1. WATER QUALITY ASSESSMENT OF KALUNDRE RIVER BY ENACT MEMBERS

As a responsibility towards river conservation, the Environment Analysis and Conservation team has been assessing the water quality of Kalundri river of Panvel flowing adjacent to the campus. The team has completed the second quarter analysis of the river. Such analysis will help determine the pollution levels much better and thereby will help in deciding suitable measures towards the river conservation.

Student members under the guidance of Prof. Gopakumar Pillai, Incharge (EnACT) carried out the water quality assessment of Kalundre River, Panvel for the period of April-June, 2015. The major parameters for quality analysis were studied and the following results were obtained.

Sr. No.	Parameters Analysed	Result
1	pH	7.5
2	Temperature	$28^{o}C$
3	Conductivity	0.76 mS
4	Chlorinity	1.77 mg/L
5	Salinity	3.23 mg/L
6	Total hardness	0.8/ mg/L
7	Chemical Oxygen Demand (COD)	8 mg/L
8	Biological oxygen demand (BOD)	3.5 mg/L
9	MPN index	>220/100 ml
10	Gram Staining	Gram +ve bacilli and cocci, Gram –ve coccobacilli and rods

The quality of water was found to be poor and requires some treatment to be provided. On comparison to the earlier analysis a significant reduction was observed in the chemical and microbial contaminants. But still the water showed high levels of microorganisms which may include pathogenic species too reflecting the need of urgent measures to curb it. As a measure, the Team is planning to carry out some activities to reduce the polluting sources.

2. CANTEEN AND GARDEN WASTE COMPOSTING

Student members of the Environment Analysis and Conservation team (EnACT) under the guidance of Prof. Gopakumar Pillai carried out composting in the campus during the months of July and August, 2015. The activity was conducted as a part of the campus solid waste management program. Garden waste and canteen waste and other biodegradable components were accumulated and taken up for composting. The process was well monitored by students to facilitate effective degradation. Complete degradation of the wastes was obtained in 25 days following which the mature compost was given to the gardeners for utilization as manure for enhancing plant growth. Also, the students carried out physical and chemical analysis of the compost to check its efficacy as manure. The results indicated the presence of organic matter, phosphorus and calcium in abundance and also showed good physical properties of ideal compost. Such inexpensive and ecofriendly approach can contribute immensely towards effective solid waste management and the team looks forward to make it a habit.

3. FIELD VISIT TO CETP

The Department of Biotechnology conducted a field visit for the students from T.Y B.Sc as a part of their curriculum to the Common Effluent Treatment Plant (CETP), MIDC, Khairane on 4th September, 2015. As water security has been and still remains a major challenge in our country today, students must be made aware and exposed to water scarcity and related problems and various treatment measures to combat the issue. A total of 50 students accompanied by two faculty members went for the visit. Students were briefed about the working of the effluent treatment plant and various challenges linked to water security and the intricacies involved in dealing with the challenge. The students were made aware of the treatment procedures that were carried out for industrial waste water before being discharged into the water streams. Students were highly motivated to contribute towards protecting the environment. Students were encouraged to participate in various training programs related to waste water treatment.

4. ENVIRONMENT PROTECTION CELL RESCUES A BARN OWL

Mr. Gopakumar Pillai, Incharge - EPC & EnACT (left) and Mr. Devendra Gudile (right) with the rescued Barn Owl

On 29th January, 2016, the members of Environment Analysis and Conservation Team (EnACT) of Biotechnology Dept., found an injured Barn Owl in the campus building which was being attacked by crows. The EnACT members rescued the bird and provided temporary shelter to the bird under the guidance of the faculty member, Prof. Gopakumar Pillai (Incharge of EnACT & EPC). The Environment Protection Cell took help form the Uran based NGO, Friends of Nature (FON) to rescue the bird. Mr. Nikhil Bhopale & Mr. Devendra Gudile from FON provided the necessary help on time. The bird was taken to the organization and provided first aid, food and shelter and released safely at night. The Environment Protection Cell is thankful to the NGO, Friends of Nature, Ms. Aishwarya Sridhar (BMM student) and all the members of EnACT and EPC who have contributed to this rescue activity.

5. ENVIRONMENTAL SCIENCE PROJECTS

To motivate students to inculcate interest and work towards environment maintenance and conservation, the students were assigned short term projects and guided by their respective teacher in charges.

Name of the Project	Name of the Students	Project guide
Isolation of dye degrading bacteria from soil	Poonam Amrita Sameeksha Tejashree Trupti Aisha	Ms. Meenakshi Johri
Measurment of pollution at panvel city	Romina Parul Farheen Tejal Fatima	Ms. Aparna Sagare
Water Analysis	Aakansha Juily Swapanali Namrata Apurva	Dr. Amol Samant
Compost analysis	Ninad Nitish Shreejit Hrishikesh Tarun	Ms. Meenakshi Johri
Chemical analysis of Vermicompost analysis	Ankita Harshita Sofia Sharayu Anusaya	Ms. Aparna Sagare
Water analysis	Aishwarya Juhi Sayali Pooja Bhumika	Dr. Amol Samant
Isolation of Metal tolerant bacteria from soil.	Sharmila Banu Sharmila Begum Sonali Ankita Priyanka	Ms. Meenakshi Johri

Water analysis of Kalundre River	Anju Divya Babita Anjali Kaustubh	Mr. Gopakumar Pillai
Isolation of phosphate solubilizers	Ramola Simran Sumaya Deepali Nikita	Dr. Amol Samant
Biodisel Production	Yashita Pooja Christy Susan	Ms. Aparna Sagare