



ANNUAL REPORT 2016-2017



Shri Ramdeobaba
College Engineers for
Environment Forum

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PRELUDE



Decades have passed trying and failing at sustainable development. In today's world, loss of biodiversity, depletion of rainforests, over-fishing, and our consumption patterns are placing an increasing burden on the planet. The increasing stress we put on resources and environmental systems such as water, land, and air cannot go on forever. The role of engineers in saving environment and affecting sustainable development is very important because engineers can use creativity, technology and scientific knowledge to solve practical problems for conserving environment.

Keeping this idea in mind RCOEM took a small step forward by establishing REEF (Shri Ramdeobaba college Engineers for Environment Forum) on 25th January 2012 with the motto "Engineers with a mission: towards sustainable environment". The idea is to make the future engineers aware of the environment and its growing problems that can be taken care off. Engineers play a key role in development and once they're ready to strike a balance between environment and development, environment will stand a chance. REEF for the past 5 years has been conducting several activities aiming to sensitize the budding engineers towards environment. This annual report describes various activities undertaken by REEF in the session 2016-2017.

Dr. R.S. Pande
PRINICIPAL

GREEN AMBASSADORS

MENTOR FACULTY AND FOUNDER.

Dr. Deepshikha Mehra
(Asst. Prof., Department of Humanities)

REEF ALUMNI.

- | | |
|-------------------------------------|--|
| 1. Pranjal Chaturvedi (Civil, 2012) | 9. Smita Sreeram (2 nd Year, EN) |
| 2. Sarang Puri (IND, 2012) | 10. Aditya Khedkar (EDT, 2 nd Year) |
| 3. Vinay Chawla (IT, 2012) | |
| 4. Apoorv Munshi (IT, 2012) | |
| 5. Vatsalya Mathur (EC, 2013) | |
| 6. Hamza Shakir (EC, 2013) | |
| 7. Karishma Manwani (EE, 2013) | |
| 8. Supriya Kawadkar (EC, 2014) | |
| 9. Pratik Gupta (EN, 2015) | |
| 10. Aaditya Somani (EN, 2016) | |
| 11. Vishakha Jaiswal (EN, 2016) | |
| 12. Radhika Kale (EN, 2016) | |
| 13. Apurva Bhiwapurkar (EC, 2016) | |
| 14. Ashish Chandan (EE, 2016) | |

REEFians.

- | | |
|--|--|
| | 1. Bhagyashree Girhe (4 th Year, EC) |
| | 2. Sneha Wilson (4 th Year, EC) |
| | 3. Udayann Dayaanand (2 nd Year, Civil) |
| | 4. Chitra Dangra (2nd Year, IT) |
| | 5. Daniyah Ammarah (2nd Year, CSE) |
| | 6. Shreeranjini Iyer (2nd Year, Civil) |
| | 7. Snehal Gajbhiye (2 nd Year, IT) |
| | 8. Abhishek Paliwal (1 st Year, EN) |
| | 9. Anurag Tiwari (1 st Year, Mech) |
| | 10. Arohi Naik (1 st Year, EC) |
| | 11. Chetan Pandey (1 st Year, EN) |
| | 12. Hida Ahmed (1 st Year, EN) |
| | 13. KartikVaswani (1 st Year, IND) |
| | 14. Nancy Tolani (1 st Year, IT) |
| | 15. Neha Moharil (1 st Year, CSE) |
| | 16. Piyush Chhawsaria (1 st Year, EC) |
| | 17. Rishabh Meher (1 st Year, Mech) |
| | 18. Shruti Rathi (1 st Year, EC) |
| | 19. Sarthak Pande (1 st Year, CSE) |
| | 20. Abdul Rehman (1 st Year, EC) |

REEF COORDINATORS.

1. Rohan Dekate (4th Year, Mech)
2. Rohit Hazare (3rd Year, EC)
3. Atharva Mangrulkar (2nd Year, IT)
4. Gauri Chandak (2nd Year, CSE)
5. Himanshu Gunde (2nd Year, EDT)
6. Pratyaksha Jha (2nd Year, EC)
7. Ojaswara Pathak (2nd Year, EN)
8. Purvashree Waldey (2nd Year, IT)

OBJECTIVES

- a. To create awareness and take up various activities for the conservation of various aspects of environment.
- b. To establish active association with various organizations working for environmental conservation.
- c. To take up various activities for underprivileged children and in the process initiate and ingrain the value of environmental conservation.
- d. To encourage the development and execution of ideas on role of technology for protection of environment



REEFians with the Principal Sir, Dr. R.S. Pande and Mentor faculty–Dr. Deepshikha Mehra

RECRUITMENT

REEF conducted its recruitment drive for the year 2016–2017 in the college campus on 1st, 2nd and 3rd September 2016 in G-0/12 and language lab (Humanities). The club received 181 applications out of which 39 candidates were selected through a long process of evaluation. Various tasks were given to the applicants to test their skills and interests. The interview panels also included REEF Alumni Vishakha Jaiswal, Apurva Bhiwapurkar and Supriya Kawadkar along with other REEF members.



REEF panels taking interviews during the recruitment process

ORIENTATION

The newly selected REEF members (REEFlings) were taken on a nature trail on 4th September 2016 at Seminary. The orientation of new members to environment started with a walk for bird watching. All the REEFians were divided into teams and they had to give bird names to their team members as a process of knowing each other. The new REEFlings were introduced to REEF, its objectives, achievements and activities by Mentor faculty, Dr. Deepshikha Mehra. They were also introduced to the five REEF domains along with their objectives and activities by the domain coordinators.



Bird-watching during orientation session at Seminary hills



Mentor Faculty, Dr. Deepshikha Mehra and REEFians along with the new recruits after the orientation session

AWARENESS AND CONSERVATION ACTIVITIES

GLOBAL TIGER'S DAY 2016

REEF celebrates Global Tiger's Day (GTD) annually as a flagship event. This year REEF carried out various activities in and around the city as a part of GTD. One of them was an interschool ecological awareness competition, "How Green is your Campus? Challenge" in which ten schools of Nagpur city participated, namely Centre Point School (CPS, Dhaba), Mount Carmel Girls High School, Bhavans Vidya Mandir (BVM, Ashti), T.B.R.A.N's Mundle English Medium School, G.H. Raisoni, Vimaltai Tidke Convent, Hadas High School, St. Vincent Palloti, Bhavans Vidya Mandir (Civil Lines) and St. Xaviers High School. The event was coordinated by REEF Green Ambassadors Rohan Dekate, Shubhlaxmi Joshi and Himanshu Gunde. The judges of the competition included REEF Mentor Faculty-Dr. Deepshikha Mehra, Mr. Raveesh Jaiswal, Mr. Pushkar Kulkarni, Ms. Shukrita Puri, Dr. Sandeep Hate and REEF alumni, Vatsalya Mathur and Pratik Gupta.

REEFians approached the schools and persuaded them to participate in the competition so as to achieve the objective of creating awareness about tigers and environment among the students. This year the number of schools participating in the event reached to a new height of 10, which in



Students of Mount Carmel during the Bird Race on 16th September at the Gorewada Biodiversity Park

turn motivated REEF to take the responsibility of providing good platform to students who wanted to contribute in saving tigers and conserving Nature. The schools had to form an environment club and perform different tasks under six segments of the competition namely, Vrukshawali, Khagajidnyasa, Paryavarana Mapanam, Haritaprasaar, Swanubhuti and Praadushyam.

To involve the schools both physically and mentally, the segments of the competition were framed as follows

1. The **Vrukshawali** segment focused at improving the knowledge of students about various plant and tree species, and their importance. The objective of this segment was to enlighten students about the process of making a mini-herbarium. It also helped them in learning about the plant and tree species found in their school campus. The herbariums were exhibited on the final event day i.e. 29th July 2016. The herbarium segment was evaluated and judged by Dr. Sandeep Hate, a botanist and Professor at D.R.B Sindhu Mahavidayala.
2. For the segment of **Khagajidnyasa**, REEFians visited the schools and gave presentation about basics of bird watching to the students. The objective of this segment was to introduce them to bird watching, bird behavior, habitat and other related things. Bird race was organized on 16th and 17th July 2016 at Gorewada Biodiversity Park for all the participating schools. The winner of this segment was T.B.R.A.N's Mundle English Medium School.
3. The segment of **Paryavarana Mapanam** gave the students a fair idea about the impact of resources used by the school on the environment. REEFians calculated the ecological footprint of each school. The data such as fuel, water and electricity consumption was provided by the school students.



REEFians with the participants at the Gorewada Biodiversity Park



REEFian Atharva Mangrulkar giving presentation on bird watching to the students of T.B.R.A.N's Mundle English Medium School.



Participating Schools performing during the Praadushyam segment on 29th July 2016 in EN Auditorium

4. In **Haritaprasaar** segment students had to make a Facebook page in the name of their environment club and post various templates and videos about nature protection on these pages under the guidance of the school mentor teachers. The pages were continuously monitored by REEFians and judges till 28th July 2016. This segment aimed at creating awareness through social media. This segment was judged by Ms. Shukrita Puri, Media Strategic Planner, Coco Cola, and REEF Alumni – Vatsalya Mathur (Tech Mahendra, Texas) and Pratik Gupta (Accenture, Mumbai).

5. The fifth segment, **Swanubhuti**, students had to present their GTD journey and what they learnt from the competition. In this segment, one or two students from each participating School gave a presentation for a minute on the final day, 29th July 2016. This segment was judged by REEF mentor faculty, Dr. Deepshikha Mehra, Mr. Raveesh Jaiswal (Ceat Tyres), Ms. Shukrita Puri (Coco Cola) and Mr. Pushkar Kulkarni (Grindwell Norton Ltd).

6. The last segment, **Praadushyam** aimed at showcasing the talents of the students. It gave them a platform to present their creativity and boost their confidence. Each school performed various acts such as dance, skits, songs, and plays in this segment on 29th July 2016. This segment was also judged by Dr. Deepshikha Mehra, Mr. Raveesh Jaiswal, Ms. Shukrita Puri and Mr. Pushkar Kulkarni.



Dr. Sandeep Hate interacting with REEFians Apurva Bhiwapurkar, Rohan Dekate, Rohit Hazare, Gauri Chandak and Srushti Mehatkar about the Vrukshawali segment

T.B.R.A.N.'s Mundle English Medium School secured the first position whereas Mount Carmel Girls' High School turned out to be the runner-up of the competition. All the participating schools were felicitated with trophies and mementos. On final event day i.e. 29th July 2016, Music Club of RCOEM also presented a melodious song dedicated to tigers and an interactive session with the judges was also organized for the students.

Apart from the competition, REEF members carried out online and offline surveys at various public places in Nagpur city. This survey gave an insight about the knowledge and opinions of citizens on the environmental issues and our national heritage-Tiger. It also helped to create awareness about Global Tiger Day among common people.

REEF alumni made its presence felt though out the event along with the current members. Ms. Vishakha Jaiswal and Ms. Radhikha Kale (Accenture) were also present during the event.



Students of T.B.R.A.N.'s Mundle receiving award at the hands of Mr. Raveesh Jaiswal for winning the Vrukshawali segment



Judges, Dr. Deepshikha Mehra, Raveesh Jaiswal, Shukrita Puri and Pushkar Kulkarni during the main event on 29th July 2017



REEFians along with the judges Mr. Pushkar Kulkarni, Mr. Raveesh Jaiswal, Ms. Shukrita Puri and Mentor Faculty-Dr. Deepshikha Mehra

GANESH VISARJAN

REEF carried out an awareness and conservation activity on the occasion of Ganesh Visarjan at Police Line Takli Lake near Katol Road Square. This lake is one of the rich habitats for water birds in the city and in the previous years it was observed that its habitat was largely affected due to immersion of Ganesh Idols along with the disposal of Nirmalya and plastic waste. REEF took a step towards the conservation of this lake. On 15th September 2016, REEFians convinced devotees to immerse their Ganesh Idols in either of the two artificial ponds which were installed by NMC and to dispose the nirmalya in the nirmalya kalash.



REEFians Gauri Chandak and Udayann Dayaanand helping the people immerse idols in artificial tank



REEFian Himanshu Gunde interacting with a devotee about identification of PoP Idols

The drive was undertaken to create awareness about the PoP (Plaster of Paris) Idols as well as how do they affect water bodies and how to identify them. REEFians explained people how to distinguish between PoP idols and clay idols. The drive was conducted from 8 am to 8 pm on 15th September, when 785 idols were immersed in artificial ponds out of which around 245 idols were identified as PoP Idols, which implies that approximately 31.21% idols were made of PoP.

Devotees are not guided by idol sellers whether the idols being sold are of clay or PoP. This is the most common reason for the sale of such a huge number of PoP idols, as told by the devotees who came to immerse the idols at the lake. As a result of efforts taken by REEFians, not a single idol was immersed in the lake and even the garbage and nirmalya was disposed off carefully. 45 REEFians including the new recruits of REEF worked tirelessly and successfully fulfilled the objective of the activity. Devotees were very cooperative and appreciated REEF's efforts and concern. The Nagpur Police also cooperated with REEFians for this activity.



WILDLIFE WEEK

Wildlife week is celebrated in the first week of October all over the country every year with the view to preserve wildlife and create awareness about dangers faced by it due to various issues. To spread this message further, REEF had organized an 'Open Air Exhibition' in the College campus for two days, 6th and 7th October 2016, which displayed informative flex related to wildlife. On 6th October 2016 which was the first day of the exhibition, the flex was inaugurated by Dr. Deepshikha Mehra. REEF had collected various creatives like paintings, photographs, poems and sketches from college students.



Students having a look at the Photographs, Poems and Drawings in the Open Air Exhibition



Dr. Asudani, Head of Humanities Department guiding the REEFians and onlookers at the Inauguration on 7th October 2016

The best entries out of the ones received were displayed on a flex in the exhibition. The theme for the poetry entries was 'An Ode to Wildlife', the theme for paintings was 'S.W.I.T.C.H (See the Wild in the Cruel Human)' and that of the photographs was 'Green Campus'. A viewer's choice award was also announced on REEF's Facebook page, for which the visitors were asked to vote for their favorite entries under all the three sections – drawing/painting/sketches, poetry and photography. The last day of the exhibition, held on 7th October 2016, was inaugurated by Dr. V. H. Asudani, Head of Humanities Department. A flex was exhibited to spread awareness about illegal poaching of animals in different states of India and products made from them. REEFians and REEFlings explained the objective of Wildlife Week and also made the visitors aware of the threats to Wildlife due to illegal poaching and trading. The visitors also shared their experiences and views about wildlife, poaching and illegal trade.

MAKAR SANKRANT

Makar Sankrant is celebrated with great enthusiasm and with it comes kite flying and the thread used to fly these kites, the Chinese (Nylon) manjha. Therefore, like the past 3 years, REEF conducted activities towards spreading awareness about how kite flying with Nylon manjha is proving fatal for birds, humans and environment, and sensitizing young minds to stop using Nylon manjha.

1. When the birds cry (Graffiti). REEF focused on spreading awareness among college students and faculty members. To achieve this objective, a wall mural (Graffiti) was made in the Open Air Theatre (OAT) of college campus.



Dr. S D Mohagaonkar (Dean, Second shift) and Dr. Deepshikha Mehra along with REEFians during the inauguration of 'When the birds cry' at OAT



REEFians Anurag Tiwari and Purvashree Waldey discussing about the significance of kite flying during Makar Sankranti with students



REEFian Arohi Naik delivering a presentation on ill effects of Nylon Manjha in T.B.R.A.N's Mundle School



REEFians Aditya Khedkar, Abhishekh Palliwal, Prachi Shrivastava, Snehal Gajbhiye and Nancy Tolani discussing the significance of Sankranti with the students

The event named as, 'When the birds cry' focused on creating awareness about bird casualties and environmental hazards due to chinese manjha. REEFians explained the objective and concept of graffiti to the visitors, and also shared interesting facts about the origins of Sankranti, the reason behind flying kites and how the festival has turned into a competition. Many students also took selfies and uploaded it on Facebook with the hash tag - #REEFRCOEM, to express their support, thus spreading awareness through social media. The event was coordinated by REEFians Gauri Chandak and Atharva Mangrulkar.

2. School Presentations. Aiming to sensitize young minds, REEFians delivered presentations on 12th and 13th January 2017, in private and government-run schools namely Tidke Vidyalaya, Centre Point School (Dabha), Hadas High School, Jawahar Convent, Bhavan's Bhagwandas Purohit Vidya Mandir (Srikrishna Nagar), St. Vincent Palloti School, and T.B.R.A.N's Mundle English Medium School. The school students were encouraged to collect manjha from their school premises and localities. Students of Jawahar Convent and Tidke Vidyalaya collected the manjha in and around their localities and submitted it to REEFians.

3. Balsadan Drawing Competition. A drawing competition was organized for the students of Balsadan, Katol Road, Nagpur (a hostel for underprivileged kids) on 9th January 2017 on the occasion of Makar Sankranti. REEFians first discussed and explained the history, origin, objective behind the festival along with ill effects of nylon manjha to the students. This activity made students aware about ill effects of nylon manjha. REEFians helped the students to incorporate their creative ideas and the festival in the form a drawing.

MANJHA REMOVAL AT RAJ BHAVAN

On 28th and 29th January 2017, REEF conducted manjha removal drive at Raj Bhavan, a rich biodiversity hotspot in the city. The idea behind selecting Raj Bhavan every year for this drive is that it is situated in the middle of the city surrounded by residential area. Hence, immense manjha is trapped in and around Raj Bhavan. On 28th January 2017, the manjha removal activity was conducted from 12.30 to 6 pm and from 6 am to 6 pm on 29th January 2017. REEFians removed manjha from trees, electric poles, fences, and the water bodies that could prove deadly for birds. During this activity, REEFians spotted some amazing bird species like Verditer flycatcher, Grey-headed canary flycatcher, Black-lored tit, Orange-headed thrush and Long-tailed shrike on one hand and on the other hand they also witnessed a dead Blue Rock Pigeon entangled in manjha.



REEFians in the Raj Bhavan premises during manjha removal

EARTH HOUR

REEF has been conducting activities to create awareness against many environmental issues. One of them is Earth Hour which is global movement organized by WWF (World Wildlife Fund) to unite people and act against climate change by switching off non-essential lights for an hour in the evening from 8.30 to 9.30 pm. This year Earth Hour was marked on 25th March 2017. REEF conducted various activities which involved the Balsadan kids, city Radio stations, faculty members and college students.

REEFians made articles from waste and the manjha collected from Raj Bhavan. The articles were exhibited in the college campus on 25th March 2017. REEF also organized a science and art exhibition in which the kids of Balsadan presented science projects and creatives made out of waste like plastic bottles, bangles, newspaper etc.

The faculty members of college were also encouraged to participate in a vehicle pooling activity on 25th March 2017. REEFians approached faculty members of all the departments in college on 24th March and requested them to pool their vehicles on 25th March 2017 to mark Earth Hour day. Stickers designed by REEFians Ojaswara Pathak and Pratyaksha Jha were gifted as a token of appreciation to the faculty members who participated in the vehicle pooling activity.



REEFian Chitra Dangra interacting with visitors about the projects of Balsadan kids



REEFian Abhishek Paliwal interacting with students about Earth Hour



REEFians Atharva Mangrulkar, Gauri Chandak, Ojaswara Pathak and Shruti Rathi at the Radio City 91.1 office with RJ Deepika

A flex was also exhibited in college campus on 25th March 2017 which depicted an hour glass and Earth. The visitors were first asked to write their interpretation of the flex and then REEFians briefed them about Earth Hour and the objective behind the activity. They also requested the visitors to switch off lights for an hour in the evening from 8.30 to 9.30 pm. Radio City 91.1 was also approached for spreading awareness in the city about Earth Hour. REEFians Atharva Mangrulkar, Gauri Chandak, Ojaswara Pathak and Shurti Rathi went on air and talked about the significance of Earth Hour and REEF's activities on Earth Hour day. Templates on Earth hour were circulated through WhatsApp and Facebook to make people aware about their role and encourage them to take efforts in controlling climate change. An online event for Earth Hour was also created in order to inspire people to contribute in climate change control by switching off lights for an hour, which spreads awareness about climate change.



DOMAIN ACTIVITIES

ARTICLE

REEFocus. An offline group discussion activity was started to improve the communication skills and general knowledge of REEFians. In these sessions REEFians discuss about various environmental and social issues. Five REEFocus sessions were held in the year 2016-17 in which the following topics were discussed:

1. Eco-feminism
2. Genetic pollution
3. Third gender roles in Indian society
4. A student's mental health and exam pressure
5. Forced religion

GaneshUtsav_LifeToElement. This online activity was conducted to create awareness regarding the pollution and waste generated due to immersion of Ganesh idols or Ganesh Visarjan. All the domain members were divided into writer-editor pairs. Each pair was allotted an element related to the festival (like mushak, PoP, clay, durva, dhol, modak, water, unity, garland, and coconut). The storyline of this activity included a conversation between Lord Ganesh and the mouse (Mushak). The writer had to personify himself/herself as the allotted element and describe the experience of the element during the festival. Each writer posted the description on Facebook with the hashtags: #GaneshUtsav_LifeToElement and #REEF_RCOEM. This activity aimed at creating awareness about the pollution of environment during the festival.

REEF_Create_Your_Story. In this activity each domain member had to select a literary genre (like Legend, Romance, Fiction, Travel, Horror, Satire, Drama, Comedy, Suspense, Action and adventure, Tragedy, Realistic fiction, Science fiction, Fantasy and Magical realism), and frame a story based on it. The story had to be completed between these sentences: "When I saw the sun shining even brighter than yesterday and the birds chirping.....and here I was

gasping at the cliff which was the end". Each member posted the story on Facebook with the hastags: #REEF_MyStory, #REEF_Genre and #reefrcoem. The aim of this activity was to introduce the domain members to different literary genre and improve their creative writing skills.

During the session 2016-17 following activities were also conducted under this domain.

1. The first activity of this domain was 'REEF-Bulletin'. Each member framed a list of everyday news under the sections like sports, politics, international, social, environment and miscellaneous, and shared it on the WhatsApp Group.
2. The second activity of this domain was 'Framing the riddles'. The domain members were divided into groups of two. Each group framed 4-6 riddles based on facts related to environment and various environmental issues, and shared it on the domain WhatsApp group. The other members of the domain gave answers to the riddles. This activity also aimed at improving writing skills of REEFians. It was a fun and learning activity.
3. A meeting of the all domain members was held on 23rd January 2017 which focused on the introduction to article writing and 'WordPress', a website on which REEF's blog, REEFLOG is created. A group discussion was also held on the topic 'Industrial development and environmental development can't go hand in hand.'
4. Online discussions/debates were held regularly on various environmental and social topics such as:
 - Increasing lion population in Gir forest National park
 - Should Surrogacy be banned in India?
 - Budget 2017: Beneficial for the growth of Indian economy or not?
5. Following articles were also posted on REEFlog:
 - Why should PoP (Plaster of Paris) be banned?
 - Are your oblivious actions destroying his own mother?
 - O Kaat! But What?
 - Bird count through Line Transect method: An experience
 - Manjha- the menace
 - Our fight against the nylon manjha
 - Birding hotspots of Nagpur: Gorewada biodiversity park

- The imitation game – Adapting life
- An escape into the forest
- Curing the caps, filling the gaps.

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BALGRAM (COMMUNITY SERVICE)

BURGEON: The idea of this activity, given by REEFian Shreeranjini Iyer was to improve the knowledge of students of Balsadan, a foster home for economically backward children situated at Katol Road Square, Nagpur. It was conducted in December 2016 and one topic was dealt with every day and the kids solved worksheets of the same. REEFians also conducted regular tests for the kids. The main objective behind this activity was to help kids improve basic reading and writing skills in Hindi language. The kids performed well in the tests. REEFians monitored the kids regularly who were not good with their Hindi reading and writing skills.

BALGRAM PREMIERE LEAGUE (BPL): A cricket tournament, Balgram Premiere League (BPL) was organized for the kids of Balsadan on 12th October 2016. It was planned with the objective of imbibing values of sportsmanship and team work among the kids. Teams were made in such a manner that the kids those who have a sense of enmity towards each other were put in the same team so as to understand each other and become friends. REEFians and the kids enjoyed the BPL and got to know each other. At the end of the game the winning team members and the outstanding performers were also felicitated.



REEFians Shreeranjini Iyer and Prachi Shrivastava solving doubts of kids during a Burgeon session



REEFians conducting a Burgeon session with the Balsadan kids



REEFians with the Balgram kids at Raman Science Centre



REEFians interacting with the kids about the visit to Raman Science Centre

VISIT TO RAMAN SCIENCE CENTRE: REEFians organized a fun and learning trip to Raman Science Centre on 19th February 2017 for the kids of Balsadan. This visit aimed at imparting knowledge about science, technology and their applications in real life and industry to the kids. REEFians and the kids attended a 3D show which focused at imparting knowledge about evolution of earth and pre-historic era. Thereafter they attended a Planetarium show through which the kids learnt about Mars rover project. They also visited Invention, Fun Science, and Information and Communication galleries. Invention gallery showcased the information about various inventions in the field of science, technology, mechanical systems and fundamental science principles involved in the invention of modern day appliances. They were guided by an instructor who explained the working principle of all the exhibits. After the session each kid was asked to share the learning and experience from the trip. This visit aimed at imparting knowledge about science, technology and their applications in real life and industry to the kids. REEFians and the kids attended a 3D show which focused at imparting knowledge about evolution of earth and pre-historic era. Thereafter they attended a Planetarium show through which the kids learnt about Mars rover project. They also visited Invention, Fun Science, and Information and Communication galleries. Invention gallery showcased the information about various inventions in the field of science, technology, mechanical systems and fundamental science principles involved in the invention of modern day appliances. They were guided by an instructor who explained the working principle of all the exhibits. After the session each kid was asked to share the learning and experience from the trip.

JOINT LEARNING SESSIONS (JLS): These sessions aimed at improving the grammatical and mathematical skills of the students of Balsadan. Each session was conducted once in a week from 24th February to 26th March 2017. The topics that were taught to the students were noun, verb, tenses, degree of comparison, articles, and multiplication tables. A member of Article and Balgram domain each were paired to conduct these sessions. It helped the kids improve their basic knowledge about Grammar and Mathematics.



REEFians Gauri Chandak, Nupur Vyas and Geetika Mohabe interacting with the kids during a JLS session



REEFian Chitra Dangra and Kartik Vaswani teaching grammar to the kids in a JLS session

BIRDING

VIDARBHA BIRD RACE: REEF won the Vidarbha bird race organized by Maharashtra forest department in association with Birds of Vidarbha (BoV) on account of wildlife week celebrated from 1st to 7th October 2016. This is the 3rd consequent win for REEF in different bird races organized in Nagpur in the past one and a half years. REEF stood 1st among 30 teams that participated from all over Vidarbha. The team was led by REEFian Rohit Hazare. The other members were Harjot Singh Kahai, Atharva Mangrulkar, Himanshu Gunde, and Udayann Dayaanand. A bird race is a full day competition where a group of experienced and budding bird watchers spend an entire day spotting and identifying as many species of birds as possible. The team which is able to identify the maximum number of bird species wins the race. Winning is based on many aspects like knowledge and identification skills.



Mentor faculty and Bird Race winners along with other REEFians



REEFians receiving award for winning the Vidarbha Bird Race

BIRD COMMON MONITORING PROGRAMME (CBMP): A new birding technique 'Line Transect method' was followed by REEFians in a birding trip on 15th January 2017 for the Common Bird Monitoring Programme (CBMP) conducted by Bombay Natural History Society (BNHS). This scientific method of birding allows one to observe every patch only for a fixed duration while following a straight path. Two teams of REEF covered Gorewada biodiversity park and Ambazari lake for this activity. An article about this monitoring program titled, 'Bird Count through Line Transect Method: An Experience' was posted on REEFLog on 16th January 2017. The article included the experiences and observations of REEFians who participated in the activity.

BIRDING WITH BIRDS OF VIDARBHA (BoV) MEMBERS AND STUDENTS OF SOUTH POINT SCHOOL: REEF coordinated with BoV (Birds of Vidarbha) in order to introduce the students of South Point School to bird watching and took them for a field trip to Ambazari backwaters on 29th January 2017. REEFians Rohit Hazare and Hida Ahmed also delivered presentation on bird watching to the students on 28th January 2017. REEFians also made templates on various bird families that are posted on BoV, a Facebook group of enthusiastic bird-watchers of Nagpur city.



REEFians with the BoV members and students of South Point School at Ambazari backwaters.

BIRDING TRIP WITH Mr. ROHIT CHAKRAVARTY: REEF organized a birding trip to Undri lake with one of the well-known bird experts, Mr. Rohit Chakravarty on 8th January 2017. Undri lake is one of the rich birding hotspots around Nagpur. It is located on the Umred road at 37 km from the main city. The objective behind this trip was to get exposure to birding in a more scientific way and to learn more than just identifying birds. This objective was very well satisfied as REEFians learned about the migration and habitat of water birds, some distinguishing features between similar looking birds, and also nesting behaviors of various birds were discussed with Mr. Rohit Chakravarty. Some good sightings of birds like Peregrine Falcon, Grey-throated Martin, Osprey and Bar-headed Geese were also recorded.

BIRDING WITH CENTER POINT SCHOOL A birding trip was conducted on 12th and 19th March 2017 with the students of CPS Dhaba from standard 4th to 8th and 1st to 3rd respectively. They were first briefed about the significance, basics, and dos and don'ts of Birding. The purpose of the trip was to make them aware of various bird species and to encourage them towards their conservation. Interactive and informative activities were also conducted so as to make them understand different birds, their behavior and ecology. On 12th March 2017, the students were divided into teams. After the bird-watching session the teams had to solve a puzzle on common birds that they sighted that day. On 19th March 2017, the kids were shown a picture of a common bird and they had to identify it. It helped them understand the identification pointers of common birds easily and introduced them to bird-watching. REEFians Rohit Hazare, Atharva Mangrulkar, Himanshu Gunde, Ojaswara Pathak, Purvashree Waldey, Aditya Khedkar, Smita Sreeram, Nupur Vyas, Hida Ahmed, Arohi Naik, Sarthak Pande, Anurag Tiwari, Piyush Chhhawsaria, Nancy Tolani, Neha Moharil, Chitra Dangra, Geetika Mohabe, Rishabh Meher, Kartik Vaswani, Chetan Pandey, Abhishekh Paliwal were accompanied by Mentor faculty, Dr. Deepshikha Mehra for this birding session.



REEFians with the students and their teachers and parents at Gorewada

Bird Baths Installation. REEF members installed bird baths on 1st April 2017 at various places in college campus to cater the water requirements of thirsty birds. A total of 14 bird baths were installed. These bird baths are taken care of by the gardening staff along with the REEF members. The college campus is rich in bird biodiversity and thus it's a step to help the birds quench their thirst. A video was also prepared regarding the activity and posted on the Facebook page of REEF to spread awareness about the bird baths in college campus and urged the college students and staff to refill the empty bird baths and also install bird bath at their place to help the birds survive the extreme temperatures in the summer season.



Hanging Bird Baths installed by REEF (Left) and Bird Baths being refilled (Right)

Bird Rescue. On the morning of 6th April 2017 a baby house swift was found lying on the ground in the Civil Department. Students informed REEF members through a call. After initial assessments, it was found that it had fallen from its nest. The baby swift was cared for and given water while other members tried to identify its nest. As soon as the nest was identified, the swift was put back into it by REEFians Himanshu Gunde, Piyush Chhawsaria and Rishabh Meher. On 26th April 2017, two juveniles of Laughing Dove were found to have fallen from their nest in a Lab in Civil Department. REEFians Chetan Pandey and Rishabh Meher monitored and looked after them until their mother came started to take care of them. This are few of the many rescues that REEF has done this year. Owing to high temperatures and lack of water, these cases are common in the college campus during summers.



The rescued baby House Swift drinking water



REEFian Himanshu Gunde trying to rehabilitate a House swift

Other activities conducted by the birding domain in the year 2016-17 included.

- **BoV Templates:** Templates on body parts of birds, and their families were posted on Birds of Vidarbha (BoV) every week. For this activity, domain members were divided into groups and each group was allotted 3-4 bird families. These templates helped the new birders to improve their identification skills and knowledge about bird's ecology.
- **Bird Quiz:** Online quizzes were conducted online regularly on the WhatsApp group to improve knowledge about bird identification and behavior. In the quiz, calls and pictures of different birds were shared on the WhatsApp group by the domain coordinators, Rohit Hazare and Himanshu Gunde. The other members of the group had to identify the birds.
- **Warbler's Grid:** For this activity, 16 warblers were divided into 6 pairs based on similarities to identify them. Each member had to select a pair, and share observations about the warbler species of that pair based on the distinguishing features like body parts (head and super cilium), habitat, behavior and call.
- **Lessons Learnt:** Birding trips were conducted regularly to various birding hotspots in the city like Mihan, Ambazari, Wena and Gorewada biodiversity park. After every birding trip, the members shared their observations, experiences and learning about various bird species, their behavior and biology from that trip on the WhatsApp group.

HERBARIUM

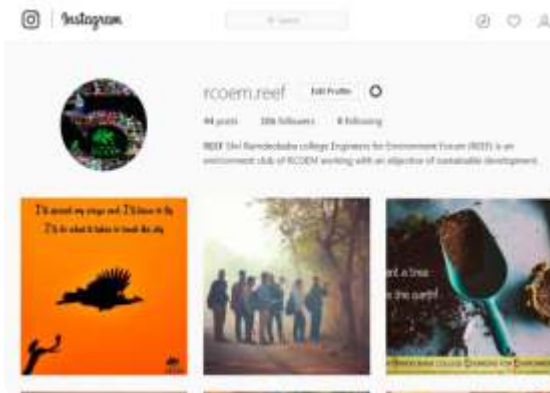
CAMPUS MONITORING: REEFians monitor the greenery in college campus once in a week. They have been divided into seven groups for this purpose. The college campus has also been divided into seven patches. Each group is allotted a patch to monitor. They do bird watching from 6.30 to 7.30 am in the morning and 4.30 to 5.30 pm in the evening, once in a week to record the bird species found in the campus. They also monitor the condition of trees and plants found in their patch. Each group submits an online response Google form for the respective patch so as to record the monitoring activity. REEF is planning to make a Biodiversity register of college and this monitoring activity helps record the bird and tree diversity present in the campus.

SOCIAL OUTREACH

WORKSHOP ON POWERPOINT, PHOTOSHOP AND COREL: REEFians Pratyaksha Jha and Nilu Pandey conducted a workshop aiming to explain Basic principles of PowerPoint Presentation to REEF members on 15th October 2016 in Language lab (Humanities). It was attended by REEFians as well as REEFlings. REEFian Pratyaksha Jha explained the basic rules to make a template effective. REEFian Nilu Pandey practically explained various tools and features of PowerPoint, and various ways to improve the reach of posts made on REEF's Facebook page. Another workshop was conducted by REEFian Pratyaksha Jha on Photoshop and Corel Software on 16th October 2016. The main objective of this workshop was to introduce REEF members to various designing software and explain how to improve design of visual content.

REEF's INSTAGRAM ACCOUNT: To keep up with the latest trends and use them to spread awareness about environment, REEF created its Instagram account on 2nd February 2017. The objective behind it was to reach out to more people and spread awareness about various environmental issues. It has also helped in creating awareness about REEF and its activities as an environment club so as to encourage masses in doing their bit towards conserving nature and protecting our environment. REEF made posts about the past activities, college level events,

photographs captured during birding sessions, etc. on Instagram. The followers of REEF are increasing day by day and they are also planning various strategies to increase its reach.



The Instagram account of REEF with the username rcoem.reef



A collage of templates made by REEFians which were posted on REEF's Facebook page and Instagram account

ANNUAL GENERAL MEET (AGM)

1. To keep up with the latest trends and use them to spread awareness about environment, REEF created its Instagram account on 2nd February 2017. The objective behind it was to reach out to more people and spread awareness about various environmental issues. It has also helped in creating awareness about REEF and its activities as an environment club so as to encourage masses in doing their bit towards conserving nature and protecting our environment. REEF made posts about the past activities, college level events, photographs captured during birding sessions, etc. on Instagram. The followers of REEF are increasing day by day and they are also planning various strategies to increase its reach.

2. REEF's second AGM of the year 2016–17 was conducted on 2nd October 2016 at Balsadan. Dr. Deepshikha Mehra guided REEFians about how the club is going to help them develop and give them a platform to polish their skill-set. REEF alumni who accompanied Dr. Deepshikha Mehra in guiding REEFians were Supriya Kawadkar, Aaditya Somani, Vishakha Jaiswal, Radhika Kale and Apurva Bhiwapurkar. They guided everyone about the rules and regulations to be followed while working. REEFians Apurva Bhiwapurkar and Gauri Chandak

shared their experiences of how REEF has helped them improve their literary and managerial skills respectively. Also the respective domain coordinators discussed some activities and issues with the REEFlings.

1. The last AGM of the year 2016-17 was held on 2nd January 2017 at Balsadan. It marked the transition of new members from REEFlings to REEFians. The members who performed well in the previous semester were appreciated for their hard work. New domain plans for the upcoming semester were discussed and administrative coordinators (Rohit Hazare, Atharva Mangrulkar, Gauri Chandak, Himanshu Gunde and Pratyaksha Jha) were also appointed. The domain as well as REEF activities performed in the previous semester were evaluated based on the objective and outcome achieved.



REEFians along with mentor faculty after the AGM on 7th August 2016 (left) and 2nd January 2017 (right) at Balsadan, Katol Road, Nagpur

VISITS AND TRIPS

INDIAN WILDLIFE PHOTOGRAPHY EXHIBITION

On 5th October 2016, during wildlife week REEF visited an exhibition, 'The Indian Wildlife Photography Exhibition' organized by Maharashtra forest department and Birds of Vidarbha (BoV) at Government Chitrakala Mahavidyalaya, Nagpur. The theme of the exhibition was Indian wildlife. Jaw dropping photographs clicked by wildlife enthusiasts across the country showcasing the biodiversity were exhibited. Best three photographs were awarded with cash prizes and a people's choice award was also given by a voting system. The exhibition was a good learning experience for all REEFians as the exhibition showcased surprising behaviors and diversity of Indian wildlife.

KEOLADEO NATIONAL PARK (BHARATPUR, RAJASTHAN)

Eight REEFians along with the mentor faculty, Dr. Deepshikha Mehra visited Keoladeo national park, Bharatpur, Rajasthan from 18th to 23rd December 2016 for an education bird-watching trip. They spotted 142 bird species which included Sarus Crane, Great White Pelican, White-tailed Lapwing, Dusky Eagle Owl, Black-necked Stork, Moustached Warbler, Imperial Eagle, Tawny Eagle, Steppe Eagle and Oriental Scops Owl (species not found in the Vidarbha region at all or are not common).

REEFians explored the park by walking and cycling for two days each. Miscellaneous activities included visit to Fatehpur Sikri on the way to Bharatpur from Agra and visit to Taj Mahal and a boating trip while returning back to Maharashtra. While boating behind the Taj Mahal, they spotted Pied Avocets. REEFians also learnt about different bird habitats and behavior. The rich flora and fauna of the park helped REEFians improve their observation and identification skills.



REEFians during bird-watching with the guide Bijendar Singh at Bharatpur Bird Sanctuary, Keoladeo National Park, Rajasthan

TRAVELLING FILM FESTIVAL ON WILDLIFE

REEFians attended film festival hosted by Kolkata International Wildlife and Environment Film Festival, India (KIWEFF) in association with Pench foundation on 24th January 2017 at Deshpande Hall, Nagpur. Award winning wildlife films from all over the world were shown in the film festival. Films like Sirocco—the Kakapo and Story of Macchali—the tigress were centre of attraction of this film festival. Green warriors around the city were also awarded for their valuable contribution in wildlife conservation. REEF mentor faculty, Dr. Deepshikha Mehra was accompanied by REEFians Aaditya Somani, Supriya Kawadkar, Rohit Hazare, Atharva Mangrulkar, Gauri Chandak, Himanshu Gunde, Ojaswara Pathak, Purvashree Waldey, Aditya Khedkar, Shruti Rathi, Piyush Chhawsaria, Rishab Meher, Chitra Dangra and Kartik Vaswani.

TRIP TO TADOBA – ANDHARI TIGER RESERVE (TATR)

19 REEFians along with the mentor faculty, Dr. Deepshikha Mehra visited Tadoba–Andhari Tiger Reserve (TATR) from 5th to 8th March 2017. The trip helped REEFians learn about the management, orientation and distribution of a tiger reserve. They also interacted with the villagers of Moharli about their livelihood options in a tiger reserve and their encounters with wild animals. REEFians did 3 safaris in the core region during which they spotted various wildlife and bird species.

The highlights of the trip were the sightings of Wild Dog, Barking Deer, Spotted Deer, Sirkeer Malkoha, Jerdon's Leaf Bird, Black-hooded Oriole, Grey-headed Fish Eagle, Crested Serpent Eagle and Brown Fish Eagle.



Bird watching in the buffer zone



REEFians during canter safari in the core region

BIRD CONSERVATION AND PLASTIC MANAGEMENT WORKSHOP

REEFians Rohit Hazare, Kartik Vaswani and Rishab Meher attended an intercollegiate workshop organized by SSES Shivaji Science College, Nagpur about 'Conservation of birds through artificial nesting and plastic waste management' on 23rd February 2017. The workshop was conducted by Dr. Tanveer Mirza and Dr. Milind Pagare. The session started with a presentation by Dr. Mirza who introduced the disturbed face of environment due to uncontrolled use of plastic. The presentation included cases leading to marine life degradation, deaths of sea gulls, boobies, turtles due to plastic consumption. They also suggested measures that we can adopt to reduce plastic consumption. Different videos were shown which focused at the process of manufacturing, reducing and reusing plastic to stop it from polluting our environment. The workshop also included a very interesting practical session of making bird houses. Well-defined wood pieces were provided to all the participants and were guided by experts in making bird houses. Participating REEFians also received certificates and cloth bag as a symbol of using no plastic. The workshop provided exposure to REEFians in terms of gaining knowledge about conservation, recycling and meeting experts in the field of conservation and awareness.

REEF'S 5TH ANNIVERSARY

On 25th January 2017, REEF completed its 5 wonderful years. The frolic birthday celebration took place at Kabila restaurant on 26th January 2017. The new REEFians presented a play, “Zoomru–Bhool nahi paoge”, as a surprise to the mentor faculty and other REEFians. In the play, they depicted their learning experiences with all five domains of REEF. The alumni REEFians gifted REEF badges to all the fellow REEFians. They also presented REEF's journey of 5 years in the form of a video. It was fun and every REEFian enjoyed and cherished the event.



REEFians during the celebration.