in the community with the involvement of the Ward Sanitation Monitoring Committee members. The donated clothes were distributed among women's groups for stitching cloth bags based on the designs learned through a training programme conducted by CEE earlier.

This campaign concluded with an event held on World Environment Day in which officials from Varanasi Municipal Corporation appreciated the efforts of CEE and the community members. During the event, cloth and paper bags were distributed by all the guests in the vegetable markets located on the ghat with a request to use these cloth bags instead of polythene bags.

CEE Rajasthan - Udaipur: Responding to the UNEP call to 'Beat Plastic Pollution', CEE organised an event to celebrate World Environment Day (WED) in collaboration with Swiss Agency for Development and Cooperation in 15 Indo-Himalayan Range locations. In Udaipur, CEE marked the day with a slew of events to initiate environmental conservation actions and conducted a five-day long programme from June 1-5 in association with Rajasthan State Bharat Scouts and Guides and Udaipur Municipal Corporation. The programme witnessed the involvement of around 350 participants in a variety of activities. On the first day, a movie was screened at three locations of the city, which raised the awareness of the participants about the WED theme along with a session on the actions to be taken for a plastic free earth. Day two of the

programme kicked off with a variety of creative activities on the concept of '3Rs: Recycle, Reuse and Reduce', such as poster making, quiz, best out of waste, designing a pictorial slogan, making a smart bag, etc. On the third day, a mini-marathon called Plasticathon was organised to spread awareness among the residents of Udaipur city. Mr. Jitendra Kumar Upadhyay, IAS, Commissioner Devsthan Department, flagged off the marathon at Fatehsagar Lake. Participating students spread the message of avoiding use of plastic and reusing plastic through placards and slogans. Udaipur is known as the city of lakes, but the beauty of these lakes is being destroyed due to pollution, especially plastic pollution, which is affecting the aquatic biodiversity, tourism and livelihoods of the local people. To make the participants understand these complex linkages, a cleanliness drive was organised at DoodhTalai, Pichola Lake, followed by a debriefing session on the fourth day. Around 20 kg of plastic waste was collected at the site which was handed over to the Municipal Corporation. Day five of the programme began with environmental games, a signature campaign, face painting and cultural presentations like song, dance and skit, all of which were based on the theme of 'beat plastic pollution'. An exhibition was organised at the Divisional Headquarters of Rajasthan State Bharat Scouts and Guides to showcase the creativity of the participants and to share ideas related to reusing and reducing plastic waste. A Tool Kit developed for schools by CEE in collaboration UNEP focusing on positive action to reduce, reuse and recycle plastic was launched by Mr. Chandra Singh Kothari, Mayor, Udaipur Municipal Corporation; Ms. Kapila Bhandalia, Additional District Education Officer, Udaipur; Mr. Dharampal Singh, Professor, Agriculture College, Udaipur; Mr. Suresh Chandra Khatik, Divisional Secretary, Rajasthan State Bharat Scouts and Guides, Udaipur; and Ms. Rajkumari Meena, Head, Local Association, Rajasthan State Bharat Scouts and Guides, Udaipur. The event culminated with prize distributions for the best entries received in various competitions during the event, followed by an oath to reduce, reuse and recycle plastic for a plastic-free earth.

Jaipur: CEE, in collaboration with Rajasthan State Bharat Scouts and Guides, organised a two day event to commemorate World Environment Day at Jaipur. The event began with a series of thematic competitions for children and youth on June 5, such as making bird feeders from waste, poster making, best out of waste, making smart bags and designing pictorial slogans. Through these competitions, children depicted their thoughts on reusing and reducing plastic. A session was held to make them understand the need to beat plastic pollution for a plastic free earth and the hazards caused by plastic to biodiversity, water and sanitation. To spread awareness among Jaipurites, student participated enthusiastically in a 'Run for Environment' organised on June 5 by the State Environment Department, Government of Rajasthan and Rajasthan Pollution Control Board. The run was flagged off by Mr. Ramcharan Bohra, MP, and Mr. Gajendra Singh Khimsar, Minister of Forest and Environment, Youth Affairs and Sports, Government of Rajasthan.

An exhibition was set up to share and showcase the products made by the participants as part of the initiative to reduce and reuse plastic. The idea of making trendy bags from old material was highly appreciated by the guests. A cultural presentation by the participants followed by prize distribution to motivate the participants for continuing their efforts in future rounded off the event.

18.3 Global Handwashing Day: October 15

The Global Handwashing day is a day dedicated to spread the message of the importance of washing hands at crucial times in order to maintain hygiene and to be free from microbes. CEE commemorated Global Handwashing Day on October 15, 2018, along with the students and staff (teaching and non-teaching) of 54 Kasturba Gandhi Balika Vidyalayas. The day kicked off with a handwashing drill with more than five thousand children. Students washed their hands with soap and water and sang jingles and raised slogan on the five steps of handwashing. Besides this, many activities were organised like plays, drawing competition, dance, poems, etc. where all the students took part with full enthusiasm and learnt the importance of hygienic practices for a healthy life.

18.4 Eco-exhibition at Jaipur

Rajasthan State Bharat Scouts and Guides (NGC state nodal agency, Rajasthan) organised an eco-exhibition in Jaipur. CEE was invited as an expert agency in the field of environment education to facilitate the event. The two day eco-exhibition aimed to provide an opportunity to eco-clubs to showcase and share their activities and efforts, and to create awareness among school children and other segments of the public about environment conservation. The participant schools displayed their small and big initiatives for environment conservation in the stalls they set up and shared with the general public various eco-friendly activities/projects undertaken by their respective eco-clubs. Mr. Debasish Prusty, IAS, Secretary to the Governor, Rajasthan, was the chief guest at the event. He appreciated the efforts being taken up by the eco-clubs under the Paryavaran Mitra Programme. Representatives of media and other government agencies/departments also participated in the programme.

18.5 Interactive Session and Food Festival with Mr. Shahu Patole, Author

CEE Central, Pune, organised this event in August 2018, which included an interactive session on 'Food Cultures of Maharashtra' by Mr. Shahu Patole, author of the acclaimed book '*Ann he Apurnbhamh*'. The interactive session helped participants understand the diversity,

geographical and communal linkages and cultural politics of food. Mr. Patole narrated his experience as a person born and grown up in a dalit community, 'invisibilisation' of the food cultures of many marginalised communities, and the myths and romanticisation of traditional/ethnic food in recent times, highlighting some of the unpleasant hardships borne especially by women behind many such dishes.

Mr. Patole displayed an exhibition of cultivated and wild foods from Nagaland where he is currently posted as Senior Indian Information Service Officer. This was followed by a feast which included diverse food from Maharashtra: Shengoli from the Marathwada region; Varan Batti and Mande from Khandesh; Lakholi Vade from Vidarbha; Sajuri, Lati Vadi and Jowar Lahya from Satara; Wagh Baras, a special multigrain preparation made on the second day of Diwali new moon; Ginna, a sweet preparation made from lactating buffalo milk; three types of bhakri made from rice, jowar and bajra, including sun dried bhakri from Solapur; among others.

19. FACILITATING NETWORKING AND PARTICIPATION

19.1 Facilitation

19.1.1 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 organisations, 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.

IFC has a menu of 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 also has a month-long summer programme for children, culminating on June 5 which is the World Environment Day. Outdoor activities 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 provides information about latest publications. A database on participants of the various programmes of IFC and visitors to IFC has been prepared and is being updated on a regular basis. It has over 3700 addresses listed to whom event information and other updates on special programmes at CEE are sent.

Packages on Orientation to Environmental Education: These were offered to a varied group of visitors to CEE. Generally planned as sessions of three hours, 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 and college groups: IFC facilitated visits from many schools of Ahmedabad. The student groups were varied as they ranged from very young children from pre-primary classes to those from senior secondary classes and colleges/professional institutions. The number of groups who have undergone the Orientation Programme facilitated by IFC during the reporting period is:

Group	No	No of Participants
Schools	5	500 plus
University/Architecture students and trainees	6	250 plus
Groups supported by NGOs	2	45 plus
Summer Programme students	1	75 plus
Night Camps	1	30 students
Walk in Visitors		100 plus

Besides offering the Orientation package, IFC facilitated field visits to Nature Education sites developed by CEE, namely, the Manekbaug plot, Sundarvan, etc. IFC also facilitated linkages with other programmes within CEE such as connecting colleges to the SAYEN network in Ahmedabad.

IFC also plays a major role in helping out with the media coverage to many of the NFD (Nehru Foundation for Development) programmes.

Birthday Package: IFC organised birthday celebrations for children at CEE's 14 acre Green Campus. The package includes a nature trail, bird watching, film screening, quiz and lots of games focusing on the environment. The birthday girl or boy plants a sapling and has her/his name tag on it. Their friends are given educational products developed by CEE as return gifts.

Safe Festival Campaign

Diwali Safe Festival Campaign: Posters were put up at various places talking about safe festival celebration. Mailers were sent to people to make them aware about the health hazards and pollution created due to crackers.

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 Bluebell School, Zydus School (Godavi), St. Kabir School, Jamnabai Narsee, Ahmedabad Juniors (3 branches), Nurture Pre-school and the IFC. The colours were procured from AURA Herbal wear - organic products entrepreneurs in Ahmedabad. Posters were put up at different locations. Pamphlets with tips on making homemade colours were distributed. How to make natural colours at home was also demonstrated in schools and colleges.

Makar Sankranti Festival Campaign - Save our Birds: Mailers were sent to friends of CEE and other colleagues regarding the need to celebrate the kite flying festival safely so as to avoid hurting birds. Helpline numbers were provided so that people could contact in case they find some injured bird.

Go Green Ganesha Campaign: CEE celebrated an eco-friendly Ganesh Chaturthi with 'Go Green Ganesha' campaign. The two-day campaign included workshops for primary and pre-primary school students. Traditionally Ganesh Chaturthi was a small and intimate family affair where people used the fertile soil from river banks to create their own Ganesha idols. With time, however, the festival became a large-scale commercial and community-based event involving Ganesh idols which can be as tall as 70 feet and are made of Plaster of Paris. These are later submerged into the river water and since they are non-biodegradable, they cause extensive pollution. The Go Green Campaign at CEE was an attempt to make children realise the impact of celebrating Ganesh Chaturthi in this manner. Through presentations and stories, they were acquainted with the legend of Lord Ganesha and taught the value of enjoying the festival without harming the environment. They were also taught to make small Ganesha idols of clay.

Summer Programme for Children: As being done every year, a special summer vacation programme for children of the age group 5-13 years was conducted by the IFC in May 2018. The month long programme was divided into different themes, each coordinated by a subject specialist from CEE. This was scheduled under the main theme "Air Pollution", which was the World Environment Day theme announced by UNEP.

The programme included field trips, movie screenings, theoretical and practical session, activities and games. Participants were given certificates at the end of the month long 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.

World Environment Day: IFC supported the programme, by sending mailers and invites to the general public. An exhibition of children's work was also held at CEE for the general public to come and see what the kids did during the month long summer vacation programme.

Products: like paper bags, candle stands, lampshades and traditional diyas were exhibited and sold at the IFC. These were procured from organisations like UTTHAN, SEWA and Blind People's Association (BPA) and were made by mentally challenged children and visually challenged people.

IFC Memberships: IFC offers membership to the citizens of Ahmedabad that will entitle them to participate in various activities, get invited to popular lectures and events, and get access to CEE's facilities like the library.

19.1.2 CEE Delhi Office

The Delhi office of CEE continued to function as a national coordination office, providing liaison and coordination services to the Director's Office, various groups of CEE Headquarters, and the 30-odd offices of the organisation. The main tasks of coordination with the Ministry of Environment, Forest & Climate Change, follow up on sanctions and release of grants, outstanding payments, submission of reports and UCs, went on throughout FY 2018-19. Follow up with other government ministries and departments, foreign missions, national and international funding agencies, has also continued.

Another continuous service by the Delhi Office is to provide all CEE teams with focused and identified information about tenders, bids, RFPs, calls for proposal, etc. where CEE has the relevant expertise to apply. During 2018-19, 30 such opportunities were identified and details sent to relevant units of CEE.

19.2 Participation

Mr. Amarnath

- Undertook the course ARITRA Leadership Accelerator Programme, offered jointly with IIM Bangalore, for leaders from the social and development sector.
- Participated in the Training on Urban-Nexus and Training of Trainers organised by ICLEI, NUIA and GIZ at New Delhi.
- Participated in a Workshop on Street Design Guidelines, organised by NATCO and a public talk by Janette Sadik Khan.
- Participated in the Workshop on Air Pollution for the cities organised by NRDC and IIPH at Ahmedabad.
- Participated in the FUSE-Workshop on Food, Water and Energy-Nexus Approach for Pune Region and helped facilitate the group discussion and activity.
- Conducted a session and guided a visit on sustainable cities, design, planning and transportation for the students of MUWCI Pune.

Mr. Satish Awate

- Participated in the Conclusion Event of the Mentoring for ESD-Leadership Programme, during May 29 to June 5, 2018, in Guanajuato, Mexico. He participated as a mentor at

this event where all the mentees presented their projects and conducted interactive sessions on themes related to ESD.

- Along with Ms. Sanskriti Menon, attended the meeting of the Working Group on Material Development of ESD Expert Net at Lauf, Germany, May 7-9, 2018, for the discussion and planning of the trans-adaptation of Teaching the SDGs book and developing resource materials on systems thinking, nexus and traces and realities, beside designing an international exhibition using the theme of 'Traces and Realities'.
- Participated in the Annual Meeting of ESD Expert Net at Durban, South Africa, during November 17-26, 2018 as a member. This agenda for this meeting included the national groups' exchange, drafting the network's constitution, evaluating the network's impact and chalking out the way forward for this international network of ESD practitioners from the four countries of India, Germany, Mexico and South Africa.

Mr. Sujeetkumar Dongre

- Has been nominated as Member of the Goa State Wildlife Advisory Board, Government of Goa.
- Has been nominated as Member, Thematic Group on Training and Capacity Building of Goa State Biodiversity Board.

Ms. Madhavi Joshi

- Participated as Faculty in the CEE-CEPT Summer School Course, 'Resilient Communities for Resilient Cities: Study of Design Projects and Processes in New York', held from June 11-21, 2018.

Dr. Simanta Kalita

- Participated in the Global Road Safety Leadership Course in Johns Hopkins University (JHU), in Baltimore, USA. It was a ten-day comprehensive international training course on Road Safety conducted jointly by Johns Hopkins International Injury Research Unit, JHU, Bloomberg Foundation and Global Road Safety Partnership (GRSP).
- Participated in the Training on Foldscope Microscopy organised by the Department of Biotechnology, Government of India, at the International Centre for Genetic Engineering and Biotechnology, New Delhi.
- Participated as a Key Resource Person in the National Seminar on 'Addressing gaps in achieving rural water security: an integrated approach' organised by Centre for Environment Education (CEE) in Ahmedabad.

- Delivered a Radio Talk on 'Environment protection and our duties' in All India Radio FM channel 100.1 on November 17, 2018 at 7.15 am.

Ms. Preeti R. Kanaujia

- Represented CEE in the executive and steering committee under the State Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Uttar Pradesh. As member, she provided inputs towards the planning of conservation education interventions in the state.
- Was invited as guest speaker in a consultative meeting organised by Shohratgarh Environment Society and CUTS on "Sharing Community" focusing on Handprint actions held in October 2018 in Lucknow. She delivered a lecture on the theme at the workshop.
- Was invited as guest speaker for the Earth Day 2018 event organised by the Forest Department, Awadh division.

Mr. Avinash Madhale

- Attended the Second Indo-German Dialogue at Freiburg, Germany, in November 2018. The Indo-German Dialogue is a series of interactions of academics, civil society activists, government officials and business/entrepreneurs on transdisciplinary research and practice related to urbanisation and sustainability in Europe/Germany and India. The Second Indo-German dialogue was held on Green Practices, Education, Learning and Training and Awareness for Sustainable Development.
- Submitted his Ph.D thesis at the Department of Politics and Public Administration, Savitribai Phule Pune University, Pune. The topic of the thesis is "Politics of Participation and Policies of Urban Governance: Cases of Participatory Processes in Urban India".

Ms. Sanskriti Menon

- Participated as speaker on the Pune Bicycle Plan in Connect Karo, organised by the World Resources Institute in New Delhi, April 5-6, 2018.
- Participated in a workshop on Intermediate Public Transport Needs in Developing Countries organised by TERI in April 2018, where she moderated a panel discussion.
- Participated in the Pune River Dialogue organised by INTACH in April 2018, where she moderated a session on Urban Riverfronts.
- Was a panellist at an event organised in January 2019 by LAYA, Samuchit Enviro Tech and INECC, to discuss a Citizens Charter and Action Agenda for Sustainable Pune, where she spoke about the transport sector in Pune, commenting on policy and also, as a

citizen who chooses to commute by bicycle, the challenges cyclists face and the way ahead for the implementation of the Pune Bicycle Plan that CEE has helped to develop.

Mr. Suman Rathod

- Participated in the workshop organised by ACCU, Japan, representing the project 'Youth led Community Development' where CEE was one of the partners along with Bangladesh, Pakistan, Philippines and Japan. Two youth from the community presented their case at the meeting held in Tokyo during November 9-13, 2018.

Ms. Khushbu Shah

- Participated in the Foundation for Environmental Education's Eco Schools National Operators Meeting held in Ireland in July 2018, and presented CEE's activities in India.