Institutional Achievements

Swachh Campus 2018

Department of Higher Education

Ministry of Human Resource Development
Government of India

सत्यमेव जयते

Swachh Campus 2018

Institutional Achievements

Mahatma Gandhi National Council of Rural Education

(Formerly National Council of Rural Institutes)

Department of Higher Education, Ministry of Human Resource Development, Government of India

#5-10-174, Shakkar Bhavan, Fateh Maidan Road, Basheerbagh, Hyderabad - 500 004.

Tel : 040-23212120, 23422105, Fax : 040-23212114, www.mgncre.in

प्रकाश जावडेकर
Prakash Javadekar

सत्यमेव जयते

मंत्री
मानव संसाधन विकास
भारत सरकार
MINISTER
HUMAN RESOURCE DEVELOPMENT
GOVERNMENT OF INDIA

MESSAGE

I am pleased to observe that the Swachhata Mission has been embraced by our Higher Educational Institutions and their efforts at both in-campus & off-campus hygiene have gone up in leaps and bounds. This is reflected in the fact that this year's Swachhata Rankings exercise has seen more than double the number of institutions applying, compared to last year. I am happy to note that of these 6029 institutions, 2430 have installed solar power in their campuses and 940 are in progress. More than 2500 of these institutions have installed composting facilities in campus, while more than 93 % institutions have 24 hours running water facility. Several other intensive activities have been undertaken by our institutions towards creating a hygienic and vibrant learning environment for students.

I am glad that an effort has been made to capture the Swachhata activities of about 62 leading institutions into this publication to showcase their achievements. This publication should set the benchmark and serve as a reference point for more and more institutions to consciously create hygienic campuses. It is heartening to see that this publication has brought out the village adoption interventions of our institutions in hygiene and the fact that a few thousand villages have benefited, makes our Rankings Exercise a prime mover of environmental hygiene in the country.

(PRAKASH JAVADEKAR)

Room No. 3, 'C' Wing, 3rd Floor, Shastri Bhavan, New Delhi-110 115
Phone : 91-11-23782387, 23782698, Fax : 91-11-23382365,
E-mail : minister.hrd@gov.in

Foreword

Students are ambassadors of cleanliness. Their participation and zeal to keep campuses clean and green along with the support of people and institutions can go a long way in reaching our vision of a Swachh India. Universities and Higher Educational Institutions need to be smart campuses with focus on cleanliness as well as waste management. Saving water and electricity, conserving energy, harvesting rain water, tapping solar energy and promoting cleanliness are indicators to measure a smart campus. Such endeavours by students need to be appreciated and rewarded time to time not only to promote cleanliness but also to create a sense of competition for an environmentally critical cause.

Exercises to rank Universities and Higher Educational Institutions (HEIs) on the basis of cleanliness and hygiene need to be done periodically with a given set of parameters for an unbiased assessment. Factors such as student: toilet ratio, kitchen hygiene, hostels' maintenance, availability of running water, modernity of toilets, kitchen hygiene, campus green cover, solid and liquid waste management, garbage disposal, solar energy usage, and other relevant areas are benchmarks for University and HEI rankings. More so, the adoption of neighbouring villages and the interventions carried out in such villages to bring out positive and developmental changes are necessary to assess the zeal and commitment to spread awareness about Swachhta.

The Government's mission to promote Swachhta has given a clarion call for HEIs to submit their Swachh report. More than 6000 Universities and HEIs responded. The following pages include meticulously documented Universities and HEIs Swachh profiles, a testimony to the growing demand for cleanliness and the willingness of authorities to encourage such developmental drives.

W G Prasanna Kumar
Chairman, MGNCRE

"Cleanliness Is Next to Godliness." – Mahatma Gandhi

Contents

Symbiosis International (Deemed University)

Pune, Maharashtra

Symbiosis International University (SIU), established on the principles of the Vedic thought 'Vasudhaiva Kutumbakam' meaning 'World is One Family' believes in 'Promoting International Understanding through Quality Education'. The main campus of the University is located in the picturesque hilly region near Pune. Today, the campuses of University are spread across four states with 32 Constituent Institutes/ Departments offering quality education under seven Faculties supported by 726 qualified and dedicated faculty. The University has created a state of the art Infrastructure across all its campuses. The main campus of the University hosts nine Constituent Institutes/ Departments, ranging from Engineering, Management, Biological Sciences, Media and Communication, Photography, Sports Sciences to Culinary Arts. 4187 students are studying at the main campus of the University out of which 2925 are girls and 1262 are boys. Today 18,281 students from across all States of India and more than 85 foreign countries are studying in its Constituent Institutes/ Departments, out of which 8186 are girl students and 10095 boy students.

Residential Facilities:

The Main campus of the University has 13 hostels. The rooms in the hostels are of double and triple occupancy with attached toilets and bathrooms with 24 X 7 water supply. The University has its own water purification system along with water purifiers. Solar water heaters are installed on all hostel buildings for supply of hot water. All hostels are equipped with Wi-fi facility. Every campus has a Symbiosis Centre for Health care with residential medical staff. University has established the Symbiosis Centre for Emotional Wellbeing and student affairs to

take care of the emotional health of the students. Every campus has Recreation and Wellness centre with well-equipped gymnasium, and outdoor and indoor sports facility. To maintain cleanliness in and around the hostels, housekeeping staff have been appointed. The washrooms are cleaned twice daily, and are monitored by the hostel staff on daily basis.

For differently abled students, there are specially designed hostel rooms, with ramps, railings at various places for movement and access to all places, Lifts with friendly controls, and Disabled friendly toilets, wash rooms in academic buildings.

The kitchens and equipment are kept extra ordinarily clean to ensure hygienic standards. At a time 1600 students can dine in the mess. All Symbiosis campuses are "No Smoking" Campuses. Alcoholic beverages are strictly prohibited on all campuses.

Waste Management:

University has established the Symbiosis Centre for Waste Resource Management (SCWRM). The University emphasizes on 3-R principle (Reduce-Reuse-Recycle) of waste management. Besides research and development, SCWRM focuses on inculcating into society the habit of treating waste as resource through awareness, trainings and education. The University strictly follows at-source segregation of Wet and Dry waste for ease of processing the waste resources separately. It has installed the waste collection bins at strategic locations all over the campus for separate collection of dry and wet waste.

Solid Waste Management:

SIU has waste resource collection mechanism and systems for management of solid (biodegradable and non-biodegradable) wastes.

Biodegradable waste is processed using two technologies viz biogas and composting. SIU has 2 'Nisargruna' biogas plants of 1ton capacity each of BARG technology. The kitchen waste is mainly treated in the biogas plants. A portion of the kitchen waste and the garden waste are processed for converting it into compost with the process accelerating 'Nisarglaxmi' culture and method developed by the Symbiosis Centre for Waste Resource Management.

Symbiosis Centre for Waste Resource Management has developed the following system for waste management; treatment: 'Nisarglaxmi' basket

1 Nisarglaxmi' basket for at-source sustainable processing of household organic waste at household and society level. A model is developed by training secondary school students in Pune where Mid-day meal waste is processed by students, leading the school to become a 'Mid-day Meal Waste-Free' school and

2 Organic fertilizer formulations with potential for commercialization for sustainable agriculture and management of biogas digestate.

For collection and segregation of non-biodegradable mixed dry waste, a separate waste collection and segregation unit is installed. Among the dry waste, the PET bottles are processed through 'Biocrux', a bottle shredding machine. The other dry wastes including metal, plastic, wood, glass, rubber etc. has reuse and recycle potential and are collected separately for disposal through authorized vendors. Similarly biomedical waste is collected separately and disposed as per norms through authorized vendors. SIU has initiated research on generation of hydrocarbons from waste vegetable oil on laboratory scale.

Liquid Waste Management:

Waste water generated on the campus is treated using activated sludge and biological treatment methods for reuse. SIU has 190 KLD capacity Sewage Treatment Plant (STP) and 5 reed beds of 5 lakh litres capacity each. The treated water is re-used for biogas plants, gardening, lawns, washing floors and irrigation. Provision is being made to reuse treated water for flushing.

Campus Greenery:

The main campus of the University is located on 350 acres of hilly region. 60% of the land is densely covered with various habitats such as grassland, deciduous trees, water bodies and plateau. The University has a team of dedicated staff to look after landscape gardens, plantation of indigenous trees, and butterfly gardens. The University has constituted a Bio-diversity committee to look into the areas of awareness, conservation, education and research in the field of Bio-diversity. The University has constructed two huge water tanks (Bandhara) for rain water harvesting. The water storage capacity of the Bandhara is 30 crore litres. This water is sufficient for all the needs of the campus for 10 months.

Energy Conservation:

The University strongly believes in conserving energy, and believes in providing its students a carbon free environment friendly campus. The University has installed 160 solar panels across all its campuses. The solar power systems offer a dependable source of unlimited energy. They are designed to work on cloudy days, in part sun, and even in wintery environments. The solar panels generate a significant amount of power for the university.

Solar plant capacity at various campuses of the University

'Bandhara' - Water storage at Lavale

The University has recorded 256 floral species and 191 faunal species in its campuses, and it still continues. As its commitment to conservation of nature, the University has published books on 'Singing Rocks', 'Natures Wonders at Symbiosis' and 'Fauna of Symbiosis International University'.

Symbiosis and Swachhta

The University chose to focus its efforts regarding 'Swachhta' related activities in the villages of Sus and Lavala. SIU is deeply committed towards betterment and improvement of the adopted villages. A variety of activities are undertaken by the University to achieve holistic development of the villages. In the past one year several activities were undertaken up in Sus gram panchayat for generating awareness regarding 'Swachhta'. The activities included village cleanliness drives. awareness sessions in the schools, drawing competition, distribution of sanitary napkins, generating awareness regarding menstrual health etc. Every activity surrounding 'Swachhta' that was taken up saw active participation from students and villagers. The village cleanliness and awareness drives that were undertaken saw participation from students of various institutes of the University. Increased awareness levels were measured by administering pre-tests and post-tests, and it was found that the awareness drives indicated a 50% improvement in the cleanliness levels.

Outcomes

- State of art facilities
- The University has its own water purification system along with water purifiers.
- Solar water heaters are installed on all hostel buildings for supply of hot water.
- University has established the Symbiosis Centre for Emotional Wellbeing and student affairs to take care of the emotional health of the students. Every campus has Recreation and Wellness centre with well-equipped gymnasium, and outdoor and indoor sports facility.
- For differently abled students, there are specially designed hostel rooms, with ramps, railings at various places for movement and access to all places, Lifts with friendly controls, and Disabled friendly toilets, wash rooms in academic buildings.
- All Symbiosis campuses are "No Smoking" Campuses. Alcoholic beverages are strictly prohibited on all campuses.
- The University emphasizes on 3-R principle (Reduce-Reuse-Recycle) of waste management.
- Biodegradable waste is processed using two technologies viz biogas and composting.
- Waste water generated on the campus is treated using activated sludge and biological treatment methods for reuse.
- 60% of the land is densely covered with various habitats such as grassland, deciduous trees, water bodies and plateau. The University has a team of dedicated staff to look after landscape gardens, plantation of indigenous trees and butterfly gardens.
- The University has constructed two huge water tanks (Bandhara) for rain water harvesting. The water storage capacity of the Bandhara is 30 crore litres. This water is suf ficient for all the needs of the campus for 10 months.
- The University strongly believes in conserving energy, and believes in providing its students a carbon free environment friendly campus.
- The University has installed 160 solar panels across all its campuses.
- The University has launched Symbiosis Community Outreach Programme and Extension (SCOPE) with the objective of positively impacting the community around the University.
- The Family Doctor Clinic (FDC) and Mobile Medical Unit (MMU) were launched in the Mulshi block of Pune district. MMU, a well-equipped mobile clinic run by a Medical Officer, a staff nurse and one medical social worker, is catering to 14 villages in Mulshi block and 2 construction sites in Walhekarwadi and Kalakhadak areas of Pimpri Chinchwad Municipal Corporation (Total 24 sites).
- MMU currently provides healthcare/services to over 14 different villages at 26 different locations. Together MMU and FDC have provided services to over 62,000 individuals since 2012.
- Institutional Social Responsibility (ISR) and Village Development Activities mainly focus on Education and livelihood by working with Self Help Groups (SHGs). and Zilla Parishad Schools.
- The University chose to focus its efforts regarding 'Swachhata' related activities in the villages of Sus and Lavala. SIU is deeply committed towards betterment and improvement of the adopted villages.
- Increased awareness levels were measured by administering pre-tests and post-tests, and it was found that the awareness drives indicated a 50% improvement in the cleanliness levels.

O.P. Jindal Global University (JGU)

Sonipat, Haryana

A Green Campus for a Sustainable Environment

O.P. Jindal Global University (JGU) is a non-profit global university established by the Government ofHaryana and recognised by the University Grants Commission (UGC). JGU was established in 2009 at theSonipat District of Haryana as a philanthropic initiative of its Founding Chancellor, Mr. Naveen Jindal inmemory of his father, Mr. O.P. Jindal. JGU is one of the few universities in Asia that maintains a 1:13 faculty: student ratio and appoints faculty members from India and different parts of the world with outstanding academic qualifications and experience.

JGU achieved distinction by breaking into the global university rankings and is the Youngest IndianUniversity to feature in these rankings. JGU has been granted with"Autonomy" by the University Grants Commission and the Ministry of Human Resource Development, Government of India, forreceiving the “A” Grade from the National Assessment andAccreditation Council (NAAC). This makes JGU the only privateuniversity in the state of Haryana and one of the only two privateuniversities in India to be given the status of autonomy. JGU hasbeen ranked in the 251-300 rank brackets of the QS UniversityRankings: BRICS 2018 Edition. JGU is ranked in the top 300universities out of 9,000 universities in the BRICS region (coveringfive countries – Brazil, Russia, India, China, South Africa), placingit in the top 2.8% of the universities in the BRICS region.

Student and Faculty Strength

JGU has approximately 340 faculty members of whom 3are Rhodes scholars. 50% faculty members are alumnifrom 200 top global universities and 17% international faculty members are from 26 different countries. JGU hasapproximately 4500 students from 29 Indian States andUnion territories and 20 countries with 60% students onscholarship. JGU has an outstanding male-female ratioamongst students and faculty members.

Hostels and Toilets

We are a fully residential campus and our students arehoused in 10 hostels, each with state-of-the-art amenitiesand hygiene facilities. We undertake round the clockhousekeeping activities to ensure total cleanliness. Intotal, our hostels have 1658 toilets with a 1:2.61 toilet tofemale student ratio and 1:3.1 toilet to male student ratio.

In these toilets, urinal sensors have been installed toreduce wastage of water and Jet hand dryers have beeninstalled to ensure proper hygiene. Granite and anti-skidvitrified tiles have been used for flooring. Inline fans havebeen installed for toilet ventilation. Supply of domestic, flushing and drinking water is available round the clock.In order to reduce our dependence on ground water, 32rainwater harvesting chambers have been constructed torecharge ground water level.

Garbage Handling and Treatment

With over 7500 dustbins across the campus, a twin binpolicy has been implemented for garbage segregation.Segregated garbage is collected by the Municipal Corporation of Sonipat. Green waste is converted into vermi compost for further horticulture use. Sewage wateris treated in our sewage treatment plant and the treatedwater is used for irrigation.

Kitchen Facilities

JGU operates its food services through a moderncentralised kitchen. In the kitchen and dining area,air cutters and fly catchers have been installed toensure insect free environment in addition to airhandling systems that ensure proper air circulationand ventilation. Fire resistant stainless steel ceilingtiles and a fully automatic fire suppression systemensure that our kitchens are safe for our workers aswell. In order to reduce human intervention in thepreparation of food, we also have fully automatic dishwashing machines and fully automatic chapatti making machines.

Green campus

58% of the JGU campus is under green coverincluding a 50 meters' green belt on the periphery ofthe campus. This green cover is maintained by a teamof gardeners undertaking hoeing, weeding, watering, cleaning, lawn mowing, hedge cutting, bush cutting,manuring, pruning anti-termite, weedicide andinsecticide treatment. As a result, our campus is hostto a wide variety of species of flora and fauna.

Solar Power

We have also installed a 100 KW solar power system which, on anaverage, generates 250 units/day. This energy is used in academicblock in the same grid.

Swachhta off campus

JGU has identified 10 villages for making themself-sustainable. These villages include Chhatera, Jagdishpur, Garhibala, Rathdhana, Rohat, BadhKhalsa,Bahalgarh, Nahara, Khanpur and Rai in the Sonipat District of Haryana. Swachhta campaigns have also been carried out in Tulip labour Colony, close to our campus. As a result of our efforts, Rathdana, Jagdishpur and Jatheri have been made open defecation free. JGU proposes to adopt 15 more villages, there by taking the total tally to 25 villages.

Team of faculty, staff and students visit these areas to carry out, among other things, cleaning activities.This is done once every month in different areas and these visits essentially include the following activities:

- Carrying out cleaning in the vicinity
- Removal of any accumulated/ stagnated water
- Distribution of dustbins and other hygiene products
- Educating residents on the benefits of personal hygiene and environmental cleanliness
- Educating residents on open defecation
- Female hygiene awareness and distribution of female hygiene products



Outcomes

- JGU students are housed in 10 hostels, each with state-of-the-art amenities and hygienic facilities.
- In all, the hostels have 1658 toilets with a 1:2. 6 toilet to female student ratio and 1:3.1 toilet to male student ratio.
- In all the toilets, urinal sensors have been installed to reduce wastage of water and Jet hand dryers have been installed to ensure proper hygiene.
- Granite and anti-skid vitrified tiles have been used for flooring.
- Supply of domestic, flushing and drinking water is available round the clock.
- 32 rainwater harvesting chambers have been constructed to recharge ground water level.
- Twin bin policy for garbage segregation. Segregated garbage is collected by the Municipal Corporation of Sonipat.
- Green waste is converted into vermicompost for further horticulture use
- Sewage water is treated in sewage treatment plant and the treated water is used for irrigation.
- Modern centralised kitchen. In the kitchen and dining area, air cutters and fly catchers have been installed to ensure insect-free environment
- About 58% of JGU campus is under green cover, including 50-metre-long green belt on the periphery of the campus.
- The University has installed a 100 KW solar power system which, on an average, generates 250 units/day
- In the 10 villages adopted by JGU, there are regular activities, involving faculty members and students, such as cleaning, removal of stagnant water, distribution of dustbins as well as other hygiene products, and education of residents on the benefits of personal hygiene and environmental cleanliness.

Amrita Vishwa Vidyapeetham

Coimbatore, Tamilnadu

Planting for a green future

The Amrita Vishwa Vidyapeetham, Ettimadai, Coimbatore, with 4,995 students and 400-strong faculty, has been planting around 1,000 tree seedlings a year for the past 10 years with 95% survival rate. That apart, 1.75 lakh trees make the 450-acre plus campus an enchanting expanse of verdure, with rich bio-diversity and more than 200 different varieties of trees. A bewildering variety of birds and butterflies adorn the campus. Out of the 13,86,110 sq m of land, 6,93,055 sq m is maintained as green belt area, amounting to 50%.

There are nine hostels on the campus --two girls' hostel and seven boys' hostel -- with two- four and single-bedded rooms. The mess halls are well-maintained with dish washers and housekeeping staff active round the clock. More than 50 water dispensers serve drinking water 24 hours. The toilets -- in the ratio of one toilet for 4 students - are well-maintained.

The institution has four units of STP with a total capacity of 8 lakh liters. Apart from state-of-the-art technology, including sand/ charcoal and UV filters, effective microorganisms are used to clean the water. Solid waste is collected using four different types of bins -- plastic waste, bio waste, sanitary napkin waste and paper waste.

These are processed and wherever possible recycled and then handed over to registered agencies for safe disposal.

The university has a centralized kitchen which uses boiler to produce steam. Rice and vegetables are subject to steam cooking. Modern kitchen equipment includes vegetable cutters, peelers, wet grinders, juicers and chappathi-making machines.

Solar panels are used for electricity generation and for heating water in the hostels. The university has an installed capacity of 210 KW of solar power on the campus.

Outcomes

- Around 1,000 tree seedlings planted every year for the past 10 years with 95% survival rate.
- Campus has 1.75 lakh trees with rich bio-diversity and more than 200 different varieties of trees
- 6,93,055 sq m is maintained as green belt area, amounting to 50% of the total area.
- Mess halls are well-maintained with dish washers
- 50 water dispensers serve drinking water 24 hours.
- Toilets -- in the ratio of 1:4 -- are well-maintained
- Four units of STP with a total capacity of 8 lakh liters.
- Four bins for collecting solid waste: plastic, bio, sanitary napkin and paper.
- Centralized kitchen that uses boiler to produce steam for cooking.
- The university has an installed capacity of 210 KW of solar power on the campus.

How the university turned Ettimadai village clean and green

The university adopted Ettimadai village in Ettimadai Town Panchayat of Coimbatore District, Tamil Nadu, for creating Swachta awareness. This benefited over 100 families. Students and faculty, with the help of residents, planted more than 10,000 trees on the campus. Regular awareness programmes are conducted in the village. At least 500 people have directly benefited from the awareness campaigns, including those on cleanliness, hygiene, health and personal cleanliness. Six public toilets were constructed for women of the village and they are maintained by the University.

The villages previously had open defecation area. Now, the practice has been stopped completely. Regular clean-up and awareness drives are conducted by the university. Around 300 students from the University took up a cleanliness drive in the village on August 15, 2017.

Under a novel initiative called 'Live in Labs', students spend 10-15 days in a village to understand the problems faced by residents and thereafter design and implement environment-friendly and sustainable solutions. The research centers of the university have developed environmentally friendly bio-toilets, sanitary napkins, and safe drinking water projects for rural areas.

Outcomes

- Swachta awareness campaigns benefited over 100 families.
- Students, faculty and residents planted more than 10,000 trees
- At least 500 people benefited directly from awareness campaigns
- Six public toilets were constructed for women of the village and maintained by the university.
- There is no open defecation area in the village.
- Students spend 10-15 days in a village to mend matters

Indian Institute of Technology Guwahati

Assam

Indian Institute of Technology Guwahati (IITG), has eleven departments and five inter-disciplinary academic centres covering all the major engineering, science and humanities disciplines, offering BTech, BDes, MA, MDes, MTech, MSc and PhD programmes. IITG's campus is on a sprawling 285 hectares plot of land on the north bank of the river Brahmaputra around 20 kms. from the heart of the city, providing an ideal setting for learning.

The current student strength is 6392. There are 10 hostels for boys and 2 hostels for girls.

All the hostels have spacious single seat rooms and have all basic and modern amenities like food mess, canteen, lounges, recreation room, campus wide LAN with Wifi internet access. The toilets and washrooms of all the hostels are equipped with modern fittings and are friendly for specially abled students, with 24 hrs running hot/cold water supply and round the clock cleaning services.

Effluent Treatment Plant

With a capacity of 1000L, the effluent treatment plant (ETP) installed at the Medical Section of IITG constitutes an anaerobic digester, flocculator cum clarifier and a filtration process to aid tertiary treatment. The plant performance is evaluated periodically by sending treated samples to reputed pollution testing units/ laboratories to ensure that the treated effluent is much lower than the maximum specification limit set for various parameters by the Pollution Control Board of Assam (PCBA).

Kitchens in every hostel across the Institute are furnished with modern kitchen equipment and services of professional caterer are engaged to maintain cleanliness and hygiene above all. To oversee the implementation of all, services of Institute employees with background in hospitality management are in place in all the hostels.

IITG boasts of green cover of more than sixty percent of its total area. The beautification of the entire campus is maintained through outsourced Horticulture agency under the supervision of trained engineers.

Solar photovoltaic panels and plants are installed at IITG campus. A total of 459 kWp is generated through the photovoltaic plants installed across various building across the campus. Apart from this, solar water heaters are installed at various hostels inside the campus to harness green energy. Rain water is harvested in the campus very efficiently and diverted to the large lakes and waterbodies of the campus which is then reused for gardening, construction, washing vehicles and other common maintenance purposes. Artificial ponds to harness rain water to be used for emergency purposes have also been developed.

Villages adopted include Sishugram, Lathia Bagicha, Ghoramara, Moriya Patty, Cutting Pahar, Auni Ati Satra, Amtola

Cleanliness Drive

Cleanliness drive and awareness on Swachhta mission are carried out by the student and employee volunteers in and around the surrounding villages of IIT Guwahati campus periodically. In this effort local populace of the villages are also roped in. Awareness programmes on cleanliness and health, bio and non-biodegradable waste are also carried out from time to time.

No Open Defecation Awareness and Building of Toilets

In addition to the awareness drive carried out by the volunteers of the institute on 'No open defecation' policy, employees of IIT Guwahati have also taken the responsibility of the area of Sishugram for its hygiene, infrastructure development and education. Voluntary contributions are collected on on-time as well as monthly basis from the willing donors at IIT Guwahati campus. Till date, an amount of approximately twenty lakhs has already been collected and majority of the amount had been used in the infrastructure development of the area, including building of toilets.

Plantation Drive

Plantation drives are carried out by the IITG community inside and around nearby villages on occasions like independence Day, World Environment day etc. Plantation drives are also organised during various conferences, Symposiums. Maintenance of these saplings are part of routine gardening.



A total 156 numbers of fruits and medicinal plants were planted with the help of twenty club members and representatives of the village. The participant from the village also undertook to take care of the planted sapling during the initial period.

As a continued effort towards upliftment of people of nearby villages, the student volunteers of IIT Guwahati recently installed many solar lights at Amtola village near Kukurmara in Kamrup district of Assam.

The installations of the solar lights were done with the support of village residents and Susconnect Private Limited. Notably, Amtola is remote and quite underdeveloped with respect to technical and infrastructural aspects. Breaking away from the conventional electrical lights, the institute has inducted energy efficient solar lights with the support of Susconnect Private Limited.



It all started with a vision of revitalizing underdeveloped villages in the outskirts of Guwahati, that not only aims at tackling the infrastructure shortcomings, but also promoting new and advanced technical support to the villages. Students volunteers of IIT Guwahati have installed several LED street lights in more than 50 villages.

The cleanliness drive and other social interventions undertaken by IIT Guwahati has resulted in better hygiene in several villages and has been successful in educating as well as creating awareness among the populace about overall cleanliness, hygiene, better health benefits and preventing open defecation. After the sustained efforts of IIT Guwahati, several villages have improved in overall hygiene parameters, better social responsibility for the upkeep of their neighbourhood and surroundings. Creating awareness among these citizens will require persistent efforts and IIT Guwahati community will continue to strive with its ongoing as well as future efforts to further improve the living standards among the rural community.

Outcomes

- All the hostels have spacious single seat rooms and have all basic and modern amenities
- The toilets and washrooms of all the hostels are equipped with modern fittings and are friendly for specially abled students
- 24 hrs running hot/cold water supply and round the clock cleaning services
- With a capacity of 1000L, the effluent treatment plant (ETP) installed at the Medical Section of IITG constitutes an anaerobic digester, flocculator cum clarifier and a filtration process to aid tertiary treatment.
- Kitchens in every hostel across the Institute are furnished with modern kitchen equipment and services of professional caterer are engaged to maintain cleanliness and hygiene above all.
- Green cover of more than 60% of its total area.
- Solar photovoltaic panels and plants are installed at IITG campus. A total of 459 kWp is generated through the photovoltaic plants installed across various building across the campus.
- Solar water heaters are installed at various hostels inside the campus to harness green energy.
- Rain water is harvested in the campus very efficiently and diverted to the large lakes and waterbodies of the campus which is then reused for gardening, construction, washing vehicles and other common maintenance purposes.
- Artificial ponds to harness rain water to be used for emergency purposes have also been developed.
- Awareness programmes on cleanliness and health, bio and non-biodegradable waste are also carried out from time to time.
- Awareness drive carried out by the volunteers of the institute on 'No open defecation' policy, employees of IIT Guwahati have also taken the responsibility of the area of Sishugram for its hygiene, infrastructure development and education.
- Plantation drives are carried out by the IITG community inside and around nearby villages on occasions like independence Day, World Environment day etc.
- the student volunteers of IIT Guwahati recently installed many solar lights at Amtola village near Kukurmara in Kamrup district of Assam.
- Students volunteers of IIT Guwahati have installed several LED street lights in more than 50 villages.
- The cleanliness drive and other social interventions undertaken by IIT Guwahati has resulted in better hygiene in several villages and has been successful in educating as well as creating awareness among the populace about overall cleanliness, hygiene, better health benefits and preventing open defecation.

Siksha 'O' Anusandhan Deemed to be University

Bhubaneswar, Odisha

Siksha'O' Anusandhan(SOA) is a NAAC accredited Deemed to be University situated in Bhubaneswar, Odisha. SOA was granted greater autonomy (graded autonomy) by the UGC in 2018, one of the few to be granted so in India. MHRD NIRF India Rankings also ranked SOA as the 38th Best National Institution, the 24th best in the University Category and the 19th best in the Medical Category.SOA is only Higher Educational Institution in Odisha to be listed within first 40 overall and first 25 in the University Category under NIRF (MHRD) Ranking 2018.

Total student strength of SOA is 10389 while total faculty strength is 1079.

SOA has 25 hostels for boys and girls (total boarding capacity of 8508), with the current residing strength being 7127 students. The hostels are equipped with the spacious and adequate number of Indian and western Flush system lavatories with ceramic urinal pans, toilet seats and wash basins. Ceramic wall tiles and vitrified antiskid floor tiles are used. The bathrooms are provided with modern Geysers and solar heaters for provision of warm water. Exhaust fans are installed in the lavatories and bathrooms. Water supply is provided through the government water supply system and borewells. The water, stored in overhead tanks and underground reserves, is distributed through pump houses. All the hostels and academic buildings are provided with adequate number of water purifiers (Aqua Guards/Coolers etc.) for clean drinking water. Maintenance of cleanliness and hygiene is outsourced and monitored by a team of supervisors on daily basis.

SOA has 48 Garbage Clearance Units per building and 12 Garbage Clearance Units per floor. The solid garbage is collected, segregated and disposed in safe manner. The collection, segregation and disposal of bio-medical waste is outsourced to M/s. Sani Clean Pvt. Ltd., Bhubaneswar, which is authorized by Odisha State Pollution Control Board for waste treatment facilities relating to bio-medical waste using Autoclave/Microwave/Incinerator shredders etc. The lifting and disposal of general garbage (both wet and dry) from all campuses

are outsourced to M/s Space, Bhubaneswar. Bhubaneswar Municipal Corporation (BMC) is also involved in the process of garbage disposal. Besides SOA also has its own Sewage Treatment Plant (STP) in each campus for liquid waste management.

The canteen / mess facilities are outsourced. Dedicated Food and Beverage expert committee, Food and Beverage operational committee and Food and Beverage monitoring team have been constituted to maintain optimum level of quality in food preparation, distribution and cleanliness. Hostels are equipped with spacious state-of-the-art kitchens, with clever designs, sleek styles and layout involving best in class materials and equipment. HACCP (Hazard Analysis and Critical Control Points) principles have been thoroughly implemented to maintain quality and hygienic food standards. Use of anti-skid tiles on kitchen floors, proper drainage, installation of modern chimneys and ventilation facilities across kitchens along with iron-grading at the top are some of the features of SOA kitchens. All the kitchens are equipped with modern facilities and equipment like pulverizers, trulssen, bain bain-maries, deep fat fryers, modern cooking ranges, OTGs, Salamanders, vegetable processors, rotisserie, etc.

Campus greenery

SOA has adequate lush green coverage of around 45 acres out of the total campus area of 127.10 acres. It has lawns and gardens in every campus as also instructional farms and other areas maintained by trained and dedicated maintenance staff. The lawns and gardens have automated sprinklers and are also manually watered.

Solar Power

SOA initiated the use of solar power across its different campuses. Solar energy is tapped and utilized basically to supply warm water through solar operated geysers.

Rain Water Harvesting

In a bid to conserve water, SOA has put in place Rain Water harvesting system in its campuses.

Adopted Villages

Chattabara gram panchayat in Khordha District, 12 villages in Jahangirabad of Cuttack District, 3 gram panchayats (Baluria, Andara and Amrutamanohi) of Kendrapada District and Malipada village in Khordha district.

BeheraBasti, KargilBasti, Patel Basti, Chalasahi, Paikraipur, Malipada, Madanpur, Arisol, Bindhagiri, Kujimahal, Kantabada, Shyampur, Nuagaon&Patrapada, in and

around Bhubaneswar city of Khurda District of Odisha are also the places where swachhata& different awareness activities have been undertaken.

More than one lakh people have been benefitted by the effort.

SOA is working towards adoption and development of different villages and gram panchayats in Odisha. It has developed 12 villages in Jahangirabad of Cuttack District, Odisha, as a smart village cluster powered by clean energy (solar powered) and modern internet capabilities. A wide variety of Clean Technology (LED lightings, solar water pumps, electric car and vans, solar powered sanitation and e-learning centre) have been deployed along with uninterrupted clean energy services: a very unique system in India.

SOA spends to the tune of Rs. 6.72 lakh per annum for scholarships in 3 gram panchayats (Baluria, Andara and Amrutamanohi) of Kendrapada district, Odisha.

SOA has also spent around Rs. 7 lakh in developing Baluria High School which is shared by 3 gram panchayats in Kendrapada district.

Chattabara gram panchayat in Khurdadistrict, has been developed under Lab to Land technology transfer.

A rural health centre at Jamujhari village of Khordha district has also been set up.

Students of SOA undertook restoration of the village pond in Malipada in Khordha district over a period of two years. The pond is now being used by the villagers. The volunteers also cleaned up the temple premises, streets and playground.

Intervention include among others - Swachha Bharat Abhiyan, Jan DhanJojana, Awareness on Adult, Women Education, School Dropouts, Pond Cleaning, Fire Skill Demonstration, Water Harvesting, Soil Conservation, Organic Farming, Backyard Agriculture, Mushroom Cultivation, Dryland Farming, Azolla Cultivation, Organising Health Camps, Awareness on Jaundice, TB, Old-age Diseases, Health checkups for old-age diseases and children, Awareness about prevention of heatwave shocks, Organization of Oral Health Camps, Danger of Ghutka, and tobacco chewing, Health and Brushing tips, Common foods in different diseases, Measurement of Blood Pressure, Blood Sugar etc.

Outcomes

- The hostels are equipped with the spacious and adequate number of Indian and western Flush system lavatories with ceramic urinal pans, toilet seats and wash basins.
- SOA has 48 Garbage Clearance Units per building and 12 Garbage Clearance Units per floor. The solid garbage is collected, segregated and disposed in safe manner.
- Besides SOA also has its own Sewage Treatment Plant (STP) in each campus for liquid waste management.
- Dedicated Food and Beverage expert committee, Food and Beverage operational committee and Food and Beverage monitoring team have been constituted to maintain optimum level of quality in food preparation, distribution and cleanliness.
- HACCP (Hazard Analysis and Critical Control Points) principles have been thoroughly implemented to maintain quality and hygienic food standards.
- SOA has adequate lush green coverage of around 45 acres out of the total campus area of 127.10 acres.
- Solar energy is tapped and utilized basically to supply warm water through solar operated geysers.
- In a bid to conserve water, SOA has put in place Rain Water harvesting system in its campuses.
- SOA has adopted several villages. More than one lakh people have been benefitted by the effort.
- Students of SOA undertook restoration of the village pond in Malipada in Khordha district over a period of two years. The pond is now being used by the villagers. The volunteers also cleaned up the temple premises, streets and playground.

The Indian Institute of Technology Madras

Chennai, Tamilnadu

Strategic management of waste

The Indian Institute of Technology Madras, established in 1959, was recognized as an Institute of National Importance by the Government of India in the year 1961. The lush green campus of IIT Madras, spread over 248 acres, is located in Chennai, capital of Tamil Nadu. The total population of 15,000 (approx.) campus residents include around 9,500 students, 584 faculty members, 621 non-teaching staff and their dependents.

There are around 8,150 students residing in 20 hostels of the Institute, which are well-equipped with adequate number of toilets for male, females and disabled students with facilities like 24 hours' water supply, treated water supply for flushing, hot water supply from solar-powered water heaters, water-efficient fittings, napkin incinerators in ladies hostels etc. The toilets are maintained by dedicated housekeeping team equipped with modern equipment.

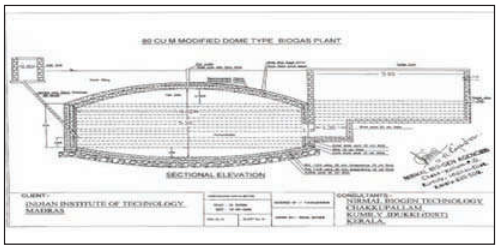
Hand sanitizer

The solid waste management at the Institute is being carried out with well-defined strategic 4Rs process -- Refuse, Reduce, Reuse and Recycle. Every household has been provided with triple dust bins to segregate bio-degradable and inorganic waste and exclusive dust bin for napkin disposal. The garbage generated is collected daily from door to door and transported to the segregation yard. The garbage is further segregated for re-use and recycle of the waste.

IITM has a fully automated centralized of 4 MLD STP (SBR technology) to treat 100% of the sewage generated. The treated sewage is recycled for flushing, gardening and ground water re-charging. The surplus treated sewage is being sold to nearby Research Park and partly used for HVAC requirements.

As rainwater harvesting methods are in place, all runoff water is collected in the IITM lake. The collected water in the lake is used for domestic water supply and recharging the ground water.

IITM has modern centralized kitchen and dining facilities in the Hostel Zone. The infrastructure has modern kitchen exhaust system, gas supply lines, bio-gas plant, kitchen waste treatment facilities etc. Recently, FSSAI has issued certificates for the eateries located on the campus.



Biogas Plant

The campus is enriched with a wide variety of flora and fauna. About 75% of the IITM land is covered with greenery and a water body. The terraces of all Academic and Hostel buildings have been covered with solar panels. The current installed capacity of the grid-connected solar energy is 3.20 MW.

Rooftop solar panels

Caring for five villages

IITM has adopted 5 villages in Tamil Nadu for implementing the Integrated Municipal Solid Waste (MSW) management by collection, segregation, transportation, reduce and reuse of waste. The project demonstrates resource recovery from organic waste through composting and from inorganic waste through reuse and recycling. The project involves local manpower trained them for operation & maintenance of the same.


Moisture reduction by drying


Shredding


Small Bore system


Constructed wetland


Addition of Cow dung & Dry leaves


Windrow compositing and Temp. monitoring

Outcomes

- All 20 hostels well-equipped with adequate number of toilets for male, females and disabled students
- Facilities like 24 hours' water supply, treated water supply for flushing, hot water supply from solar-powered water heaters
- Water-efficient fittings, napkin incinerators in ladies hostels etc.
- Solid waste management through 4Rs process -- Refuse, Reduce, Reuse and Recycle
- Every household provided with triple dust bins to segregate bio-degradable and inorganic waste and exclusive dust bin for napkin disposal.
- Fully automated centralized of 4 MLD STP (SBR technology) to treat 100% of the sewage generated.
- Treated sewage is used for flushing, gardening and ground water re-charging. Surplus is being sold to nearby Research Park and partly used for HVAC requirements
- Rainwater runoff water is collected in lake on the campus and used for domestic water supply and recharging ground water.
- Modern centralized kitchen and dining facilities with exhaust system, gas supply lines, bio-gas plant, kitchen waste treatment facilities etc.
- About 75% of campus is covered with greenery and a water body.
- Terraces of all buildings have solar panels. The current installed capacity of the grid-connected solar energy is 3.20 MW.

National Institute of Technology, Tiruchirappalli

Tiruchirappalli District, Tamil Nadu

The National Institute of Technology (formerly known as Regional Engineering College) Tiruchirappalli, situated in the heart of Tamil Nadu on the banks of river Cauvery, offers Under Graduate Courses in ten branches and Post Graduate Courses in twenty-one disciplines of Science, Engineering & Technology besides M.S. (by Research) and Ph.D. in all the departments. The hallmark of the campus is the good facilities which caters to the academic and extracurricular interests of the students. The Octagon is the pride of the campus equipped with modern facilities like a CAD/CAM Lab, Local Area Network, High-Speed Internet connection, and other seminar and conference facilities. It is maintained and run by the Computer Support Group (CSG) of the institute.

Total student strength is 6406 (Boys: 4952, Girls: 1454), while total faculty strength is 332.

Hostels:

The campus has 21 Boys and 07 Girls Hostels accommodating 5336 students. They are well equipped with modernized gym, reading room, indoor and outdoor recreation facilities, and Garden area. The hostels have 775 Indian toilets and 141 Western toilets including toilets for differently abled. The Sanitary Napkin Incinerator is provided in girls' hostels. The Recycled Grey Water is used for flushing toilets and gardening. 24-hour water supply is available in all hostels and messes, and well-maintained Reverse Osmosis (RO) water system is provided for drinking. Students mostly use bicycles as mode of transport. The Institute has also provided pollution-free Battery cars for the benefit of the students.

Solid and Liquid Waste Systems:

The institute follows a door-to-door collection of waste segregated in three separate bins - bio-degradable, non-biodegradable and domestic hazardous wastes. The bio-degradable waste is processed, treated and disposed of through composting. The manure generated is used for gardening. The Treated sewage water from two STPs (800KLD and 300KLD) is used for gardening through a separate pipeline. The Food wastes collected from the messes are fed into the Bio-gas plant and the Bio-gas is used as fuel in the Mess kitchens.

Hostel Kitchen Facilities:

The kitchen in the hostels have modern amenities like potato peeler, vegetable cutting machine, Atta Dough kneader, Steam cooking facility, etc. The dining area is modernized with Stainless steel furniture, Pesto flash-Insect killer machine and television. The students are provided with the choice of vegetarian and non-vegetarian food.



Campus Greenery:

The area of NITT campus is 777 acres, out of which the built-up area is 70 acres. The green belt covers more than 240 acres (30% of the total campus area) and 24,500 Sq.mt of Lawn is maintained in the Institute area. The Recycled Water from STP is used for maintaining the green area using sprinklers and drip system as the average annual rainfall of Tiruchirappalli is less than 850mm. The Nature Club of the NITT has recently documented 120 species of birds in the campus.

Solar Power Plants:

The campus has two solar power plants with a capacity of 100Kwph each and one plant with a capacity of 10Kwph. All these generate around 2.8 lakh units every year and help reduce CO2 emissions by about 224 tons annually. The street lights are fitted with energy efficient LED lamps.

Villages Adopted:

As a part of 'SwachhtaPakhwada' programme, NIT Tiruchirappalli has set the following key objectives – (i) To clean the campus, (ii) To instill cleanliness and hygiene in the minds of faculty, staff and students and (iii) To clean the surrounding villages and spread the message of cleanliness and hygiene. As a part of the programme, a 60-member team of doctors, paramedical staff, faculty, students, and sanitary staff conducted a medical camp in the villages, cleaned public places and created awareness through posters and handouts.

About 300 books, steel racks, ceiling fans, tubelights, inverters, sewing machines, Public address systems, and 3000 PET water bottles and grocery have been donated to 12 schools, Orphanages and Old age homes.

The NSS wing of NIT Tiruchirappalli conducted an eye camp in Govt. High school in Aachamppatti with the help of Joseph Eye hospital, Trichy. Around 300 students from 4th standard to 10th standard were screened and 12 students were found with defective vision. NITT hospital medical officers examined the weak students and prescribed medicine for them. NSS volunteers were involved in tree plantation in the school.

The Students of NIT Tiruchirappalli donated books to libraries of Government schools. The students visited a blind women rehabilitation center in Trichy and taught them how to use blind friendly software in computers. Under the Ignite programme run by NIT Tiruchirappalli students, out of the 30 trained students from Government schools, 28 students cleared NEET and 2 cleared JEE Mains. The Students from Infant Jesus HSS were trained to build simple electronics circuit and the students from Thuvakudimalai North School were taken to organic farming site in BHEL to impart the importance of organic farming.10,000 seed packets were distributed at Trichy.

Outcomes

- Hostels have 775 Indian toilets and 141 Western toilets including toilets for differently abled.
- The Sanitary Napkin Incinerator is provided in girls' hostels.
- The Recycled Grey Water is used for flushing toilets and gardening.
- Students mostly use bicycles as mode of transport.
- The Institute has also provided pollution-free Battery cars for the benefit of the students.
- The institute follows a door-to-door collection of waste segregated in three separate bins - bio-degradable, non-biodegradable and domestic hazardous wastes.
- The bio-degradable waste is processed, treated and disposed of through composting.
- The manure generated is used for gardening.
- The Treated sewage water from two STPs (800KLD and 300KLD) is used for gardening through a separate pipeline.
- The Food wastes collected from the messes are fed into the Bio-gas plant and the Bio-gas is used as fuel in the Mess kitchens.
- The green belt covers more than 240 acres (30% of the total campus area) and 24,500 Sq.mt of Lawn is maintained in the Institute area.
- The Recycled Water from STP is used for maintaining the green area using sprinklers and drip system
- The Nature Club of the NITT has recently documented 120 species of birds in the campus.
- The campus has two solar power plants with a capacity of 100Kwph each and one plant with a capacity of 10Kwph. All these generate around 2.8 lakh units every year.
- The street lights are fitted with energy efficient LED lamps.
- NITT undertakes several development programmes under different schemes. NSS wing is very active.
- Organic farming is practiced.

Indian Institute of Science Education and Research Kolkata

West Bengal

IISER-K today has a vibrant campus with strong faculty members of repute and supportive non-teaching staff members. The students pursuing various degrees are among the best in the country and have established a commendable culture.The Institute has a flexible academic programme and hosts state-of-the-art research facilities. Currently, it has five academic departments (Biological Sciences, Chemical Sciences, Earth Sciences, Mathematics & Statistics, Physical Sciences) and several centres of excellence.

Total student strength is 1456 while total faculty strength is 105.

There are 3 hostels with 1371 strength with two dining halls. A capacity of another 105 is being added to the hostel strength.

The campus has 71 toilets with separate facilities for girls. The toilets have multiple user facility - EWC with flushing, shower rose, health faucet, wash basin. PC toilets number 6 with handle support.

Liquid Waste Management

There are 3 STP (Sewerage Treatment Plants) - two with capacity of 750 KLD (Kilolitre per day) and One with 150 KLD. The Solid waste management system is coming up soon.

Hostel kitchen facilities

Hostel dining and kitchen halls are hygienically maintained from all respects and regularly inspected by FASSI and institute health officials. Cooking is from Central Gas bank and exhaust system is regularly maintained. Basins are supported with liquid and hygienically effective hand-washes. Dining and kitchen floor is cleaned with phenyl at least four times a day. The dining-staff members use headgear and gloves. The dishwashing system is both automatic and manual and with clean water flow.

Campus Greenery

The Green Cover Percentage is 80%.

Solar Power

The Solar Panels are on the roof of Institute hostel building and are soon coming up on other roofs where facility is available.

Villages Adopted

Ayespur, Balindi, Birohi, Hatikanda, Narayanpur in district Nadia and other neighborhood areas. Almost 150 families are covered by the effort.

Since 2008, IISER Kolkata has been working in community services by teaching local underprivileged teens every evening and demonstrating basic sciences. There are lot of off-campus and in-campus camps and fests on science education, cyber-safety, swachhta, cleanliness for school children. The outreach student body name is EkPahel.

The Institute has taken up several plans in village development, facility upgradation and curriculum development and training for school teachers. Detection of water samplings for arsenic above consumption level has been completed in two villages. Setting up of safe drinking water outlets in two villages is under process. Students and staff have visitedtwo homes – one for abandoned children and one for old parents having inmates of nearly 100 in Bhokula in Nadia District.

Outcomes

- There are 3 hostels with 1371 strength with two dining halls.
- The campus has 71 toilets with separate facilities for girls.
- The toilets have multiple user facility - EWC with flushing, shower rose, health faucet, wash basin. PC toilets number 6 with handle support.
- There are 3 STP (Sewerage Treatment Plants) - two with capacity of 750 KLD (Kilolitre per day) and One with 150 KLD.
- Cooking is from Central Gas bank and exhaust system is regularly maintained, basins are supported with liquid and hygienically effective hand-washes.
- The dishwashing system is both automatic and manual and with clean water flow.
- The Green Cover Percentage is 80%.
- There are lot of off-campus and in-campus camps and fests on science education, cyber-safety, swachhta, cleanliness for school children. The outreach student body name is EkPahel.

G.D. Goenka University

Gurugram, Haryana

GD Goenka University is one of the top ranked private Universities in India _offering programs from diploma to doctoral level in various disciplines. The University focuses on holistic development of students through inclusive, innovative, and value-based education and research.

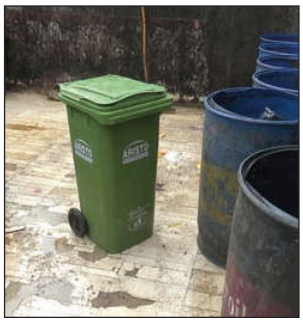
The total number of students in the University is 2856 while the total number of faculty members is 224.

Hostels and Toilets

There are four hostel blocks in G.D. Goenka University. The toilets and fixtures on campus are modern. There are adequate water dispensers providing bottled mineral water for drinking. For bathing and washing, disinfected ground water is being used for which, the University has a total water storage capacity of 10,000 liters per day. There are 5 rainwater harvesting pits available in the University campus to recharge the ground water table.

Solid and Liquid Waste Management

All the liquid waste is channeled to Sewage Treatment Plant (STP) for treatment and reused for horticulture. Capacity of the STP is 50,000 liters per day. G.D. Goenka University has tied up with Green-o-Bin and Farm



Pallet for recycling of solid waste. Green-o-Bin collects the paper waste from the University for recycling. Farm pallet collects all the kitchen waste twice a day which is segregated into dry and wet waste. The waste is used by Farm Pallet as animal feed and for composting. In return G.D. Goenka University gets chemical free manure and compost which is used for horticulture on campus.

Hostel Kitchen

G.D. Goenka has the latest and modern kitchen facilities. The entire kitchen area is tiled and chimneys have been installed to ensure proper exhaust. Special care is taken to maintain the cleanliness and hygiene in the kitchen.

Campus greenery

The G.D Goenka Education City campus is spread over 60 acres. Out of this, the University's area is 20 acres with 52% maintained as green area. There is a wide variety of trees on campus. It also has 2 herbal parks with medicinal and aromatic plants. Staff has been employed for landscaping and maintenance. Sprinkler system is installed in the green area for irrigation.

Solar Power

Installation of 1 GW capacity solar power plant is in progress. The University has signed MoU with High Tech Engineers and Consultants Pvt. Ltd. for setup. The installed plant will produce energy which is more than the University's usage. So once installed, it will not only make G.D. Goenka University self-sufficient but also a supplier to the grid.

Villages adopted

- Ghamroj, Sohana Tehsil, Gurgaon, Haryana
- Alipur Soha Tehsil, Gurgaon, Haryana
- Rampura, Dadri Tehsil, Bhiwani, Haryana
- Bhondsi, Sohana Tehsil, Gurgaon, Haryana
- Bosena, Bilaspur Tehsil, Rampur, UP
- Naurangpur, Tehsil-Manesar, Gurgaon, Haryana
- Damdama, Sohana Tehsil, Gurgaon, Haryana
- Bhira, Palia Tehsil, Lakhimpur Kheri, UP

Number of people or families covered by effort

More than 50,000 people of the eight villages mentioned above have been benefitted with the visits, awareness campaigns and drives. The students and faculty members of G.D. Goenka University have been involved in various activities that involve organizing movie screenings to spread awareness about the mission and its objectives. Various cleaning and waste collection drives are conducted. As part of their efforts, dirty walls were cleaned and painted with positive and motivational quotes and art works. Villagers were made aware of the benefits of growing trees and massive sapling plantation drives were undertaken. The volunteers also helped the development of composting pits and construction of toilets. G.D. Goenka University is helping many villages in constructing the toilets and making the villages clean. Ghamroj village stands out as the most benefitted village.

Outcomes

- Modern toilets and fixtures on campus
- Adequate water dispensers providing bottled mineral water for drinking
- For bathing and washing, disinfected ground water is being used for which, the University has a total water storage capacity of 10,000 liters per day.
- There are 5 rainwater harvesting pits available in the University campus to recharge the ground water table.
- All the liquid waste is channeled to Sewage Treatment Plant (STP) for treatment and reused for horticulture. Capacity of the STP is 50,000 liters per day.
- Hostel kitchens are tiled, properly fitted with exhaust and maintained with utmost cleanliness in hygienic conditions.
- Campus spread is over 60 acres with 52% green coverage. 2 herbal parks are also maintained. Sprinklers are used for irrigation.
- Installation of 1 GW capacity solar power plant is in progress.
- More than 50,000 people in the 8 adopted villages have benefitted from the University's awareness campaigns and drives.
- The volunteers also helped the development of composting pits and construction of toilets.

Shiv Nadar University

Uttar Pradesh

The Shiv Nadar University (SNU) Shiv Nadar University is a comprehensive, multidisciplinary, research-focused, and student-centric University offering a full range of academic programs at the undergraduate, postgraduate and doctoral level. With state-of-the-art infrastructure, the University comprises of academic wings, sophisticated labs, international standard sports facilities, amphitheaters, auditorium, conference rooms and smart classrooms.

The total student Strength is 2070 while the faculty strength is 196.

The University has 15 hostel blocks with modern toiletsequipped with latest facilities, well ventilated and lit washrooms with excellent waiting areas. Feminine hygiene concept is implemented in all ladies' washrooms. Solar-heated water supply with roof-mounted heater systems backed up by individual geysers in washroom in the both gender toilets are available.

Solid and Liquid Waste Management

The University has the latest 500 KLP Sewerage Treatment Plant (STP) located in the campus, which has more than enough capacity to cater to the current population visiting and residing in the campus. Output generated from this STP is used for irrigation in our horticulture.

Hostel Kitchen Facilities

The hostel kitchens have extremely good technology with full spectrum of cooking gadgets and modern storage amenities. The Dining Halls have walk-in refrigerators with adequate storage to maintain the food supply chain. Random food testing and drinking water sampling are done. The cooking facility includes the latest technology driven chimneys and exhaust systems.

Campus greenery

SNU Campus has around 107.5 acres of green cover, which is about 38% of the total campus area of 286 acres. More than 7 thousand trees have been planted across the campus. The campus also has 13 acres of wet land, which is assiduously and aggressively protected. The impact is that the migratory birds have started coming from across the continent. The University also has a planned bio-diversity park spread over 4 acres, with unique plant species. In a pioneering initiative, the University has recently published a book documenting the flora of the Chithara Village Panchayat in which the University is located. The book describes 272 plant species under 203 genera belonging to 69 plant families, and should serve as a model for the local Biodiversity Register.

Solar Power

A total of 430 Kwp of rooftop solar power system has been commissioned at three different locations in the campus -- 200 Kwp at the Indoor Sports Stadium, 200 Kwp at the Business School, and 30 kwp at the Utility-2 building. The current generation per month has stabilized at 40,000 units (average) valued at Rs. 4.35 lakhs per month or Rs. 0.52 crores per year. The Biodiversity Garden at SNU uses a solar water pump for irrigation. Water condensate from the air-conditioning system in the Research Block is stored and recycled.

Swachhta Activities outside Campus:

1. Name of village or neighborhood adopted by institution with district name
    - Village - Chithera, Tehsil Dadri, District Gautam Buddha Nagar (UP), and

- Village - KhedaMustakil, Tehsil Jalaun, District Jalaun (UP).

2. Number of people or families covered by effort and activities undertaken

(i) For Village - Chithera, Tehsil- Dadri, District- Gautam Buddha Nagar (UP)

The University raised awareness among villagers for proper waste disposal eg. dry and wet waste, bio-degradable and non-bio degradable and simple ways to achieve it. The village Pradhan himself took the responsibility to spread the word among the villagers regarding changes in waste disposal system and getting the same installed in the village.

(ii) For Village - KhedaMustakil, Tehsil- Jalaun, District- Jalaun (UP)

The University sensitized people towards constructing toilets and the necessity to maintain proper hygiene for better health conditions in the community. The villagers were given education about the cost and the technique to get a proper toilet made. Around 20 families started getting toilets made.

Around 180 families in both of the villages were covered and benefited by the activity undertaken by the University.

The awareness campaigns made people understand the importance of cleanliness and moreover made people understand how to maintain it in their home and their surroundings. They started disposing biodegradable and non-biodegradable separately and also started maintaining kitchen hygiene.

School students started throwing all the waste in the dustbin and kept their classroom clean. The housekeeping staff has started the segregation of waste according to their category. Currently 60-70% of families of KhedaMustakil have their own toilets which was only 10-15% earlier.

Outcomes

- The University has 15 hostel blocks with modern toilets equipped with latest facilities.
- Feminine hygiene concept is implemented in all ladies' washrooms.
- Solar-heated water supply with roof-mounted heater systems backed up by individual geysers in washroom in the both gender toilets are available.
- The University has the latest 500 KLP Sewerage Treatment Plant (STP) located in the campus, which has more than enough capacity to cater to the current population visiting and residing in the campus. Output generated from this STP is used for irrigation in our horticulture.
- The Dining Halls have walk-in refrigerators with adequate storage to maintain the food supply chain.The cooking facility includes the latest technology driven chimneys and exhaust systems.
- SNU Campus has around 107.5 acres of green cover, which is about 38% of the total campus area of 286 acres. More than 7 thousand trees have been planted across the campus.
- The impact is that the migratory birds have started coming from across the continent. The University also has a planned bio-diversity park spread over 4 acres, with unique plant species.
- The book on Bio-diversity brought out by SNU describes 272 plant species under 203 genera belonging to 69 plant families, and should serve as a model for the local Biodiversity Register.
- A total of 430 Kwp of rooftop solar power system has been commissioned at three different locations in the campus -- 200 Kwp at the Indoor Sports Stadium, 200 Kwp at the Business School, and 30 kwp at the Utility-2 building.
- Water condensate from the air-conditioning system in the Research Block is stored and recycled.
- The University raised awareness among villagers for proper waste disposal eg. dry and wet waste, bio-degradable and non-bio degradable and simple ways to achieve it.
- The University sensitized people towards constructing toilets and the necessity to maintain proper hygiene for better health conditions in the community.
- Around 180 families in both of the villages were covered and benefited by the activity undertaken by the University.
- Currently 60-70% of families of KhedaMustakil have their own toilets which was only 10-15% earlier.

Atal Bihari Vajpayee- Indian Institute of Information Technology & Management

Gwalior, MP

Excelling in green metric

The Atal Bihari Vajpayee Indian Institute of Information Technology & Management, with 900 students and 300-strong teaching and non-teaching staff, already has the distinction of being internationally acknowledged as a green campus by UI Green Metric (Universities Indonesia) with 1st rank in India and 164th rank globally for year 2017.

The University has three hostels for boys and one hostel for girls. There is 24x 7 water supply enabled through a RO system. The numbers of toilets in hostels are: 49 in BH-1, 47 in BH-2, 46 in BH-3 and 49 in GH. The toilets are modern with appropriate tile flooring and tiled walls and exhaust fans. In select areas, waterless/odourless urinals are fitted.

A biodiversity park and butterfly conservatory park (with more than 34 varieties of butterflies) has been developed on the campus. At various places, water sprinklers have been installed for efficient watering of plants.

Heralding change in four villages

The Institute has adopted four villages: Bhatpura Sani, Utila, Gurri and Tiholi. All villages falling in Gwalior district.

The students formed four teams and did extensive work. During internships the students covered all critical locations of the villages. Gram Sarpanch and other key persons assembled the villagers for awareness campaigns. Villagers took interest in understanding various facets of cleanliness. Village School students participated in Cleanliness drives undertaken during internship. The total population of these villages is 10,779. With the intervention of the college at least 30% of the population is sensitized.

The cleanliness drive included awareness campaigning through PowerPoint Presentations, Movie Screenings, Door-to-Door Cleanliness Discussions, Solid Waste Collections, Arranging Medical/ Health Awareness through Medical officers, etc. In continuation to above, the awareness campaigns includes online/recorded lectures, short movie screening on "Issues in Environmental Hygiene & Health" in the villages.

One-to-One discussions were held with villagers that emphasized the importance of cleanliness and sanitation as well as its implementation in the daily lives.

In schools, cartoon-based movies were screened to sensitize school children. For them, singing competitions, poetry recitation competitions, painting competitions and essay writing competitions were organized on themes of Swachhata.

Elder people from the villages were felicitated and designated as Swachhata Doot so that they can carry forward this mission and motivate other villagers for cleanliness.

At all villages, oath-taking ceremonies were conducted and people participated in "Swachhata Shapath" for maintaining the integrity for cleanliness.

Proper dustbins for waste collection have been distributed to all visited villages. An awareness drive for waste segregation was conducted so that people could understand the hazards of plastic wastes, medical wastes, etc.

People have started adapting Swachhata as routine. Regular visits and campaigning have resulted in successfully raising awareness levels. This has resulted in clean environment around schools. Health centres, haats and major locations in the respective villages. A YouTube film about these initiatives has also been launched.

Outcomes

- Acknowledged as a green campus by UI Green Metric (Universities Indonesia) with 1st rank in India and 164th rank globally for year 2017
- The University has three hostels for boys and one hostel for girls.
- There is 24x 7 water supply enabled through a RO system.
- The numbers of toilets in hostels are: 49 in BH-1, 47 in BH-2, 46 in BH-3 and 49 in GH. The toilets are modern with appropriate tile flooring and tiled walls and exhaust fans.
- A biodiversity park and butterfly conservatory park (with more than 34 varieties of butterflies) has been developed on the campus.
- At various places, water sprinklers have been installed for efficient watering of plants.
- The Institute has adopted four villages: Bhatpura Sani, Utila, Gurri and Tiholi. With the intervention of the college at least 30% of the population has been sensitized.
- People have started adopting Swachhata as routine.

National Institute of Food Technology Entrepreneurship and Management

Sonipat, Haryana

NIFTEM works actively for assisting in setting up food standards, businesses incubation and also includes knowledge sharing. Student strength numbers1100 and faculty number is 52.

Hostels and Toilets

NIFTEM, Deemed-to-be-University has 4 five story Hostels for B.Tech., M.Tech., and Ph.D. students, and two separate hostels for MBA students. In hostels both single seated and double seated rooms are available with modern facilities. One hostel viz., Kaveri is dedicated to girls only while others Brahmputra, Ganga, and Satlej are used for Boys. Besides that, Portable Cabins 1 and 2 are used for MBA students with attached toilets. All hostels having ultramodern toilets provided with sensor based technology, solar geysers, dryers, sanitizers, laundry, washing machines, etc. The toilet to student ration in hostels is 1:8. All hostels are provided with 24 hours running water. The Institute has water treatment plant from where water supplied to hostels. Additionally, in each wing at every floor water coolers with RO and UV filtration unit is provided. Each day quality of water tested in institute's microbiology laboratory.

Solid and Liquid Waste Management: Since the inception, Institute adopted zero waste policy on the philosophy that 'waste is not a waste until it is wasted'. NIFTEM installed Sewerage Treatment Plant, Effluent Treatment Plant, Water Treatment Plant, Waste Segregation Unit for segregation into organic and non-organic and also wet and dry, Composting with modern technologies, Vermi-compost Units, following standard protocols for destroying chemical and hazardous waste of laboratories, etc.

Hostel Kitchen Facilities

All the hostels have ultra-modern kitchen and dining halls. Each of the kitchens are provided with vitrified tile flooring, PNG gas connection, Chimneys, ultra-modern equipments for food preparation, handling and serving, cold storage for vegetable storage, four door refrigerators for food items storage, modern tables and chairs used in dining halls with sufficient exhaust fans and insect traps, etc. All mess are provided with separate washing stations for cooking equipments and use crockery and plates. RO water is used for food preparation. Four Hundred Litres per hour capacity RO water coolers are provided in each of the dining halls. Being a Food Institute, all hygiene practices are followed including HACCP (Hazard Analysis and Quality Control Point). The Institute invested more than Rs.25 crores for the machinery part only for food manufacturing in its four processing pilot plants viz., Ready to Eat Pilot Plant, Fruit and Vegetable Processing Pilot Plant, Dairy and Milk Products Pilot Plant, and Meat Processing Plant. Besides entrepreneurship development, R&D, and utilization by budding entrepreneurs, these processing pilot plants are allowed to prepare food for hostels also.

Campus Greenery:

NIFTEM is a green campus with about 60% green area. One very big lawn, many small lawns, 4 acre fruit orchard, 4 acre forestry plantation, its own nursery, sizeable space for seasonal ornamentals, hedges, shrubberies, rosary, etc. are maintained in the campus. A dedicated medicinal plants orchard is also maintained. More than 300 species of ornamentals, fruits, forest plants, medicinal and aromatic plants, hedges, edges, and shrubberies, vertical gardens, etc. are planted. Irrigation is given on the concept to utilize per drop water and with highest water use efficiency. As per the need of the plantation and topography, plants are irrigated with drip irrigation, sprinkler irrigation, and rain guns. Water from Sewerage Treatment Plant is being utilized for irrigation purpose. There are 32 water harvesting structures and harvested rain water is also utilized for irrigation.

Solar Power Plant:

The Institute installed its own 1 MW capacity Roof Solar Power Plant. This solar energy caters to more than 60% power needs of the institute. In this financial year another 1 MW solar unit will be installed. Based on the utilization of solar energy, water harvesting structures, greenery area, efficient use of water, waste disposal and utilization system, architecture of buildings, modern toilets, etc., the Institute received "Green Building Award with Platinum Rating".

NIFTEM Efforts in Sanitation and Hygiene in Adopted Villages

NIFTEM through its unique Village Adoption Programme is contributing to rural India. The program is being implemented by NIFTEM for its students since 2012. In this programme students of B. Tech., M. Tech. and MBA, under the guidance of Faculty (Mentor) adopts a village in India and nurses it about two to three years during the entire programme of study. Apart from its main focus on promoting entrepreneurship in rural youth, the teams also addresses the awareness raising about social concerns including sanitation, personal hygiene, Save the girl child, etc. In last five years NIFTEM has made interventions in about 83 villages on pan India basis covering 22 states of the country.

Awards and Recognition

1. NIFTEM VAP bagged Agricultural Leadership Award in Entrepreneurship Development in Food Sector in Agriculture leadership summit on 18 September 2015, New Delhi
2. Appreciation by Parliament Standing Committee on Agriculture in their 23 Report. The committee was directed to enlarge program by adopting more villages.
3. NIFTEM VAP associated with "SMARTGRAM" project of Rashtrapati Bhawan
4. NIFTEM is part of Smart Model Village adoption programme of Rashtrapati Bhavan which was inaugurated by "Hon'ble President of India on July 2, 2016. In this programme, NIFTEM is associated as Knowledge partner in five villages (Four from Gurugram district & one from Mewat district) of Haryana for skill development & entrepreneurship in the area of Food Processing.

Villages adopted by NIFTEM Across India Under Village Adoption Programme (Since Oct 2012)

through its unique Village Adoption Programme is contributing to rural India. The program is being implemented by NIFTEM for its students since 2012. In this programme students of B. Tech., M. Tech. and MBA, under the guidance of Faculty (Mentor) adopts a village in India and nurses it about two to three years during the entire programme of study. Apart from its main focus on promoting entrepreneurship in rural youth, the teams also addresses the awareness raising about social concerns including sanitation, personal hygiene, Save the girl child, etc. In last five years NIFTEM has made interventions in about 83 villages on pan India basis covering 22 states of the country.

Awards and Recognition

1. NIFTEM VAP bagged Agricultural Leadership Award in Entrepreneurship Development in Food Sector in Agriculture leadership summit on 18 September 2015, New Delhi
2. Appreciation by Parliament Standing Committee on Agriculture in their 23 Report. The committee was directed to enlarge program by adopting more villages.
3. NIFTEM VAP associated with "SMARTGRAM" project of Rashtrapati Bhawan
4. NIFTEM is part of Smart Model Village adoption programme of Rashtrapati Bhavan which was inaugurated by "Hon'ble President of India on July 2, 2016. In this programme, NIFTEM is associated as Knowledge partner in five villages (Four from Gurugram district & one from Mewat district) of Haryana for skill development & entrepreneurship in the area of Food Processing.

The number of villages adopted by NIFTEM under Village Adoption Programme (Since Oct 2012) are Eighty Three Across India.

Outcomes

- NIFTEM has 4 five story Hostels. In hostels both single seated and double seated rooms are available with modern facilities.
- All hostels having ultramodern toilets provided with sensor based technology, solar geysers, dryers, sanitizers, laundry, washing machines, etc. The toilet to student ration in hostels is 1:8.
- The Institute has water treatment plant from where water supplied to hostels.
- NIFTEM installed Sewerage Treatment Plant, Effluent Treatment Plant, Water Treatment Plant, Waste Segregation Unit for segregation into organic and non-organic and also wet and dry, Composting with modern technologies, Vermi-compost Units, following standard protocols for destroying chemical and hazardous waste of laboratories, etc.
- All mess are provided with separate washing stations for cooking equipments and use crockery and plates.
- Being a Food Institute, all hygiene practices are followed including HACCP (Hazard Analysis and Quality Control Point).
- NIFTEM is a green campus with about 60% green area. One very big lawn, many small lawns, 4 acre fruit orchard, 4 acre forestry plantation, its own nursery, sizeable space for seasonal ornamentals, hedges, shrubberies, rosary, etc. are maintained in the campus.
- As per the need of the plantation and topography, plants are irrigated with drip irrigation, sprinkler irrigation, and rain guns. Water from Sewerage Treatment Plant is being utilized for irrigation purpose. There are 32 water harvesting structures and harvested rain water is also utilized for irrigation.
- The Institute installed its own 1 MW capacity Roof Solar Power Plant. This solar energy caters to more than 60% power needs of the institute.
- received "Green Building Award with Platinum Rating".
- Several villages are adopted by NIFT

National Institute of Technology, Calicut

Kerala

National Institute of Technology Calicut (NITC) has campus spread over an area of 120 hectares and is located close to the Western Ghats, featuring a tropical monsoon climate. The institute presently offers ten UG programmes, 30 PG programmes and Ph.D. programmes in thirteen departments/schools. The present student enrolment in various programmes is 5780 with the share of male students being 71%. The present faculty strength is 341.

Hostels

Presently there are eleven hostels for boys and five hostels for girls. Modern toilet facilities are available in all the blocks of NITC with facilities for physically challenged persons.

Solid and Liquid Waste Management

A sewage treatment plant (STP) with a capacity of 4.75 lakh litres per day is operational to treat the waste water from the hostels inside the main campus. The processes adopted in the STP are skimming, aeration, biological treatment, sedimentation, filtration (activated carbon and pressure sand filter) and chlorination. The dried sludge is then disposed off scientifically. An overhead tank is constructed to store the effluent and recycle it for gardening purpose. Additionally, two more STPs with 4.75 and 1.75 lakh litres per day capacity are under construction for treatment of waste water from mega boys' hostel and girls' hostel.Solid waste from various parts of the campus, including residential area, is collected on a daily basis. The biodegradable waste is treated locally and the non-biodegradable waste is sent to treatment plants outside the campus. A plant for converting non-biodegradable waste to fuel is under development. On campus organic farming of vegetables is another feature and the produce is made available to buyers in the campus.

Water Supply System

Water for NITC campus is fetched from Cherupuzha river, 2 km away from the main campus. A small check dam is constructed across the river to create a pondage on the upstream side. The raw water from the intake is pumped to the water treatment plant located inside the NITC campus. The treatment plant has the capacity to treat 20 lakhs litres per day. The water

is distributed from overhead tanks to various locations within the campus directly or through small storage tanks provided in each building. For drinking water, water purifiers with dispensers are provided at various locations in the academic blocks, administrative blocks and hostels.

Hostel Kitchen Facilities

Every hostel has kitchen cum dining facility and the students have the freedom to select the mess. Separate messes are available for north Indian and south Indian menu and also vegetarian and non-vegetarian menu. Energy efficient methods such as steam cooking, and semi-mechanised cooking are adopted.

Biodiversity at NITC

Large area of the campus is overgrown with beautifully lush trees and plants. Home to a large number of trees (around 160 different species) and beautiful birds, this campus is meticulously maintained by its staff and students. The plants at NITC are tended to everyday, with sprinklers set up for irrigation in some areas. The trees along the Rajpath provide a cool effect as well as a shade from the afternoon sun. The area on the sides of the Rajpath, is one of the places where diverse birds can be spotted. Many activities lined up at NITC, such as organic farming, also seek to spread this love of natural beauty. Various clubs at NITC also take initiatives in promoting the greenery within and around the campus.

Roof top solar water heaters are provided in some hostels. Grid connected roof top solar power system is under development.

Swachhtha Activities

The National Service Scheme Cell is actively involved in spreading the message of 'Swachtha' in the Chathamangalam Gramapanchayath. Overgrowth of vegetation is a major problem, especially on the roadsides. The NSS volunteers regularly undertake cleaning works on the roads, thereby making the roads free from vegetation and in maintaining sight distance for drivers. Cleaning activities are also organised in the adjoining schools, orphanages and centres for the disabled by the NSS Cell. An awareness campaign on the use of low cost organic solid waste management practices such as 'pipe compost', 'compost using coir pith' was also organised. In order to reduce the use of plastic usage in the Panchayath, 'Anti –plastic' campaigns are regularly organised by the NSS volunteers in the Panchayath. Moreover, paper bags and cloth bags are made by the volunteers and supplied free of cost to the shop keepers, so as to discourage the use of plastic carry bags which are a major source of pollution.

Outcomes

- Campus spread over an area of 120 hectares
- Eleven hostels for boys and five hostels for girls.
- Modern toilet facilities are available in all the blocks of NITC with facilities for physically challenged persons.
- A sewage treatment plant (STP) with a capacity of 4.75 lakh litres per day is operational to treat the waste water from the hostels inside the main campus.
- A plant for converting non-biodegradable waste to fuel is under development.
- A small check dam is constructed across the river to create a pondage on the upstream side. The raw water from the intake is pumped to the water treatment plant located inside the NITC campus. The treatment plant has the capacity to treat 20 lakhs litres per day.
- For drinking water, water purifiers with dispensers are provided at various locations in the academic blocks, administrative blocks and hostels.
- Home to a large number of trees (around 160 different species) and beautiful birds, this campus is meticulously maintained by its staff and students.
- Roof top solar water heaters are provided in some hostels. Grid connected roof top solar power system is under development.
- The NSS volunteers regularly undertake cleaning works on the roads, thereby making the roads free from vegetation and in maintaining sight distance for drivers. Cleaning activities are also organised in the adjoining schools, orphanages and centres for the disabled by the NSS Cell.

National Institute of Technology Warangal Telangana

NIT Warangal, situated in Warangal District of Telangana State, extends over 250 acres on the State Highway. It is fully residential and presently houses about 5,600 students. It has won state and national awards for greenery and ODF village respectively, thanks to its committed faculty and enthusiastic students

The Institute has 20 hostels with sufficient mess facilities to cater to all students. The toilets are modern with advanced water supply and sanitary fittings.

The Institute has its own Sewage Treatment Plant with a capacity of 600 KLD with Moving bed bio-film reactor (MBBR). Treated water is used for gardening and flushing toilets.



The Institute has lush greenery with varied trees and plants. The extent of greenery is about 31%.

Roof-top solar power plant of 999.7kWh capacity is being installed.



The Institute regularly conducts awareness drives and camps. An amount of Rs. 34,366-00 was earned through old paper collection and disposal. In all, 2,000 students participated in the "Campus Clean and Neat" programme in October, 2017.




During October 2017 and January 2018, food, blood donation and medical camps, including cancer awareness programs were conducted.



Heralding change in five villages

NITW has adopted 5 villages in Warangal district. Many awareness, educational and Swachhta programmes were conducted in these villages during 2017 and 2018.

MarripallyGudem of KamalapurMandal was made 100% Open Defecation Free (ODF) and won the National Award.

In 2018, NITW received Harita Mitra Award given by the Government of Telangana

NIT Warangal was also awarded during the Independence Day Celebrations 2018 with "Best Green Cover' Award for having maximum green cover among all engineering institutions in the State.

Visit to Adopted village MarripallyGudem:

Outcomes

- 20 hostels have sufficient mess facilities
- Toilets are modern with advanced water supply and sanitary fittings.
- Sewage Treatment Plant with a capacity of 600 KLD with MBBR. Treated water is used for gardening and flushing toilets.
- The Institute has 31% green cover
- Roof-top solar power plant of 999.7kWh capacity is being installed
- The Institute has adopted five villages. One of them, Marripally Gudem of Kamalapur Mandal, was made 100% Open Defecation Free (ODF) and it won the National Award.

The ABES Institute of Technology

Ghaziabad, Uttar Pradesh

The ABES Institute of Technology (ABESIT) is known traditionally for its education and research in engineering and management. The college, affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow, has 1623 students and 206 faculty members.

The Institute has modern hostels with all facilities:

- Number of hostels: 2 (Girls & Boys)
- Total number of toilets: 114 (74 for boys and 40 for girl students)
- Toilet facility for differently abled
- National Skill Qualified Framework certified "Safai Karmachari" on campus for maintenance of toilets
- Water purifiers & cooler for safe drinking water (quality tested) available 24x7
- Solar energy powered geysers available in bathrooms
- Rain water harvesting mechanism having an overall capacity of 36,000 liters

Advanced technology is in place for solid and liquid waste management. The Institute has a practice of re-using or re-cycling the paper after shredding it in-house. Garbage bins are installed at various places across the campus for the collection and segregation of solid wastes as bio-degradable and non-degradable. The biodegradable waste from hostel is decomposed in-house as compost khaad and used as organic manure in the campus.

The hostel kitchens are as per modern standards:

- PNG used for cooking
- Modern cooking equipment
- Modern dining room furniture
- Dining room flooring is tiled
- Well-trained chefs
- Focus on personal hygiene (chefs wear cooking caps, use sanitizers)
- Water purifier and cooler available
- Meals served 4 times a day

About 40% of the campus has green cover with 6000 perennial trees. There are 100 different plant species of medicinal values.

In all, 300 sprinklers are used to water plants and avoid waste water. Students use electric solar vehicles in campus, which is lit by 150 solar street lights. There are roof-top solar panels for water geysers (800 litre/hr)

Transforming slum and schools

The Institute has adopted a Slum are near Char murti, Greater Noida as well as Kamla Devi Mohiyal Junior High School and Step Up in Dundahera, covering 350 people and 50 families. The Institute has brought change in the slum and schools through interventions:

TREE PLANTATION ACTIVITY

TEACHING CHILDERN ON CLEANLINESS AND HYGIENE BEST PRACTICES

- Each one teach one 50+ members of ABESIT teach children of adopted village and cleanliness and hygiene best practices

Children now regularly practice personal hygiene at home

- She for She: An awareness and facilitation Initiative started in April to take care of menstrual hygiene of girls & women in the area

Noticeable increase in confidence and empowerment of ladies

- Say NO to open defecation Institute organizes –

Workshops, competitions and awareness campaigns to promote use of public toilets and measures to implement basic hygiene

Families have minimized open defecation and use public toilets

- Unused clothes are gathered from faculty, staff and students time to time and distributed in adopted village (Dundahera)

Youth got motivated to wash clothes regularly and stay clean

- Adopt a Tree Plantation activity is conducted along with young children of Step Up school giving them a feeling of belongingness towards environment

Over 100 saplings and trees planted and adopted in 3 months

Outcomes

- The Institute has two modern hostels with all facilities
- It has 114 modern toilets, including those for differently abled
- Water purifiers & cooler for safe drinking water available 24x7
- Solar energy-powered geysers in bathrooms
- Rain water harvesting mechanism having an overall capacity of 36,000 liters
- Advanced technology in place for solid and liquid waste management: reuse or recycling of paper, garbage bins across the campus for the collection and segregation of solid wastes as bio-degradable and non-degradable, biodegradable waste from hostel is decomposed in-house as compost khaad and used as organic manure on the campus.
- PNG used for cooking with modern equipment
- Meals served 4 times a day
- About 40% of the campus has green cover with 6000 perennial trees.
- There are 100 different plant species of medicinal values.
- 300 sprinklers are used to water plants.
- Students use electric solar vehicles on campus
- 150 solar street lights across campus.
- Roof-top solar panels for water geysers
- The Institute adopted a slum and two schools for interventions including tree plantation, as well as education and to raise their awareness on cleanliness, menstrual hygiene of girls & women, and campaigns against open defecation

College of Agriculture

Baramati, Maharashtra

The College of Agriculture, with an annual intake of 150 students for B Sc (Honours) offered in collaboration with VHL Netherlands - three years at Baramati and one year at VHL, Netherlands – has 50 faculty members, apart from 36-strong non-teaching staff. The college has three hostels. There are 498 toilets and bathrooms which have vitrified flooring, WC, urinals are of famous brands like Jaquar and Hindware. The toilets have exhausts, drying space as well as storage and utility space. For 24 hours cold and solar heated warm water is available. The Institute has water storage capacity of 4.5 cr liter, use of water softener is used before every tank. All the water purifiers and water tanks are maintained by AMC cleaning and repairing contract. Special arrangement is made during the time of scarcity to economise use of water.

On the campus, each waste is treated with an eye on reuse. Papers are also reused by utilizing its other side for printing. Different dustbins are used for collecting hazardous and non-hazardous material. Plant waste is treated by the vermin-compost unit, which converts it into fertilizer and again comes in use at college crop cafeteria. Mess and canteen waste is treated in biogas plant. Hostel waste water is used after treating to maintain greenery on the campus.

Mess food is cooked by modern kitchen equipment example, rice steamer, roti-making machine only on LPG. Exhaust fan facilities are available in the work area and in separate kitchen stores. Cleaning signage is displayed in the work area. Workers are guided and trained about maintaining good hygienic conditions. The use of aprons, head cap is a routine practice. Health checkup is done regularly. Sanitary vending machine and sanitary disposal machine are available in girls' hostel

More than 40% of the campus has green cover. Greenery is maintained on campus by students with treated waste water by students through drip and micro sprinkler irrigation system. Over 100 different plant species are on the campus which include those preferred by birds and medicinally important one eg Tulasi, Aloe vera. Students have designed nests on plants for shelter of birds. Floriculture plants are planted season-wise to maintain year-round greenery, which increases positivity of students. The Institute has developed its own nursery, technique of vertical gardening

About 110 kw of electricity is being generated by solar panel installed on campus, which meets 70% of electricity demand of the institute. Water recycling and roof water harvesting is used. Daily demand of vegetables in hostel mess is met by the college cafeteria, itself which is maintained by college students

How the university changed the face of Kololi village

Kololi, a village located in Baramati Taluka of Pune district, has 219 families. The village has a population of 1083, of which 551 are males and 532 females as per Population Census 2011.

Prior to 2016, in this village there was lack of awareness about sanitation, cleanliness and literacy. The university raised awareness on sanitation by involving college volunteers who organized special camps. The Government of India declared Kololi village as "Open Defecation free" in 2016.

Outcomes

- The college has three hostels. There are 498 toilets and bathrooms which have vitrified flooring, WC, urinals are of famous brands like Jaquar and Hindware.
- The toilets have exhausts, drying space as well as storage and utility space. For 24 hours cold and solar heated warm water is available.
- Each waste is treated with an eye on reuse.
- Mess food is cooked by modern kitchen equipment eg rice steamer, roti-making machine only on LPG.
- Exhaust fan facilities are available in the work area and in separate kitchen stores.
- Sanitary pad vending machine and sanitary pad disposal machine are available in girls' hostel
- More than 40% of the campus has green cover. Greenery is maintained on campus by students with treated waste water by students through drip and micro sprinkler irrigation system.
- 10 kw of electricity is being generated by solar panel installed on campus, which meets 70% of electricity demand of the institute.
- Water recycling and roof water harvesting is used. Daily demand of vegetables in hostel mess is met by the college cafeteria, which is maintained by college students
- The University has raised awareness levels in Kologi, the village it adopted in Baramati Taluka of Pune district, which has 219 families. Prior to 2016, in this village there was lack of awareness about sanitation, cleanliness and literacy.

BML Munjal University

Gurugram, Haryana

BML MUNJAL University has Student Strength totaling 1545 and faculty strength of 92.

The college has total 6 hostels with occupancy of 229. The Student: Toilet ratio in the Hostel is 9.1. Additionally in the campus total number of toilets is 18 for Handicap and for male & female it is 182. Modernity of toilets is visible by tiled flooring and inline fan ventilation. All water supply system is connected with RO water for drinking in whole campus and 100% of RO rejected water is used for flushing.

Hostel Kitchen Facilities

- Spacious and ventilated kitchen area equipped with high capacity exhaust and fresh air units installed.
- Maximum possible usage of machines like Chapati Machine, Boiler, Tilting Pan, High Pressure Cooking Ranges, wet & Dry Grinders etc.
- Gloves, Headgears and Aprons are mandatory while cooking / serving food.

- Surprise inspections are done to ensure adherence to hygiene measures.
- Periodic health checkup of staff is conducted.
- Integrated pest management.
- Well trained & groomed staff

Solid and Liquid Waste Management

- Compost Machine – Capacity" 250 kg/day, decomposing garden & kitchen waste, converts it into manure. The food & green waste are used for composting. The excessive compost is given to nearby villages: Lokra, Sidhrawali & Kapriwas etc for the use as a part of CSR activity.
- Rain water Harvesting Pits –Number of rain water harvesting pits is 22 for maintaining ground water level

- Pond- Capacity of 262 cubic meters for collection of access rain water.
- Swells-For collection of rain water other than pits & pond, we have created swells.
- Sewage Treatment Plant- 700 KLD STP for treating kitchen & toilet waste, entire campus water is treated having zero discharge outside.
- Effluent Treatment Plant-100% of laundry waste water is treated without any outside discharge.
- Treatment Water Usage – Treated water from STP is used for flushing & gardening purpose.
- Taps & Showers Aerators – Taps and showers in whole campus are equipped with aerators creating a non-splashing stream and often delivering a mixture of water and air, thus reducing water wastage.

Campus Greenery

- Green Area-84% of total campus comprises of green cover, trees, shrubs etc.
- No. of Trees – 11752 number of total trees comprising of various varieties
- Maintenance-16 member team to maintain the landscape and green area around the campus.

Solar Power

- Solar Cell-Grid connected photovoltaic power system of 246 KW capacity.
- LED Lights-Whole campus area is equipped with LED lighting for saving energy.
- Natural Light Usage – The design of academic and library building allows more day light usage decreasing energy consumption.

- Air Cooled Chiller with adiabatic technology- 650TR of air cooled chiller instead of water with inverter technology which saves water and reduces consumption of electricity.

Villages adopted

The students and the faculty visited nearby various village like Gujjar Ghatal (Rewari), Sidhrawali (Gurugram), Kapriwsas (Rewari), Lokra (Gurugram) & Umren (Alwar) for Cleanliness and other Educational Awareness programs. Approximately 150-200 families are covered by their effort.

The institute has organized a variety of events that included awareness campaigns, door to door visits, school level movie screening and school level painting competitions. They also performed solid waste management tasks to encourage the villagers to come forward and join us. Cleaning of the streets and drains was also undertaken. After this every villager whom they met in the village took a pledge not to spill garbage in the environment and to always keep their society and environment clean. They reduced cases of open defecation in the village afterwards. The student club "Savera" is conducting educational programs with over 100 students of village.

Outcomes

- All water supply system is connected with RO water for drinking in whole campus and 100% of RO rejected water is used for flushing.
- Maximum possible usage of machines like Chapati Machine, Boiler, Tilting Pan, High Pressure Cooking Ranges, wet & Dry Grinders etc in the hostel kitchens
- Compost Machines' Capacity" 250 kg/day, decomposing garden & kitchen waste, converts it into manure. The food & green waste are used for composting. The excessive compost is given to nearby villages: Lokra, Sidhrawali & Kapriwas etc for the use as a part of CSR activity.
- Number of rain water harvesting pits is 22 for maintaining ground water level.
- 700 KLD STP for treating kitchen & toilet waste, entire campus water is treated having zero discharge outside.
- 84% of total campus comprises of green cover, trees, shrubs etc.
- Solar Cell-Grid connected photovoltaic power system of 246 KW capacity
- Whole campus area is equipped with LED lighting for saving energy.
- Approximately 150-200 families are covered by the efforts of the University
- The student club "Savera" is conducting educational programs with over 100 students of village.

Chitkara University

Solan, Himachal Pradesh

The Chitkara University, with 2,007 students and 452-strong teaching & non-teaching staff, has 5 hostels and 2 guest houses with all amenities like safe drinking water, round-the-clock water and electricity supply, Wi-Fi facility, lift facility.

There are toilets, far more than the statutory requirement, on each floor with special provisions for persons with disability. The student-toilet ratio in residential area is: Male 6:1 Female 2:1, while in the academic area, it is 10:1. Due care is being taken to ensure cleanliness of the toilets with proper sanitation & hygiene. There are dedicated housekeeping and maintenance staffers for upkeep of the facilities. Round-the-clock normal water supply and hot water supply through solar plant is also available.Bathrooms are equipped with latest fittings and modern, anti-skid flooring. Exhausts installed have been in each toilet.Mechanized laundry helps in saving water by about 70%.

The University is a zero-discharge campus which follows innovative technology for Solid/Liquid Waste disposal. Waste paper recycling plant is available on campus to recycle waste paper and convert it into new papers, file covers, sheets, note pads etc. There are separate bins to segregate dry and wet waste. Garbage is cleared twice a day.

Kitchen waste is being processed in vermi compost plant. Weeds, leaves and other garden wastes are deposited in organic pits for generation of compost.Liquid waste generated from washrooms, kitchen, laundry etc. is treated in the Sewage Treatment Plant (STP) inside the campus. Treated wastewater from STP is being reused through double plumbing technique in horticulture.

Organic pesticide pit collects the residual water from vermicompost plant– which is used as pesticide.

Disposal of roof-top rain water in rain water harvesting pits. Waste that cannot be treated or reused in the University is placed in the garbage disposal bins installed by HIMUDA near the University.

Biomedical waste and lubricating oil coming out from generator sets are being collected by vendors approved by Government of Himachal Pradesh.

The university has automated and modern kitchen with chimney and multiple exhausts. It has well-maintained kitchen apparels, servers and a cold storage room. Kitchen staff is well-groomed and appropriately dressed. Standardized use of only LPG as the cooking medium. Safe drinking water, round-the-clock running water and mechanized food preparation units are in place. There are regular checks by the Mess Committee. Dining areas exude warm and lively ambience. Kitchen is FSSAI-approved.

A dedicated team of horticulturist and gardeners maintain greenery and landscaping in and around the campus, which has 70% green cover. Over 3000 trees have been planted within the campus and equally around the University locations to improve air quality.

There is in-house nursery for growing plants further used for tree plantation drives and for gifting.Hydroponic farming with production of over 18 kgs of vegetables per day. There is adequate provision for watering through sprinklers and treated water from the Sewage Treatment Plant is used in horticulture.Protection of the saplings is done through organic pesticides and compost prepared in-house. Plant markers indicating nomenclature, species information is displayed at designated spots.

In-house solar power plant produces 120 KW solar power (on-grid). Solar water heaters in hostels have capacity of 21000 liters per day. Solar Photovoltaic lights have been installed within the campus.

Outcomes

- 5 hostels and 2 guest houses have all amenities like safe drinking water, round-the-clock water and electricity supply, Wi-Fi facility, lift facility.
- The student-toilet ratio in residential area is: Male 6:1 Female 2:1, while in the academic area, it is 10:1
- Round-the-clock normal water supply and hot water supply through solar plant is available.
- Bathrooms are equipped with latest fittings and modern, anti-skid flooring.
- Exhausts installed have been in each toilet. Mechanized laundry helps in saving water by about 70%.
- The University is a zero-discharge campus. Waste paper recycling plant is available on campus to recycle waste paper and convert it into new papers, file covers, sheets, note pads etc.
- There are separate bins to segregate dry and wet waste. Garbage is cleared twice a day.
- Kitchen waste is being processed in vermi compost plant. Weeds, leaves and other garden wastes are deposited in organic pits for generation of compost.
- Liquid waste generated from washrooms, kitchen, laundry etc. is treated in the Sewage Treatment Plant (STP) inside the campus. Treated wastewater from STP is being reused through double plumbing technique in horticulture.
- Roof-top rain water is let into rain water harvesting pits.
- Waste that cannot be treated or reused in the University is placed in the Garbage Disposal Binsinstalled by HIMUDA near the University.
- The university has automated and modern kitchen with chimney and multiple exhausts.
- Safe drinking water, round- the-clock running water and mechanized food preparation units are in place.
- The campus has 70% green cover. Over 3000 trees have been planted within the campus and equally around the University locations to improve air quality.
- There is in-house nursery for growing plants further used for tree plantation drives and for gifting.
- Hydroponic farming is in place with production of over 18 kgs of vegetables per day.
- There is adequate provision for watering through sprinklers using treated water from the Sewage Treatment Plant.
- In-house solar power plant produces 120 KW solar power (on-grid). Solar water heaters in hostels have capacity of 21000 liters per day. Solar Photovoltaic lights have been installed within the campus.

Five villages that transformed under out watch

The University has adopted 5 villages - Kot Beja, Gunnai, Kalranwali, in Sheran District Solan, Himachal Pradesh and Nanakpur in District Panchkula, Haryana. Over 16,000 people were covered under various community services.

The activities organized on a regular basis within the campus and in nearby areas to contribute to a clean and healthy environment include eradication of open defecation, conversion of insanitary toilets into pour flush toilets, eradication of manual scavenging, making people aware of healthy sanitation practices through behavioral changes, generating public awareness through programmes of sanitation and public health, and scientific processing, disposal reuse and recycling of municipal solid waste

Outcomes

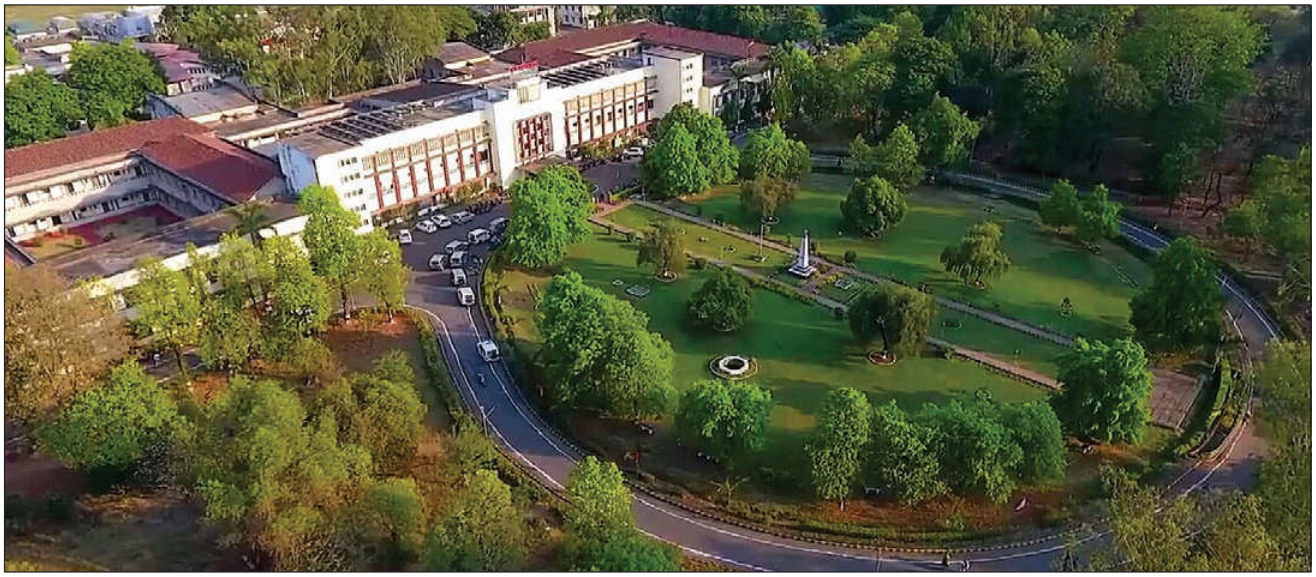
- In five villages adopted by the University, over 16,000 people benefited under various community services
- Campaigns for eradication of open defecation
- Conversion of insanitary toilets into pour flush toilets
- Eradication of manual scavenging
- Enhancing awareness on healthy sanitation practices
- Scientific processing, disposal, reuse and recycling of municipal solid wastes

College of Agriculture

Jabalpur, Madhya Pradesh

Building a soothing ambience

The College of Agriculture, Jabalpur, with 984 students and 90 faculty members, has a soothing ambience with nearly 75% green cover and 400 KW installed solar power generation capacity. All its hostels have modern toilets and water supply systems.



The College has nine hostels -- four girls', four boys' and one International -- with capacity of 588 beds. The washrooms have modern gadgets, 24 hours water supply system, hot water availability and proper drainage under hygienic conditions in sufficient number (1:4). The other facilities include ramp, toilets and rooms for physically challenged students in each hostel.

For collection of solid and liquid wastes separate bins are placed in the hostels. Bio-degradable waste is collected daily and transferred to the composting units. The compost is utilized in the university farm. Sanitary pad dispenser and incinerator units are available in all the girls' hostels. For handling liquid waste, proper drainage facilities are available with treatment through microorganism at septic tank for fast decomposition.

All hostels have well-equipped kitchen and modern amenities viz., modular kitchen, automatic LPG burner, roti (bread) maker, mixer-grinder, chimney, exhaust fan, refrigerators, water purifier, water coolers, utensils etc. The well-ventilated dining hall is maintained with modern furniture and wash rooms.

Nearly 75% area of the campus has green cover with proper avenue plantation, dedicated gardens viz., botanical, medicinal, instructional farms, forest, green belt etc. A wide range of bio-diversity is conserved on the campus. The gardens are maintained with the help of sprinkler and drip irrigation systems to minimize the use of water.

Solar panels are installed on the roof of most of the buildings with 400KW power generation capacity. Functional roof water harvest is available in each building of the college.

Entire campus, including hostels, has Wi-Fi facility. The college, including hostels, is secured with boundary wall and private security set-up with CCTV camera surveillance at each important point. The college has well-equipped gymnasium, sports complex, swimming pool and playground.

Outcomes

- Nearly 75% green cover
- 400 KW installed solar power generation capacity
- All hostels have modern toilets and water supply systems
- 24-hour water supply
- Separate bins for solid and liquid wastes
- Composting units
- Sanitary pad dispensers and incinerators in girls hostels
- Well-equipped kitchens and well-furnished dining halls
- Sprinkler and drip irrigation systems to minimize use of water
- Solar panels on rooftops of most buildings with 400KW power generation capacity
- Wi-Fi for entire campus, including hostels

How the college transformed Raipura village

The College of Agriculture adopted Raipura village in Panagar block of Jabalpur district, covering 265 of the 2,950 residents. Through a series of cleanliness drives, including 'Swachta Awareness Rallies', the people were involved in the preparation of vermin-compost from farm waste, plantation of 100 plants, construction of soak pit, water purification and construction of toilets. Awareness programme were conducted on health and hygiene for women and school students, including timely hair & nail cutting, hand wash etc.

Before the intervention only 10% of the village was open defecation free. Today the village is 100% ODF. There is heightened awareness about sanitation among the adult population. The villagers earlier never used dust bins; today, 95% of the population use dust bins. Previously they never made use of farm waste; these days 20 % of the people use it for preparation of vermin-compost. Earlier, there was hardly any awareness among school students about sanitation. Today all of them understand the significance of hand wash, nail cutting, bath, personal hygiene and the use of toilet.

Students and people were involved in various activities including plantation, irradiation of Parthenium weed and Vermi-composting.

Outcomes

- In all, 265 of 2,950 residents covered
- People involved in the preparation of vermin-compost from farm waste, plantation of 100 plants, construction of soak pit, water purification and construction of toilets.
- Awareness programme conducted on health and hygiene for women and school students
- The village is today 100% ODF.
- Heightened awareness about sanitation among the adult population
- 95% of the people use dust bins.
- Everybody understands the significance of hand wash, nail cutting, bath, personal hygiene and the use of toilet.

Dayalbagh Educational Institute

(Deemed University), Agra, Uttar Pradesh

With a student strength of 6659 and a faculty strength of 265, Dayalbagh Educational Institute is located amidst the tranquil environs of Dayalbagh, a self-contained colony renowned for its serene environment.

Hostels and Toilets

There are 4 hostels. All the hostels are provided with proper water storage, pipeline systems for ensuring clean and uninterrupted supply of water as well as washrooms and toilets. Hostels are equipped with RO systems to ensure pure and safe drinking water supply to boarders. Each hostel has well ventilated, illuminated and clean rooms, common room and dining halls. The hostel premises are maintained clean and green by the boarders themselves. Hostel kitchens are well equipped with state-of-the-art solar thermal plant/LPG system and PNG system for cleaner and hygienic cooking facilities under green initiatives.

Solid and Liquid Waste Management

Waste Management Systems: The campus is provided with a complete set of garbage cans for different types of bio and non-bio degradable waste. The collection of garbage from these cans is done on frequent basis i.e., once every day with the help of staff and students. A 150 CumBio-Gas Plant is installed in Dairy campus for production of Bio Gas using Cow Dung. The Bio Gas is then used to generate electricity for lighting and heating applications at Dairy Plant and Gowshala. Operation and maintenance, vermicomposting and composting using bio waste is done by students.

Innovative e-waste management: The Institute has come up with several ideas to utilize e-waste by converting it into some Art objects.

Water Resource Management:

Rain Water Harvesting: In all the new buildings, extensive water harvesting facilities have been installed in the campus. The Institute's bore wells get water at 100 to 120 ft depth while general levels in Agra lie between 200 to 250 ft.

River Bank Filtration (RBF) plant is under construction to provide clean and pure drinking water to the nearby villagers. The project is funded by DST and Solar power will be used for any electricity use.

Hygiene and Safety: Use of KMnO4 (Potassium Permanganate) in water and in production plants run by students and general awareness on hygiene and safety, makes people and the surrounding community and villages more healthy.

Campus Greenery

Around 75% of the campus is covered with lush green gardens and lawns.

Tree Plantation: Campus is made Green by extensive plantation by NSS volunteers. Institute works in collaboration with the NGO, "SPHEEHA" which is committed to preserve the Ecology and Heritage of Agra region. DEI is collaborating with "SPHEEHA" on projects aimed at preserving the water table in Agra. SPHEEHA also helps in planting Trees in and around DEI Campus.

Green House: A chain of green houses are proposed to enhance the income of farmers by growing non-seasonal produce. Two such green houses are in operation at present. It is also proposed to demonstrate Solar Agri Farm to double the income of farmers by utilizing their land for agriculture and solar power generation. Solar power thus generated can be used in Agriculture and Dairy farm for various applications.

Bio-diversity Parks:

Two Bio-diversity parks spread over more than 15 acres of land have been developed as a unique initiative to project and promote sustainable green eco-system in the campus and to conserve and re-introduce the native species of Agra region. These parks are regularly maintained with help of sufficient number of sprinklers

and drip-farming by staff and students of the Institute. Wide variety of plants including herbal, fruit-bearing, medicinal and ornamental inhabits the parks. Plants like bougainvillea, khejedi, roheda, ronjh, pilu, khabbar, bamboos and karounda have been planted in the park at Seminar Hall location. This park is also provided with a weather monitoring system and water harvesting system to recharge the ground water. The biodiversity park at DEI Intermediate College comprises of Bougainvillea garden, Succulent and Gymnosperm Garden, Birds and Butterfly garden, Multigrafted and Rare plants, Palm plantation, Arboretum etc.

Renewable Energy Initiatives:

Renewable Energy

In order to attain the lofty vision through sustainable developmental activities in agreement with the concept of Eco-Village, Dayalbagh Educational Institute has take initiatives in harnessing the non-conventional and renewable energy through Solar Thermal Plants for cooking, Solar Photovoltaic power plants for electricity generation, Bio Gas (Gobar Gas) for cooking and electricity generation, Bio Mass Gassifier at community kitchen for cooking and solar distillation for water purification.

Efforts for Carbon neutrality: Campus has drastically reduced Carbon emission. The waste leaves are not burnt but are converted into organic fertilizer. The solar photo voltaic panels used in the Solar Power Plant in DEI, Solar Hot Water and cooking in hostels, Development of Bio-fertilizers, Bio-fuels, Solar driven vehicles, Research on Hydrogen fuels are some of the contributions of this academic Institution to teach the public methods to attain Carbon neutrality at the national level.

Community Service in Villages and other Areas

Cleanliness and concern for hygiene has always been core to campus life at the Institute. National Service Scheme program of Government of India has been inducted as a compulsory component of the curriculum in all under-graduate programmes. Regular classes with interventions in nearby adopted village and slums are the unique innovative aspect of teaching learning environment at DEI.

Activities in adopted villages:

The NSS unit has adopted Dayalbagh-semi urban locality and also provides services to four nearby village in Mauja-Khaspur, Eight Slums and Agra Cantt Railway Station. In these locations students of the Institute regularly participate in diverse activities such as cleanliness, social awareness programs, women empowerment, skill development programs, computer literacy, career counselling, rural assistance through Chaupal to promote micro-enterprises.

The silent, solid and sustained social work through innovative and government directed programs have brought about drastic changes in the living and health conditions of neighborhood community, adopted villages and slums. Remarkable and exemplary efforts of students got appreciation from government officials including Railway Department, medical practitioners, social activists, scientists, dignitaries of NGOs, ministers of government of India and also the visitors from abroad.

DEI in association with the Nagar Panchayat Dayalbagh is also doing various social activities. A mobile toilet is also provided at various places of community service for students and staff to prevent open defecation.

Medical Campus:

Organization of Free Medical and Assistance Campus (FMACs) initiated on 27th June, 2010 is an innovative program of the institute. These camps are organized on fortnightly rests in nearby rural areas. The aim of these camps is to provide comprehensive package of health, awareness and assistance to people including children, youth, and women of nearby villages and neighborhood community. The services offered in these camps include Multi-specialty Free Medical Services, Hole-in-the-Wall Program, Children Recreation, Spoken English facilities for rural children, Education and Career Counseling, Vocational Training and Skill Development Programs for rural youth, Rural Assistance and Chaupal (Bhagvad Geera Ke Updesh) for developing culture and ethics among people of nearby villages and neighborhood community.

Activities in City:

The NSS unit of the institute has also supported in cleanliness drive at Agra Cantt Railway Station. Remarkable and exemplary efforts of students got appreciation from government officials including Railway Department, medical practitioners, social activists, scientists, dignitaries of NGOs, ministers of government of India and also the visitors from abroad.

University-Society Connect: Community outreach and social service.

Physical Exercise:

Participation of the university students and staff through university wide core courses like Agricultural operations, Rural Development etc, plug the academia into the social fabric, give opportunity to students to appreciate dignity of labour, working with own hands and benefits of physical exercises. Tilling and foiling not only cleanses the body but also the mind.

Outcomes

- All the hostels are provided with proper water storage, pipeline systems for ensuring clean and uninterrupted supply of water as well as washrooms and toilets.
- Hostel kitchens are well equipped with state-of-the-art solar thermal plant/LPG system and PNG system for cleaner and hygienic cooking facilities under green initiatives.
- The campus is provided with a complete set of garbage cans for different types of bio and non-bio degradable waste.
- A 150 CumBio-Gas Plant is installed in Dairy campus for production of Bio Gas using Cow Dung.
- The Institute has come up with several ideas to utilize e-waste by converting it into some Art objects.
- The Institute's bore wells get water at 100 to 120 ft depth while general levels in Agra lie between 200 to 250 ft.
- Around 75% of the campus is covered with lush green gardens and lawns.
- The Institute works in collaboration with the NGO, "SPHEEHA" which is committed to preserve the Ecology and Heritage of Agra region.
- In order to attain the lofty vision through sustainable developmental activities in agreement with the concept of Eco-Village, Dayalbagh Educational Institute has take initiatives in harnessing the non-conventional and renewable energy through Solar Thermal Plants for cooking, Solar Photovoltaic power plants for electricity generation, Bio Gas (Gobar Gas) for cooking and electricity generation, Bio Mass Gassifier at community kitchen for cooking and solar distillation for water purification.
- Campus has drastically reduced Carbon emission. The waste leaves are not burnt but are converted into organic fertilizer.
- DEI in association with the Nagar Panchayat Dayalbagh is also doing various social activities.
- The NSS unit of the institute has also supported in cleanliness drive at Agra Cantt Railway Station.

Dr. C.V. Raman University

Bilaspur, Chhattisgarh

Dr. C.V. Raman University is a premier world class University in Chhattisgarh, and more importantly, in Central India as the Research and Education hub of Professional Courses ranging from diverse fields like Management, Arts, Science, Law, Naturopathy and many more. Located over a vast area in the backward region of Kota Bilaspur, the University has transformed the perception of Higher Education in terms of its quality and accessibility. The goal is to develop a new cadre of Confident, Capable and Cultured professionals who are evolved in terms of a skill set and thus, are Work Ready from day one. The university student strength is 5891 with faculty strength being 215.

There are 2 Boys Hostels and 1 Girls Hostel, equipped with 26 well maintained semi modern toilets with 24 hours water supply. The total number of hostellers is 160.

Dr. C V Raman University has both solid and waste management systems in place including vermi-composting, Bio gas plant, herbal Gardens, medicinal park, pond, using bio-fertilizers etc.

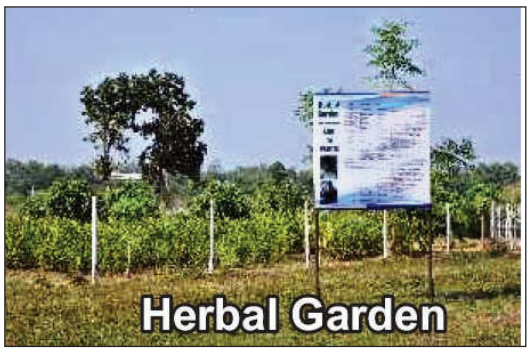
Bio Gas- In additional Biogas plant of 100 cubiccm capacity thathandles 300 to 400 Kg of waste has been installed and the biogas produced has been used in the labs of the departments.

Rain water Harvesting- A facility for ground water reverse osmosis with capacity of 500 litres per hour is also available. 50% of rain fall is harvested and stored in a 15lakh liter capacity tank for use in hydraulics and other laboratories. It is done, through mini soak-pits in various places of CVRU campus.

Hostels are within Campus with semi modular kitchen and communal dining area with a TV. The Kitchen offers common dining area for every hostel. Students can enjoy their meal, as well as the garden with a playground and lawn get-together.

Campus greenery:

60% of the campus has green cover.



Bio Diversity:

1. Rural Technology Park- The university campus has a green herbal garden with nearly 425 medicinal plants of essential medicinal use and for research purpose. It also includes about 20 different other types of herbs and shrubs which significantly contribute to the "Go Green Campus" strategic plan of the University.

Maintenance of Garden, Lawn and Trees is done by watering through Sprinklers. Almost 10mts source (pipe) is dedicated to garden maintenance. The garden staff maintain cleanliness by cutting the edges, planted new plants, etc.

Solar Power:

The University has installed solar power generation system of (10KW) for the renewable use of energy in the departments. Also the university is taking initiatives to use renewable energy for providing substantial benefits towards climate, health and economy. Initiatives towards energy conservation include the setting up of a5KW capacity Solar Photovoltaic cell facility that is used in the campus.

Community Service:

The villages adopted by Dr. C.V. Raman University are Amne, Pandakapa, Tada, Patharra and Jogipur, all from district Bilaspur. About 500 Families has covered by effort. The university organizes awareness programmes related to government schemes, yoga, health andsanitation, nutrition, soil and water conservation, rural planning and livelihood activities.The university organizes on an average 3 awareness camps in a year for swachhta, in coordination with NSS Cell of the University.

Outcomes

- Research and Education hub of Professional Courses ranging from diverse fields like Management, Arts, Science, Law, Naturopathy and many more
- Hostels are equipped with 26 well maintained semi modern toilets with 24 hours water supply.
- Dr. C V Raman University has both solid and waste management systems in place including vermi-composting, Bio gas plant, herbal Gardens, medicinal park, pond, using bio-fertilizers etc.
- Biogas plant of 100cubiccm capacity handles 300 to 400 Kg of waste
- 50% of rain fall is harvested and stored in a 15 lakh liter capacity tank for use in hydraulics and other laboratories.
- 60% of the campus has green cover.
- The university campus has a green herbal garden with nearly 425 medicinal plants of essential medicinal use and for research purpose.
- The University has installed solar power generation system of (10KW) for the renewable use of energy in the departments.
- Initiatives towards energy conservation include the setting up of a 5KW capacity Solar Photovoltaic cell facility that is used in the campus.
- The university organizes on an average 3 awareness camps in a year for swachhta, in coordination with NSS Cell of the University.

Easwari Engineering College

Chennai, Tamil Nadu

Easwari Engineering College offers 8 undergraduate programmes and 6 postgraduate programmes covering Engineering and Technology and Management.

The college has a total student strength of 4500 with faculty members numbering 331.

Hostels and Toilets

3 hostels for girls and 1 for boys are available with modern, adequate and clean toilets provided in all floors of all blocks of entire campus. Both Indian and European closets are cleaned 4 times a day with disinfectants. Closets, urinals, flush handles, faucets, seat covers and door knobs are cleaned 4 times a day with disinfectants. Sanitizers are used and floors are scrubbed twice a day. There are specially designed toilets for physically challenged. Sanitary napkin dispensers and incinerator are available. Water is supplied 24x7. Recycled water is used in toilets and gardens.

Solid and Liquid Waste Management

Sewage Treatment Plant is in place. Reduce – Recycle – Reuse principle is followed. There is a Solid Waste Composter (500 kg/day).

Advanced Immobilized Cell Reactor Technology Based STP (300 KLD) – Innovative & Patented Technology

Highlights: Approved by M/s CSIR-CLRI, Chennai - BBR with 8 hours HRT and 40 % pollutant removal efficiency - FAICR with 3 _ hours HRT and 90 % overall pollutant removal efficiency - AICR with overall pollutant removal efficiency more than 95% - Eco friendly, user friendly, easy startup, suitable for continuous and batch operations to meet Tamil nadu Pollution Control Board Standards - Cost effective, Low power requirement, No chemicals, Less land requirement and maintenance

Hostel Kitchen Facilities

- Kitchen with Chimney
- Dining
- Bakery
- Bread Maker

The food is cooked and served in clean and hygiene conditions with high quality and meets the acceptable standards of FSSAI and Tamil nadu government food safety regulations

- Pest control services
- Purified cold and warm water
- Special meals catering to different students taste
- Modern technologies used in hostels includes wifi enabled ovens, robot chef for bread making, hitech tempered glass ventilation hood (chimney), pantry 2.0 (to serve north Indians).

Campus Greenery

There are 700 native trees covering 30% land inviting diverse birds including sparrows. Watering is done using recycled water with sprinklers.

Solar Power

- used for water heating in all hostels
- Solar Power Generator
- Solar Water Heater
- Solar Panel Cleaning - Flexible Low Power IOT Controller
- Artificial Wind Tree Micro-Grid Power Generation
- 200 KW roof top solar PV system - Advanced Space vector pulsed width modulation techniques - made of Polycrystalline cells which uses MPPT Charge controllers – Solar water heating and cooling system using flat plate, evacuated tube, integral collector storage (ICS), thermosiphon and concentrating technologies producing 40,000 litres / day

Village adopted – Developmental activities:

- Sirukalathur Village, Kacheepuram District, Tamil Nadu covering more than 500 families.
- Construction of Dustbins
- Planted saplings
- Repaired the water tank
- Contributed and fitted Electric fans in all class rooms
- Science Exhibition
- Distributed Napkins for the school girls - awareness created on its use
- Conducted Medical and Dental camps
- School premises cleaning, Black Board painting
- Construction of sewage tank inside the school campus
- Polio Drop Awareness Camp
- Malnutrition Awareness Camp for Pregnant Women
- Cost Effective Dustbin Construction
- Sports Events for Primary Students
- Innovations undertaken in the process of creating Smart-Village
- Development of efficient garbage disposal system
- Improved enrolment ratio in higher education by 12% when compared with 2017-18
- Created renewable energy power model house, street light and wheel chair
- Easwari information centre imparts information for women on social and economic issues which create awareness among rural women

Outcomes

- 3 hostels for girls and 1 for boys are available with modern, adequate and clean toilets provided in all floors of all blocks of entire campus.
- There are specially designed toilets for physically challenged.
- Sanitary napkin dispensers and incinerator are available. Water is supplied 24x7. Recycled water is used in toilets and gardens.
- Reduce – Recycle – Reuse principle is followed
- Advanced Immobilized Cell Reactor - overall pollutant removal efficiency more than 95% - Eco friendly, user friendly, easy startup, suitable for continuous and batch operations to meet Tamil nadu Pollution Control Board Standards
- The food is cooked and served in clean and hygiene conditions with high quality and meets the acceptable standards of FSSAI.
- Modern technologies used in hostels includes wifi enabled ovens, robot chef for bread making, hitech tempered glass ventilation hood (chimney), pantry 2.0 (to serve north Indians).
- 30% green coverage. Watering is done using recycled water with sprinklers.
- Solar Power used for heating
- Several developmental activities conducted in adopted village - planting saplings, repairing water tanks, distributing napkins for school girls, polio drops awareness, cost effective bin distribution, and other.

Garden City University

Bengaluru

The Garden City, University, with 2394 students and 125 faculty members, has six hostels – 3 girls' hostels and 3 boys' hostels'. The hostels are full-fledged with all modern amenities, including 24-hour water supply, power supply, including UPS/Generator services, hot water facility through solar plant. It has modern toilets.

Tiled and Box Sweepers, Vacuum cleaners, Wet and Dry Mops, Mops with Impregnated fringes, Spray Bottles, Druggets and wipers, among other things.

Waste water Treatment plant

Systems are in place for solid and liquid waste management, including vermi Composting, water treatment plant, sewage treatment plant and disposal of e-waste is through sound technology used as per standards set by the Karnataka State Pollution Control Board.

The hostels have good kitchens and dining halls. Food is cooked in centralized kitchen using modern gadgets (boilers, grinders, mixers, vegetable cutters, peelers, coconut scrapers, Instant - Poori making machine and food warmers). Priority is given to hygiene & cleanliness.

Vermi Composting Unit Inspected the UGC Team on 19-9-2018

Modern Kitchen cooking area with chimney

Chimney and exhaust fan have been fixed at all places. Hairnets/Head covering is provided to all the kitchen staff members to avoid hair fall. The dining hall is big with sufficient water & lighting

The campus has 40% green cover. Lush green gardens and lawns are maintained with the help of four dedicated gardeners. The gardens have 65 types of medicinal plants and herbs; 450 varieties of plants and trees. Small sprinklers are used through a system of pipes.

Solar power is used for hot water &solar lighting on the University Campus and in the Hostels. Sensor-controlled lights are used. Wind power generation units as well as LED and CFL lighting systems have been installed.Rain water harvesting structures are in place.

Outcomes

- Full-fledged hostels with all modern amenities, including 24-hour water supply, power supply, including UPS/Generator services, hot water facility through solar plant.
- Modern toilets
- Systems in place for solid and liquid waste management, including vermi Composting, water treatment plant, sewage treatment plant.
- Disposal of e-waste is through sound technology used as per standards set by the Karnataka State Pollution Control Board.
- The hostels have good kitchens and dining halls.
- Food is cooked in centralized kitchen using modern gadgets
- Chimney and exhaust fans have been fixed at all places.
- The campus has 40% green cover. Lush green gardens and lawns are maintained with the help of four dedicated gardeners.
- The gardens have 65 types of medicinal plants and herbs; 450 varieties of plants and trees.
- Solar power is used for hot water & solar lighting on the University Campus and in the hostels.
- Sensor-controlled lights are used.
- Wind power generation units as well as LED and CFL lighting systems have been installed.
- Rain water harvesting structures are in place

How we changed the face of six villages

Ro Implementation done in Doddabanahalli Village

The Garden City University has adopted six villages –Doddabanahalli (Bangalore Rural), Thornahalli (Kolar District), Vereanahalli (Bangalore Rural), Bhyreanahalli (Kolar District), Gerupura (Kolar District) and Baterahalli(Bangalore District). In all, 200 families were covered.

The University developed sanitation facilities, including toilets, in Baterahalli village, while promoting health and taking steps to stop open defecation. A total of 15 toilets were constructed in various places.

The innovative projects introduced by the Garden City University include Healthy Grama, Digital Awareness Program- Web site development for villages as well as promotion of 3 Rs-- ('Reduce, Reuse and Recycle').

People were told how good hygiene at home is all about following clean procedures and practices at critical points, at right times so as to cut the chain of contamination i.e. to eliminate germs before they can spread further.Hygiene plays an important role in preventing the spread of infectious diseases. The main hygienic activities at home include proper hand washing, food and water hygiene, general home hygiene, cooking and storage hygiene.

Training on 'Home Hygiene of Mothers' helped participants in identifying the routes of spreading of pathogens at home and how to apply hygiene procedures, practices at critical points and at right times to break the chain of infection. The Department of Hotel Management at Garden City College organized a training session on Home Hygiene for Mothers & Home Makers located in the vicinity of the adopted villages on 16th January 2016. The participants included mothers, homemakers and cooks.

The methodology followed for the training included videos, demonstration and roleplay. This methodology was designed in such a way that even the mothers who did not hold any elementary schooling could actively participate in the training. The training components included Personal Hygiene, Vegetables, Meat, Products and Equipment Handling/ Cooking procedure, Storage procedure of food, chemicals and cleaning equipment, cleaning activity required for home and cost-effective home hygiene techniques. The villagers requested the teams to conduct many such training programme, which are practical and beneficial to them.

The activities carried out in the villages included Healthy grama, Computer literacy programme, Nutrition Enrichment Programme, Craft / Skill Class,Pulse Polio,.Psychological Programs ,BetiBachao and BetiPadhao; interactions with Street Shakti Sanghas, Awareness about environment, GoGreen,AIDS Awareness, cancer awareness, yoga, digital awareness, plantation drive, cleanliness of tourist spot –Udupi, clean the lake surroundings, SwatchhPakwada, Waste collection and segregation, Home hygiene and the three Rs: 'Reduce, Reuse and Recycle'.

Outcomes

- Adopted six villages, covering 200 families in all
- Developed sanitation facilities, including 15 toilets
- Introduced Digital Awareness Program and promoted 3 Rs-- 'Reduce, Reuse and Recycle'
- Inculcated hygienic and healthy practices among the villagers through a series of activities
- Conducted 'Home Hygiene of Mothers' training programme, helping participants in identifying the routes of spreading of pathogens at home

GB Pant University of Agriculture & Technology

Pantnagar, Uttarakhand

What makes GB campus special?

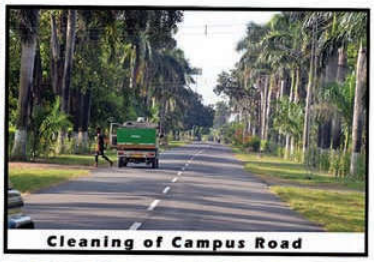
The GB Pant University of Agriculture & Technology, Pantnagar, Uttarakhand, has taken significant steps towards building a Swachh Campus, with the highlight being installation of solar power systems as well as rainwater harvesting systems in each of its 23 hostels and academic buildings. All the hostels are equipped with water purifiers and CCTV cameras, internet and modern washrooms.

The university, with 4,500 students and 550 strong faculty, has an effective waste disposal system that includes door-to-door collection of garbage, separation of organic and inorganic wastes, preparation of compost from organic waste and recycling of inorganic waste.

The kitchens of all hostels have modern equipment for cooking, chimneys and exhaust fans. There are fly-trappers in the dining halls.

The campus offers soothing environment with 70% green cover, of which about 20% is rich in biodiversity. Apart from rainwater harvesting systems, the campus has maintenance equipment including grass cutter, leveler, tractor, lawnmower and certain other horticulture equipment. Use of sprinklers has minimized water use.

Door to Door Garbage Collection



Cleaning of Campus Road

Compost Preparation from Organic Waste

Student in Hostel Dinning Hall

Sprinkler System

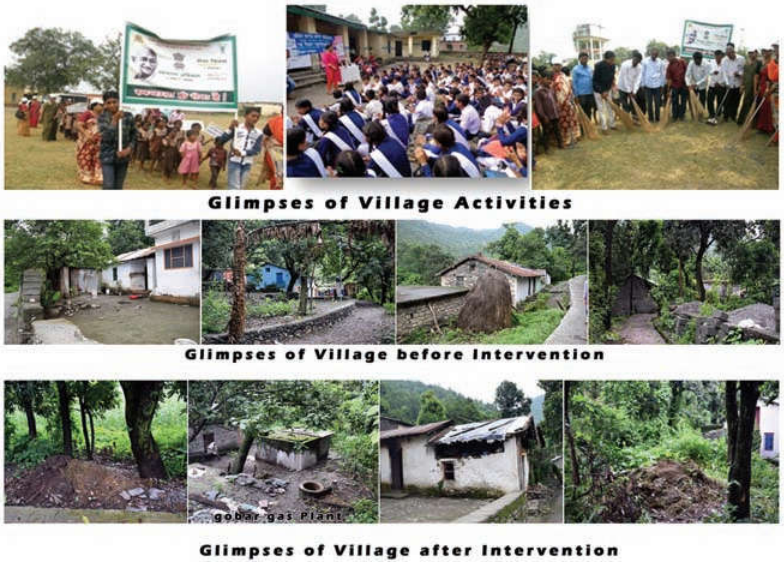
Solar Power Installation on Hostel Roof

Outcomes

- Solar power systems as well as rainwater harvesting systems in each of its 23 hostels and academic buildings
- All the hostels have water purifiers, CCTV cameras, internet and modern washrooms.
- Door-to-door collection of garbage, separation of organic and inorganic wastes, preparation of compost from organic waste, and recycling of inorganic waste
- Modern equipment for cooking, chimneys and exhaust fans; fly-trappers in the dining halls
- 70% green cover, of which about 20% is rich in biodiversity
- Maintenance equipment including grass cutter, leveller, tractor and lawnmower
- Sprinklers are used to minimize water usage.

How the university transformed Dogdaan Lamjalai village

In over four months, AICRP-FRM scientists belonging to the College of Home Science, GBPUA&T could raise awareness about health and sanitation among the people of Dogdaand Lamjala village in Bhimtal block of Nainital district.



The scientists covered all households in the village and imparted training in various aspects of sanitation and health by forming separate teams, comprising 75 members and 35 members respectively. The process of change was set in motion on November 20, 2016 with display of banners at vantage points and people in the vicinity taking a pledge along with AICRP staff.

The teams utilized particular days to involve the people. Thus, on December 25, 2017 Shramdaan was observed. On January 26, 2018, a team of researchers from AICRP's Department of Family Resource Management organized a Poster Making Competition in the Primary School. Prizes were distributed to the winners in the competition. Subsequently, a tree plantation drive was taken up in which nearly 80 children participated.

On January 28, 2018, a slogan competition was organized. Students who participated expressed their ideas creatively through ingenious forms and attractive colours. They came up with eye-catching captions and slogans. It was heartening to see youngsters sharing their ideas on ways of improving environment.

The organizers wanted to inculcate knowledge and raise awareness regarding importance of cleanliness, health and hygiene, while promoting the use of eco-friendly products. The response was overwhelming, thanks to sustained campaigns that lasted over three months.

On March 2, 2018, slogan competitions on the theme "Green City, Clean City, My Dream City", lectures on health and hygiene, and tree plantation drives were organized in primary schools. All the students participated eagerly, indicating that such efforts go a long way in putting across the message relating to the importance of hygiene in a telling manner.

Outcomes

- Awareness about health and sanitation raised in four months
- All households in the village covered
- Banners at vantage points to draw people and administer pledge
- Shramdaan, Slogan competition, Poster-making competition involving primary school children and tree plantation drive organized
- Lectures organized
- Promotion of eco-friendly products

GDC Memorial College

Bhiwani, Haryana

The GDC Memorial College, with 995 students and 65 faculty members, is k nown for greenery and steps intended to make the campus swachh. The campus has 70% green cover.

The college has two hostels -- one for boys and one for girls. Toilets are quite modern and are cleaned thrice a day and regularly. Toilets are well-equipped with may facilities including 24-hour water supply. The water supply system is excellent and 24 hours water supply is available through underground water pumps. Drinking water subject to RO is available in the hostels.

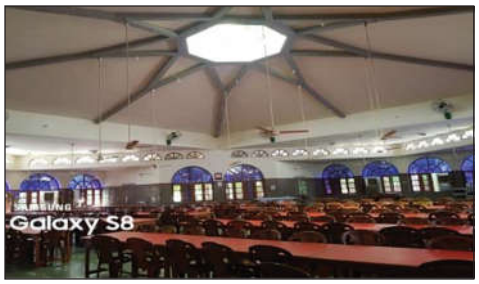
The college has tied up with the local governing body" Kachra Prabhandhan Kendra". They dispose the solid waste in an environment-friendly manner. The liquid waste is diverted at Sewerage Treatment Plant available on the campus. The water is reused by the Horticulture Department after treatment of liquid waste.

The Mess is common for students and staff residing on the campus. Mess kitchen is well-equipped with state-of-the-art facilities and due care is taken to maintain hygiene and sanitation systems.

Transforming two villages

The BRCM Education Society, which governs GDC Memorial College, has adopted 2 villages viz. Budheri and Gokalpura. The society has also adopted the Rajiv Gandhi Khel Parisar, Bahal and ITI, Bahal under PPP Scheme.

The college, through various campaign and NSS activities, including Nukkad Natak (Play), motivates local people for adopting cleanliness nearby living area. The local governing bodies also play a vital role for the motivation of students, villagers and community, from time to time.



A variety of cleanliness campaigns were organized. The campaigns covered Villages, 21 schools and colleges through 11 rallies,110 speeches to students and local villagers and 19 skits performed by students of the college.

Outcomes

- The campus has 70% green cover
- There are two hostels with modern toilets that have 24-hour water supply
- Solid and liquid wastes are disposed in an environment-friendly manner
- Mess, common for staff and students, is well-equipped with state-of-the-art facilities
- The college has adopted two villages, where through campaigns and NSS activities, people are motivated to adopt cleanliness.

Gandhi Institute of Technology and Management (GITAM)

Deemed to be University

Visakhapatnam, Andhra Pradesh

Gandhi Institute of Technology and Management (GITAM), deemed to be University, has become a diverse and dynamic undergraduate, postgraduate and research institution having 19 institutes, 12 disciplines, 52 departments,190 programs, 10 research centers, 16,800 students and 1170 faculty.

GITAM, spread across three states, has Eco-Friendly campuses with state-of-the-art facilities and infrastructure in Visakhapatnam, Hyderabad and Bengaluru. Campus landscape at GITAM adds an important part of clean and green life because it is regarded as a physical manifestation of the value of the deemed to be university.

GITAM has 13 hostels serving more than 3500 students (both boys and girls) with latest infrastructure, washrooms and students managed kitchens. The food served in the hostels is highly hygienic as per FSSAL standards. The hostels are inspected every month by "Parikshan" a voluntary organization which promotes hygienic in the kitchen and grooming of the hostel workers in the maintenance of strict standards as per government norms.

Eco-friendly campus

The University has been implementing various measures to make its campuses eco-friendly. These initiatives span across energy conservation, renewable energy, water harvesting, check dams, carbon neutrality, plantation, hazardous and e-waste management and green certification of new and existing buildings.

- For energy conservation, buildings are designed and constructed to achieve good ventilation and glare-free natural light;

- For harnessing renewable energy sources, solar hot water systems, solar photovoltaic (SPV) power generators, SPV powered LED lights and solar pumps are

installed. The complete steam and hot water requirements of hostels and guest houses are being met by roof-top solar hot water systems. A zero-energy-demand sewage treatment plant is functioning in the medical campus at Visakhapatnam, treating 100% of the sewage and sullage generated in the hospital. A pilot wind-turbine electricity generating module is under development while a bio-mass unit and modules of EcoHot generators are under implementation at Hyderabad Campus.

- For water harvesting, contour bunds, soak pits, check dams, recycling of effluents from sewage treatment plants are constructed. Some of the parks are maintained at a low topography, bounded by roads at a higher level, thereby enabling macro-percolation during the rainy season. These fairly wet zones are bird-friendly, also acting as habitats for minor animals, lending a helping hand in maintaining the flora & fauna.

- For minimizing greenhouse gases, efforts are being made to maintain the six greenhouse gases viz., carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF6) at the minimum levels as specified by the Kyoto Protocol.
- For achieving carbon neutrality, extensive plantation is undertaken to ensure a green cover that continuously consumes the atmospheric carbon dioxide. Care is also being taken to ensure that only legally acceptable refrigerant types are used and vehicular pollution is minimised by encouraging the use of public transport. Further use of firewood and other solid fuels, in raw or pellet form, is prohibited within the campuses and care is taken to dispose of effluents in safe and acceptable ways.

- For extensive plantation, stretches of land are earmarked for plantation which includes shrubs, flowering beds and plantations of usufruct value; a variety of trees like artocarpus, mangifera, anacardium, pongamia, azardichta, ficus and syzium which are known for their high wood density and consequent enhanced carbon sequestration potential, are extensively grown; water consumption is minimized; use of artificial fertilizers and pesticides are avoided; drip irrigation and sprinkler watering

are used wherever feasible; an eco-friendly bio-pesticide "GITAM Trishul" has been developed and supplied free of cost to the farmers; natural composting of plant litter is made mandatory within the campuses.

- For safe waste & solid disposal, all biodegradable waste is being composted; metallic and plastic waste is being handed over to approved recyclers; paper wastes, especially old papers, are sent to pulp manufacturers and bio-medical waste is handed over to govt.-approved agency.
- For wastewater handling, sewage and sullage are being treated ensuring that the solid by-product is used as manure and most of the liquid water is used for horticulture.
- For hazardous waste management, laboratory chemicals and biomedical wastes are disposed of as per standard procedures; dry powder, ABC and CO2 type portable fire extinguishers are used; all statutory licenses and permissions are obtained from the Pollution Control Boards and the Ministry of Environment and Forests.
- For e-waste management, electronic waste comprising hardware of condemned and discarded computers, laboratory instruments and the like are being handed over to agencies approved by the Pollution Control Boards.

- Waste management facility: Sewage Treatment Plants (STP) of 500 kld, one unit is installed in the campus for treatment of sewage. The treatment effluent is recycled for watering the plants.
- Drinking water: RO systems, 9 x 250lph, installed.

Name of the Villages adopted by the Institute : Peddipalem, Sirlapalem, Pekeru, Mukundapuram and Dabbanda Anandapuram Mandal, Visakhapatnam District.
No. of Families Covered : Peddipalem 713 Households Sirlapalem 276 Households, Pekeru 230 House Holds, Mukundapuram 186 House Holds and Dabbanda 247 House Holds (A Total of 1652 House Holds)

Intervention Undertaken in the area :

The first village adopted by the institute was Peddipalem which is connected to the national highway. Through survey it was observed that the village was not maintaining proper hygienic practices and lacking with some amenities. Taking this situation into consideration it was decided by the institute to adopt and handhold the village. As a result, Peddipalem village became 100 per cent Open Defecation Free (ODF) and bagged the best ODF village among the other villages in the district.

The second village Sirlapalem is also connected to the state highway but the condition is more or less the same as in the case of first village from the cleanliness and hygienic point of view. The institute with the

support of the students created awareness among people of the village about Swatch Bharat and accordingly the village also attained 100 per cent ODF.

The two villages are fulfilling the dream of Swatch Bharat with the help of GITAM Institute of Management Team. In the process the institute helped the other villages to reach the status of 100 per cent ODF. The institute has incorporated Social Project in the regular curricula of management courses where in each student must spend 15 hours in one of the semesters/ trimester in the said villages which had enabled in bringing change in the mindset of the people for the effective use of individual toilets and maintain sanitary in the respective villages.

In addition on achieving 100 per cent ODF in the cluster villages, the institute has created awareness among the households, the institute has contemplated a plan of action with regard to solid waste management plant in Peddipalem village and subsequently the plant is well executed with the support of the district administration.

All the above initiatives were possible through good number of street plays, door to door awareness campaigns, health camps organized with the help of GITAM Institute of Medical Science and Research (GIMSR) in sensitizing the households about relevance of good health and hygienic practices, in addition the students at government schools where shown videos to sensitize them towards better health and good hygiene practices for healthy living. Therefore, all these efforts had benefited 1652 households in five villages.

Outcomes

- GITAM, spread across three states, has Eco-Friendly campuses.
- 13 hostels serving more than 3500 students (both boys and girls) with latest infrastructure, washrooms and students managed kitchens.
- For energy conservation, buildings are designed and constructed to achieve good ventilation and glare-free natural light.
- solar hot water systems, solar photovoltaic (SPV) power generators, SPV powered LED lights and solar pumps are installed.
- A pilot wind-turbine electricity generating module is under development while a bio-mass unit and modules of EcoHot generators are under implementation at Hyderabad Campus.
- For water harvesting, contour bunds, soak pits, check dams, recycling of effluents from sewage treatment plants are constructed.
- For minimizing greenhouse gases, efforts are being made to maintain the six greenhouse gases viz., carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF6) at the minimum levels as specified by the Kyoto Protocol.
- Only legally acceptable refrigerant types are used and vehicular pollution is minimised by encouraging the use of public transport.
- water consumption is minimized; use of artificial fertilizers and pesticides are avoided; drip irrigation and sprinkler watering are used wherever feasible; an eco-friendly bio-pesticide "GITAM Trishul" has been developed and supplied free of cost to the farmers; natural composting of plant litter is made mandatory within the campuses.
- all biodegradable waste is being composted
- For hazardous waste management, laboratory chemicals and biomedical wastes are disposed of as per standard procedures
- electronic waste comprising hardware of condemned and discarded computers, laboratory instruments and the like are being handed over to agencies approved by the Pollution Control Boards.
- Sewage Treatment Plants (STP) of 500 kld, one unit is installed in the campus for treatment of sewage.
- RO systems, 9 x 250lph, installed for drinking water
- Peddipalem village, adopted by GITAM, has become 100% ODF.

Goa University

Goa

Goa University, with 1974 students and 193 faculty members, has the unique distinction of having come up with a novel scheme of awarding Swachhatam Mahavidyala Samman for the first time in India.

The University has six hostels on the Campus, which can accommodate a total of 532 students. There are total of 89 toilets in these hostels. The university conducts training on hygiene management for staff and students. Its ladies toilets in every building are equipped with sanitary pad dispensers and incinerators.

Goa University has initiated the process of systematic solid waste management. The waste is segregated into dry and wet waste. Compost pits have been dug.

The hostel kitchen is hygienic and uses good quality cooking equipment. LPG is used as fuel for cooking. There are exhaust fans in all the kitchens. The dining hall is well-maintained and furnished with semi-modern furniture.

Goa University campus is known for its very rich greenery and collection of flora and fauna, apart from a wide variety of birds. Rainwater harvesting structures are in place.

The University has banned single-use plastic items.

The campus has solar lights from the solar panels installed on the campus. Solar water heaters are available at the International Guest House as well as men's and women's hostels. The campus has a Hybrid Energy System which operates on the principle of Solar and Wind Energy Harvesting. This supplies a total of approximately 15KVA power to the Laboratory of the department of Electronics at Goa University.

Anchoring change in five villages

Goa University has adopted five villages Nauxi-Pirbhat, Curca Gram Panchayat (North Goa)
Cacra, St. Cruz Gram Panchayat (North Goa); Sirdao-Palem, Sirdao-Palem Gram Panchayat (North Goa); Madkai, Madkai Gram Panchayat (South Goa); and Gudi-Paroda, Paroda Gram Panchayat (South Goa).

About 400 families in these villages are being sensitized, educated and trained to herald change in various areas. The University conducted lectures on Sanitation and hygiene, street play and campaigns on water conservation, cleanliness drives, campaigns against open defecation, talks on converting waste into wealth and e-waste management, among others.

Thanks to concerted efforts, there is behavioural change among many people in the adopted villages.

Outcomes

- Initiated Swachhatam Mahavidyala Samman
- Six hostels on the campus, which can accommodate 532 students.
- There are 89 toilets in the hostels; ladies toilets equipped with sanitary pad dispensers and incinerators
- Waste is segregated into dry and wet waste
- Compost pits have been dug.
- Hostel kitchen is hygienic and uses good quality equipment
- Rainwater harvesting structures are in place
- The University has banned single-use plastic items.
- Solar panels installed on the campus
- Solar water heaters are available at the International Guest House as well as men's and women's hostels.
- Hybrid Energy System that harvests Solar and Wind Energy.
- The University has adopted five villages, benefiting 400 families

Guru Nanak Institute of Technology

Ibrahimpatnam, Hyderabad, Telangana

The Guru Nanak Institute of Technology, with 2916 students and 270 faculty members, has initiated several measures to ensure Swachhta on it campus.

The Institute has four well-maintained hostels – two for boys and two for girls -- with capacity of 600 residents on sharing basis (3 students per room with attached toilet, 24 hours running water). There is uninterrupted power supply, adequate ventilation and lighting facility.

The Institute has well-equipped gyms (separate for boys and girls). In girls' hostels, there are in-house nurses to take care of the girls. Washrooms are equipped with sanitary napkin incinerators. Every floor is Wi-Fi enabled and CCTVs are installed in and around the hostel.

In its backyard, GNIT has electro-oxidation system (EO) sewage treatment plant for liquid waste management with 200 KL/day capacity. The effluent quality of liquid waste collected from toilets, kitchen, labs, canteen, washrooms, drainages rooms in college having sample test having oil & grease up to 20 Mg/l, TDS up to 2000, pH is Neutral, Suspended Solids are Below 10 mg/l, COD Below 100, BOD (Assumed) IS Below 30.

Solid waste is generated by all sorts of routine activities carried out in the college that includes paper, plastics, glass, metals, foods, etc. The waste is segregated at each level (wet and dry) and source. The administrative supervisor in each block ensures that the waste in each floor is collected at designated time intervals. The block safai workers in each floor collect, clean, segregate and compile the waste in the dustbins provided on each floor.

The hostel has kitchen along with dining halls, where healthy and nutritious food is served. The hostel kitchen has facilities for steam cooking with gas stoves. The campus has 30% green cover and sprinklers are used to water plants.

Liquid and Solid waste management plant at GNIT

Picture of cooking area, chimney and dining hall

The solar plant capacity on GNIT campus is 200 kWP and the total generated power is utilized on the campus. Excess power and the generation on Sundays and holidays is exported to the grid through net metering.

Campus greenery (30%) and Sprinkler

Metamorphosing Medipally village

The Institute organized an NSS special camp in Mediapply, the village it adopted during 12-03-2018 to 17-03-2018. Volunteers created awareness through door to door campaign and through surveys on cleanliness, spread of diseases, and importance of environment and judicious use of Electricity, water harvesting and importance of ground water. In all, 400 families were covered.

All the 40 volunteers split into teams & interacted with village people. They visited the people in their houses and discussed their needs and requirements and highlighted the ills of open defecation. Volunteers created awareness through door to door campaign and through surveys on cleanliness, spread of diseases, and importance of environment and judicious use of electricity, water harvesting and importance of ground water. Top most priority was given to free dental & health treatment to underprivileged rural people.

Door to door survey

Essay writing, drawing and elocution competitions to the students

Outcomes

- The Institute has well-equipped gyms.
- Washrooms are equipped with sanitary napkin incinerators.
- Every floor is Wi-Fi enabled and CCTVs are installed in and around the hostel
- Electro-oxidation system (EO) sewage treatment plant is in place for liquid waste management with 200 KL/day capacity.
- Solid waste is segregated at each level (wet and dry) and source.
- The solar plant capacity on campus is 200 kWP and the entire power generated is utilized on the campus.
- Excess power and the generation on Sundays and holidays is exported to the grid through net metering.
- The Institute adopted Medipally village where it carried out interventions to highlight cleanliness, ways to check spread of diseases, and the importance of environment and judicious use of electricity, water harvesting and importance of ground water. In all, 400 families were covered.

Indraprastha Institute of Information Technology Delhi

New Delhi

The Indraprastha Institute of Information Technology Delhi, with 1,845 students and 84 faculty members, has taken signification steps in the direction of developing a Swachh campus.

At present, IIIT Delhi has three hostels -- one for boys, one for girls and the other one, with 21 rooms, for married accommodation. Each room in boys and girls hostels is provided with furniture needed by a student - bed, table, chair, bookshelf, cupboard, etc. The rooms are provided nighttime air conditioning in summers, and heating in winters. High-speed internet connectivity is available in the hostels.

There are common rooms equipped with a TV, newspapers and magazines. Sports and other recreational facilities are available on the upper floors of the dining building. Each hostel has modern toilet and water system. The wash rooms are provided with hot water supply through solar-based hot water system. The toilets are maintained hygienically; they are cleaned thrice a day.

The Institute is provided with 02X65kld fully operational Sewerage Treatment Plants. Two more plants of 2X90 KLD capacity are under construction and they are likely to be added to system by Dec 2018. In addition, the campus has rain water harvesting pits. Thus, the campus sewage is zero discharge.

All solid waste is segregated into bio-degradable and non-bio degradable categories on site and the wastes stored in separate colour-coded bins "Green" and "Blue". All bio-degradable waste, wet and garden waste is stored on site for generating compost. The daily solid waste is disposed of to M/S DDSL (M/S IL&FS) an agency appointed by SDMC.

The institute is in the process for procuring eco-friendly state of the art "Composter" to convert wet and garden wastes into manure. SDMC has suggested Composter Machine Eco Tatva, which can handle up to 100 kg wet and garden waste daily.

Te kitchen in hostels have modular cooking equipment and cool room storage facilities. The exhaust system is lead in Air Filtration unit to avoid any air pollution.



The campus has 33 % green cover, with irrigation facility through the STP plants.

The solar power system on the campus generates 220 kw power. In addition, hot water is supplied to hostels and residences of faculty members through a solar-based system.

Outcomes

- At present, IIIT Delhi has three hostels. Each room is provided with furniture, nighttime air conditioning in summers and heating in winters and high-speed internet connectivity
- Each hostel has modern toilet and water system. The wash rooms are provided with hot water supply through solar-based hot water system.
- The Institute has 02 X65 KLD fully operational Sewerage Treatment Plants. Two more plants of 2X90 KLD capacities are under construction.
- The campus has rain water harvesting pits.
- All solid waste is segregated into bio-degradable and non-bio degradable categories and stored in separate color-coded bins
- The kitchens in hostels have modular cooking equipment and cool room storage facilities.
- The campus has 33 % green cover, with irrigation facility through the STP plants.
- The solar power system on the campus generates 220 kw power.

Changing hub of criminals into a biodiversity park

The Institute has adopted Harkesh Nagar. The DDA area, approximately 100 acres adjoining IIITD and Harkesh Nagar Village, was an open defecation area for villagers amid Kikar plantation. There was a pathway from Harkesh Nagar/ IIITD to Okhla Metro Station. In addition, the area was hub of criminals and drug addicts with regular incidents of mobile and laptop snatching etc.

Now, IITD, along with DDA and Harkesh Nagar residents, have converted the area into a biodiversity park. More than 6,000 trees have been planted and a proper pathway laid for students and Harkesh Nagar residents.

More than 1000 trees were planted with help of forest department on 15th August, 2018. The area is now lung space and extensively used by villagers. Open defecation has totally stopped. There is a proper passage to Metro Station for residents and students. There is no criminal activity in the area now. The park used extensively by villagers for walks and sports. The Institute is proud of the efforts and DDA now plans to develop it as a tourist destination as well.

Indira Gandhi National Open University

New Delhi

Indira Gandhi National Open University has a student strength of 3.2 million and a faculty strength as follows - Teachers-267, Academics- 243, Administrative-958, Technical-409. There are no hostels.

Water Supply

The University campus is spread in an area of 150 acres. The campus receives about 1.0 lakh liters of water on an average per day from Delhi Jal Board and also fresh water is procured from a private vendor and tube wells. Three big water storage tanks are available at IGNOU Campus. Through a connected network of pipelines, the supply of water is made to the academic blocks, EMPC, Convention Centre, Vice Chancellor Office, Housing complex and Guest House.

Toilets

The buildings have common toilets, one for male and one for female for each floor. One toilet is also available for physically challenged persons in each floor. All these toilets are also accessed by students and research scholars.

Solid and Liquid Waste Management

There are 4 Sewage Treatment Plants (STPs). Three STPs are located near the housing complex and the treated water is being used for horticulture purpose in the IGNOU Campus. All these are in working condition.

Campus Greenery

Campus has adequate green coverage.

Solar Power

A Solar PV water pumping system of 7.5 hp Solar Pump has been installed in an abounded bore well inside the horticulture cell of IGNOU. The solar water pumping system has 24 solar modules each of 300 Watt P capacity. The solar water pumping system has solar modules, solar panels structure, manual tracking system, solar pump controller, solar pump and DC motor. This system is being used regularly for irrigation in the

horticulture cell. Further, the different components of solar water pumping system will be used for demonstration purposes to the enrolled learners at IGNOU.


Swachh Bharat Abhiyan Activities at Regional Centre, Rajkot

Activities undertaken in 27 villages :

- Sensitization of the Regional Centre staff and villagers through awareness meetings
- Swachta Pledge
- Swachhta Rally
- Cleaning of the office and surroundings
- Plantation activity
- Toilet cleaning
- Cleaning of drainage
- Garbage collection and disposal
- Hand washing Campaign
- Health and hygiene talks at the Regional Centre
- Facilitation to the villagers in toilet construction with the help of government officials
- Use of dustbins (wet and dry waste) management
- Cleanness drive in the school
- Poster making and Slogan writing competitions on Swachhta
- Spreading awareness among them about IGNOU programmes in health & sanitation
- Awareness Programmesorganized at the Learner Support Centres
- Awareness lecture on the importance of the plantation of Herbal and Medicinal Plants and their uses for the prevention of various diseases.
- Distribution of dustbins to the poor village people to encourage them to use them to keep the home environment clean
- Awareness about Swachhta through participation in Gram Sabha Meetings
- Upkeep of electronic equipment by cleaning them
- IGNOU learners carried out 100 hours of activities in the selected villages covering various aspects such as painting of the public park walls, cleaning of the streets, cleaning the water canals and door to door awareness counseling.

Outcomes

- The University campus is spread in an area of 150 acres.
- Three big water storage tanks are available at IGNOU Campus.
- The buildings have common toilets, one for male and one for female for each floor.
- One toilet is also available for physically challenged persons in each floor.
- There are 4 Sewage Treatment Plants (STPs). Three STPs are located near the housing complex and the treated water is being used for horticulture purpose in the IGNOU Campus.
- Campus has adequate green coverage.
- A Solar PV water pumping system of 7.5 hp Solar Pump has been installed in an abounded bore well inside the horticulture cell
- Almost all states are covered for villages adopted, running into hundreds.
- Several drives and campaigns are undertaken including pledges, rallies, cleanliness drives, garbage collection and disposal, hand washing campaigns, using electronic equipment, cleaning water canals and other host of activities with inclusive participation.

ITM UNIVERSITY

Gwalior, Madhya Pradesh

The ITM University, Gwalior, with 4764 students and 323 faculty members, has eight hostels. In the hostels and various blocks, the toilets have bowls fitted with water flushing device and are connected to a drain.

The water and waste from different hostels and blocks is treated at a distant sewage treatment plant. Toilets are separate for men and women in hostels and various blocks. All the toilets are properly floored and equipped with modern equipment. Exhaust fans and air vents are in place. Toilets are specially designed for disabled persons placed in all hostels and blocks.

The water points are located near each hostel and block. Water purifiers have been established in various buildings. There is a system to check the water quality frequently. All the buildings have rainwater harvesting systems in place to augment supply of potable water and to help maintain a green campus.

Wet and dry waste is collected on daily basis through various garbage bins installed at various places and segregated. To dispose the solid and liquid waste collected from various sources, solid waste management and liquid waste management plants are in place.

Hostel kitchen is equipped with modern cooking equipment. The mechanism of food preparation is hygienic. Kitchen provisions must meet the requirements of the food safety. The dining facilities are sufficient to allow safe practices of dining and equipped with all the modern facilities like steel furniture etc.

From the inception of the University, it is geared towards building a green campus. The University takes up annually a tree plantation drive under which nearly 2000-3000 new saplings are planted for campus beautification. Besides green landscaping, the University also aids and assists organisation working in support of the cause of environment conservation. Solar power system is also installed on various buildings to fulfill energy requirements.

Outcomes

- All eight hostels and various blocks of the university have toilets with water flushing devices and are connected to a drain
- Water and wastes from hostels and blocks are treated at an STP.
- Toilets are separate for men and women in hostels and various blocks.
- Toilets are specially designed for disabled persons in all hostels and blocks.
- Water points are located near each hostel and block. There are water purifiers in various buildings.
- All the buildings have rainwater harvesting systems
- Wet and dry wastes are collected on daily basis.
- Hostel kitchen is equipped with modern cooking equipment.
- The University takes up annually a tree plantation drive under which nearly 2000-3000 new saplings are planted for campus beautification.
- Solar power system is installed on various buildings to meet energy requirements.

How the university changed the face of Sikroda

The ITM University, Gwalior, adopted Sikroda, a village in Gwalior Tehsil of Gwalior district, with 64 families. In Sikroda village, the population of children aged 0-6 is 84 which make up 16.00 % of total population. The numbers of people is 525, of which 262 are males and 263 females. They all were covered by activities taken up by ITM University.

At the core of the concept of Swachhata is access to sanitation facilities, arrangement of system for solid and liquid waste disposal and access to safe and adequate water. Attaining Swachhata presupposes using clean and safe toilets and disposing of waste water and garbage safely. Thus, sustaining the cleanliness drive, regular inspections are being done by students in the adopted villages, Sikroda.

Operating drainage systems and garbage collection systems and adopting environmental cleanliness have improved in the villages following visits by students.

Outcomes

- Adopted Sikroda village which has 64 families
- In all 525 people 262 males and 263 females were covered
- Awareness of villagers was raised with regard to sanitation facilities, arrangement of systems for solid and liquid waste disposal
- Access to safe and adequate water

Koneru Lakshmaiah Education Foundation
K L Deemed to be University

Guntur District, Andhra Pradesh

With a student strength of 15020, and faculty strength of 1180, KL Education Foundation (KLEF) imparts quality higher education with emphasis on application and innovation.

Hostels and Toilets

The University has been maintaining 2 hostels within the campus which accommodates 2900 students and 8 hostels outside the campus. In all, a total of 3231 Toilets are available within the academic buildings and Hostels. The toilets are sanitized every day thrice and kept neat and clean by spraying necessary ceiling methods. The toilets are designed to suit men, women and differently-abled people separately. KLEF has 24 hours running water and water table is just below 12 ft. The underground water to the toilets is supplied through overhead tanks which are automatically filled when 25% storage of the tanks has been reached. The water discharges to the toilets are designed to achieve proper water pressure management. The sinks are made of bio material with water flushing with centrifugal action. RO plants are in place for drinking water throughout the campus.

Solid and Liquid Waste Management

Solid Waste Management: KLEF has introduced effective solid waste systems in the campus. The waste is segregated at source into recyclable waste and organic waste. There are dual set bins placed all over the campus. Keeping in mind the uses of bio gas plant, the university set up a bio gas plant in its campus in 2014-15 and is continued further. The plant was started with the construction of a deep well with a depth and radius of 20 ft. and 36 ft, respectively with a capacity of 300 cubic meters. The plant was set up to cater the need of producing bio gas from waste materials released by the different entities. A small unit of paper recycling is in place.

Liquid Waste Management: KLEF has installed a Sewage Treatment Plant of 300 KLD capacity. All the sewage generated in the campus is treated in such a way that it can be reused for secondary purposes like gardening, construction, bus washing etc. Nearly 80% of treated water is used for the secondary purposes and remaining 20% of it is used for flushing and cleaning of drainage systems in the campus.

Electronic Waste Management: The University administration has a buy-back policy where in old or damaged computer peripherals, e-waste are exchanged for new ones as refurbished and also following all statutory bodies and regulations. A tie-up with an established company for processing the e-waste is in place.

Hostel Kitchen Facilities

KLEF has separate hostels for girls and boys with well-furnished modern amenities of kitchen and spacious dining area. Emphasis has been laid on hygiene and cleanliness for healthy living. The kitchen is furnished with modern amenities. It is equipped with stainless steel steam boilers for rice and milk, gas burners, grinders, idli and dosa plate, atta kneader, etc.

Campus Greenery

The campus greenery is maintained with utmost importance. Out the total land area (176261 Sq.m) around 36% (63461 Sq.m) is covered with greenery. It is made sure that the green cover contains both indigenous and exotic plants that keep the biodiversity intact and helps in maintaining eco-friendly ambience in the

campus. The institute also concentrates on improving vertical greenery in the campus by incubating creepers in all of its buildings. All the gardens are watered with help of sprinklers (using recycled water from STP) which further saves water. A total of 95 dedicated staff members are in place for gardening. A total of 326 supporting staff are there for cleanliness and maintenance.

Solar Power

Renewable resources of solar PV and wind power plants are available on the rooftops of all campus building with capacity of 835.4 kWp out of which 61.2 kW of Wind and rest are solar PV. From these plants KLEF

captures approximately 12.5 lakhs units of power per annum - this is serving 34% of total power needs.

Few innovating things are in practice in the campus towards green building:

- Replacement of convention artificial lighting with LED lights.
- Replacement of conventional ceiling fans by energy efficient BLDC fans.
- Radiant cooling for HVAC systems with thermal storage system.
- Building Management System to manage the total building services.
- Lighting automation to control and save the electrical energy
- Implementation of good facades for external walls, use of natural ventilation without glare.
- Insulated roof buildings.
- Online Electrical Energy monitoring system to monitor and control.
- Biogas generation from toilet and kitchen waste

Village adopted

KLEF adopted six villages situated in its neighborhood. All these villages are situated in Guntur District, Andhra Pradesh. The details of the villages adopted include Vaddeswaram, Revendrapadu, Peddpallem, Gundemeda, Kanimerla and Pathur. More than 450 families in these villages comprising around 6,000 people are covered.

As a part of the village adoption KLEF has undertaken many of the activities that keep the villages clean and green, such as cleaning public streets and areas like schools, bus stands, removal of stray plants, and spraying bleaching powder across dumps and drainage flows, spraying mosquito mist etc. KLEF conducted continuous awareness programs to the villages regarding the use of private toilets and the ill effects that arise due to the practice of open defecation.

After the intervention, the public health of the villagers has improved tremendously due to the adaption of the best practices about which the awareness was created by KLEF. People stopped open defecation and started using public/private toilets. It was observed that no mosquitoes were flying over the dumps. It has also been observed that the roads are clean and the green plantation has been laid on the edges of the roads.

Outcomes

- In all, a total of 3231 Toilets are available within the academic buildings and Hostels. The toilets are sanitized every day thrice.
- The underground water to the toilets is supplied through overhead tanks which are automatically filled when 25% storage of the tanks has been reached.
- The sinks are made of bio material with water flushing with centrifugal action.
- RO plants are in place for drinking water throughout the campus.
- The waste is segregated at source into recyclable waste and organic waste. There are dual set bins placed all over the campus.
- bio gas plant was set up.
- All the sewage generated in the campus is treated in such a way that it can be reused for secondary purposes like gardening, construction, bus washing etc.
- Nearly 80% of treated water is used for the secondary purposes and remaining 20% of it is used for flushing and cleaning of drainage systems in the campus.
- The administration has a buy-back policy where in old or damaged computer peripherals, e-waste are exchanged for new ones as refurbished and also following all statutory bodies and regulations.
- Out the total land area (176261 Sq.m) around 36% (63461 Sq.m) is covered with greenery.
- All the gardens are watered with help of sprinklers (using recycled water from STP) which further saves water. A total of 95 dedicated staff members are in place for gardening.
- KLEF captures approximately 12.5 lakhs units of power per annum - this is serving 34% of total power needs.
- In the adopted villages, the public health of the villagers has improved tremendously due to the adaption of the best practices about which the awareness was created by KLEF.

Kalasalingam Academy of Research and Education

Krishnankoil, Tamil Nadu

Making a mark in Green Metric

The Kalasalingam Academy of Research and Education, with 6,702 students and 459 faculty members, has already made a mark in UI Green Metric World University Rankings, an initiative of Universities Indonesia that was launched in 2010. It secured 25th rank among world universities in rural set-up and 6th rank among Indian Universities)

The Academy has 7 hostels (four for gents and three for ladies) with the total capacity for 5,582 inmates with different lodging options like single/double/ triple/four-bedded rooms, with/without A/C, with/without attached bathrooms with water heater, shower and modern toilets. Common facilities include kitchens (separate for veg, Non-veg, North-Indian and South Indian foods), free in-house laundry (to conserve water), supply of mineral water, recreation and other amenities inside each hostel with measures to save electricity through smart meters, efficient pipeline systems to conserve water, active participation of inmates in ensuring food safety & hygiene and reduction of food wastes.

Across the campus, color-coded dustbins are used to collect different types of solid wastes, amounting to 3.5 tons per day. The wastes are transported to Waste Recycling Centre. The segregated biodegradable (organic) wastes are dumped in six pits for microbial decomposition (consortia microbial method) and subsequently fed to earthworm pits for conversion into vermin-compost manures. Similarly, a breakthrough to decompose inorganic plastic wastes through a unique microbial consortia technology has been made and put in practice in the Waste Recycling Centre of KARE.

The Academy has a hi-tech automatic computerized Sewage Treatment Plant (Aquamax XXL-1500 model; capacity 3lakh litres per day), supplied by a German company using Sequence Batch Reactor, without chemical treatment. The treated water conforming to norms of pollution control board is being used (since 2009) for gardening, toilet flush, air-conditioning plants etc.. The second plant, with the same technology, but with indigenously manufactured parts and with capacity of additional 5 lakh litres per day, is under erection to meet the future requirement of the campus.

All the kitchens in hostels are regularly inspected by the authorities of FSSAI and have (Form C) certified for food safety and hygiene. All the kitchens are equipped with modern and mechanized cooking equipment, ventilation through power exhausts and do not use firewood to keep the environment clean and smoke free.

KARE extends over 65 acres with a built-in area of 21,59,274 sq. ft amid verdure at the foothills of the Western Ghats. The campus has 30 % green cover. To achieve carbon neutrality, the university keeps planting trees and increases the surface of green lawn. The campus maintains bio diversity of plants and trees the native trees, flora and fauna (deer, bison and peacock) are taken care. A dedicated team is available for plantation and regular maintenance of garden inside the campus. The campus uses recycled water system for watering the plants and trees through exclusive circuit of pipelines and sprinklers and drip irrigation.

The Academy has given importance to renewable energy sources since inception. The use of solar energy for street lighting is continuous activity. It has installed a solar power plant of 214 kW capacity. The power plant is generating 1070 units per day and the annual power generation is 3,90,550 kW. A total of 167 solar street lights have been installed inside the campus , each of 11 KW. The estimated carbon reduction is 406.3t CO2 per annum. Energy audit conducted on the campus resulted in replacement of all energy-consuming lighting incandescent lamps to energy-saving LED lamps. All new buildings are also fitted with energy-saving bulbs.

Transforming five villages

The Academy has adopted five villages: Kalyanipuram, Melagopalapuram, Sethunarayanapuram , Kadaneri and

Maharajapuram, all in Watrap block of Virudhunagar district. About 250 Families in each village are covered by the campus. Students and faculty members conducted special camp themed 'Vibrant youth for wealthy India' in the villages for one week (19.05.2018 to 25.05.2018). The camp was intended to make the villages clean and plastic-free. The volunteers took part in blood donation awareness program, rain water harvesting rally, tree plantation, medical camp, cultural activities and games for village children.

Students and faculty volunteers from the Energy Centre of KARE ensure judicious use of resources (primarily the water and energy) and help increase the green cover to minimize carbon footprint in the surroundings. KARE is partnering in WoW (Well-being Out of Waste), a national recycling initiative by the ITC Ltd, by contributing 21,110 kg of paper waste for the recycling project, amounting to saving of 464 trees, consecutively in the last two years.


Vehicle Free-dav

Outcomes

- The Academy's 7 hostels have different lodging options like single/double/triple/four-bedded rooms, with/without A/C, with/without attached bathrooms with water heater, shower and modern toilets.
- Common facilities include kitchens, free in-house laundry, supply of mineral water, recreation and other amenities
- Colour-coded dustbins are used to collect different types of solid wastes, amounting to 3.5 tonnes per day.
- Automatic computerized Sewage Treatment Plant (Aquamax XXL-1500 model; capacity 3lakh litres per day), supplied by a German company using Sequence Batch Reactor, without chemical treatment.
- All kitchens are equipped with modern and mechanized cooking equipment, ventilation through power exhausts. They do not use firewood to keep the environment clean and smoke free.
- The campus has 30 % green cover.
- The campus uses recycled water system for watering plants and trees through sprinklers and drip irrigation
- Installed a solar power plant of 214 kW capacity. The power plant is generating 1070 units per day
- The Academy has adopted five villages: Kalyanipuram, Melagopalapuram, Sethunarayanapuram , Kadaneri and Maharajapuram, benefiting about 250 families.

KLE Academy of Higher Education and Research

Belagavi, Karnataka

KLE Academy of Higher Education and Research, formerly known as KLE University, is in the spheres of medical education, research and health care services.

The Institution has a student strength of 5932 with a faculty strength of teaching – 1058 and non-teaching – 770.

Hostels and Toilets

There are a total of 13 hostels in the Campus with clean flooring and modern equipments and continuous source of water. The toilets get are equipped with Auto Flush units.



Solid and Liquid Waste Management

- The institution has its own Effluent Treatment &Water Recycling Plant in the Campus
- Functional Sewage treatment plant of 1000 m3/day capacity utilizes the sewage from the hospital using the activated sludge process by extended aeration system.
- Effluent treated Waste Water after chlorination is pumped for gardening in University campus covering 21 acres.
- Water conservative measures by providing pressure compensating Aerators to the taps saves 30-40% Water usage.
- For flush valves and flush tanks, treated waste water is used.
- The laboratory waste is treated with the help of liquid disinfectant units.

Hostel Kitchen Facilities

- The hostel kitchen have got a state of art, cooking infrastructure with all modern amenities for assured delivery of hygiene and clean food. LPG steam is used to cook food.

Campus Greenery

- Sprawling green campus of 100 acres with more than 65% of green area with 15000 plantations.
- Well maintained campus with Sprinklers, plastic free, vehicle free, tobacco free with only battery operated carts running in the campus.
- LED lights are used for street lights.
- Campus has its own nursery for plants.

Solar Power

- Solar Park: Solar Power Plant generates 180 MW/month established by the KLE Society, Belagavi.
- The University obtains 8 to 10 MW / month from this through Solar Wheeling. 77% of the power utilisation in the campus is by Solar Energy.

Villages adopted

The University and the constituent units have 9 vibrant NSS Units. They have adopted Gajapati, Nittur, Benakanahalli, Chandanhosur, Basapur villages, all in Belagavitaluka of Belagavi District. A total of 20,000 people are covered.

The University, through NSS units, regularly conducts Health Check up camps, Health and Environment awareness, social traditions, etc.,. More than 60% of the students are actively involved in all these events. All the disciplines regularly undertake preventive and social medical services and and health check-up camps both of diagnostic and treatment types regularly in the adopted villages and other nearby needy areas. The NSS units also take up cleanliness of one public place, campus, heritage places, premises and one cleanliness awareness programs.

There are toilets and hand washing areas made available in the schools of these villages contributing to Open Defecation Free village.

- Two hours / week or 100 hours / year (every Friday afternoon) is dedicated to swachhta activity, conducted by all the Departments of constituent units / hospitals

- Local Gram Panchayats / Primary Schools / High Schools and Belagavi City Corporation are actively involved along with the residents of Urban slums / adopted villages in the Swachh Bharat Abhiyan activities conducted by NSS Units.
- Two NSS Units / two NSS Programme Officers / Two NSS Student Volunteers have been awarded Best NSS Units / Best NSS Program Officers / Best NSS Volunteers by Govt. of Karnataka in last 3 years.
- The Medical College (JNMC) of the University has adopted two rural Primary Health Centres – Kinaye & Vantamuri in Belagavitaluka and two urban Health Centres - Ashok Nagar and Rukmini Nagar in Belagavi City, covering a total population of 2,00,000 people under the Arogya Bandhu - Public Private Partnership with the ZillaPanchayat, Belagavi / Govt. of Karnataka and Belagavi City Corporation.

Outcomes

- There are a total of 13 hostels in the Campus with clean flooring and modern equipments and continuous source of water.
- The toilets get are equipped with Auto Flush units.
- The institution has its own Effluent Treatment &Water Recycling Plant in the Campus
- Effluent treated Waste Water after chlorination is pumped for gardening in University campus covering 21 acres.
- Water conservative measures by providing pressure compensating Aerators to the taps saves 30-40% Water usage.
- The laboratory waste is treated with the help of liquid disinfectant units.
- Sprawling green campus of 100 acres with more than 65% of green area with 15000 plantations.
- Well maintained campus with Sprinklers, plastic free, vehicle free, tobacco free with only battery operated carts running in the campus with own nursery.
- LED lights are used for street lights.
- Solar Power Plant generates 180 MW/month established by the KLE Society, Belagavi.
- The University obtains 8 to 10 MW / month from Solar Wheeling. 77% of the power utilisation in the campus is by Solar Energy.
- The University and the constituent units have 9 vibrant NSS Units.
- There are toilets and hand washing areas made available in the schools of these villages making the village Open Defecation Free.

Kongu Engineering College

Erode District, Tamil Nadu

The Kongu Engineering College, with 8,068 students and 541 faculty members, has taken a combination of steps toward Swachhta on the campus with heartening results.

Food Waste Crusher - Gents Hostel

The college has 11 hostels -- 4 for women and 7 for men -- accommodating around 4,180 students in all. All the hostels have 24/7 water supply systems (both hot and cold) and modern toilet facilities. Drinking water (hot/cold/normal) is available 24/7 through water dispensers at different easily accessible locations. There are separate toilets for differently abled men and women.

An RO water treatment plant of 12,000 liter per hour capacity is functional, producing "Kongu" brand bottled mineral water for internal use. This purified drinking water is available 24/7 through dispensers in all academic blocks as in the hostels.

Advanced systems are in place for solid and liquid waste management with a Bio-Mass Gassifier Plant and 10 lakh liter per day capacity Sewage water treatment plant. Solid and food wastes are used for Bio-gas production and treated water is used for gardening and landscaping. Elaborate and extensive sanitation and cleaning arrangements are in place with efficient management systems for waste segregation, recycling and reuse.

Sewage Treatment Plant

Kitchen Sophistication in Ladies hostel


Hostel Dinning Hall

The hostels have state-of-the art cooking facilities, chimney and high-tech waste disposal facilities. The dining halls are very spacious with modern seating facilities. There are clean, separate hand wash areas.

It is estimated that the campus has a green cover to the extent of roughly about 50 percent of the total land (166.97 acres) with well manicured lawns and landscaped garden areas. Efficient water management is done through sprinklers in all green areas. Treated sewage water is used for gardening. The vision for a green campus carefully factored in all aspects of growth with the focus on sustaining and enhancing the total topography of the campus, with biodiversity and protection of the environment given priority both within and around the campus. With nearly more than half of the land area under green cover, the campus takes pride in its elaborate network of carefully maintained gardens and green areas.


Garbage Clearance Bins


Green Cover


RO Water Plant

About 480 Kwh power, generated from solar energy-backed by captive generators of 3250 kVA, add to HT power supply to help provide 24/7 uninterrupted power supply to the entire campus.


Solar Power

NSS/NCC volunteers involve themselves in campus cleaning programmes. Around 100 volunteers are involved in these programmes. 'Clean Hostel Day', 'Clean Mess Day', 'Cleanest Hostel Room' Contest, 'Clean Campus Day' and 'Green Campus Day' and the like are organized. The volunteers celebrate the green campus day by planting trees. They create awareness among students, staff, drivers, workers and also among children in the staff quarters by asking them to avoid plastics in their daily lives and by explaining the ill effects of plastic usage. Owing to these efforts, the use of plastics among students and staff has come down drastically.

Anchoring change in five villages

The college has adopted five villages: Thiruvachi, Vijayapuri, Moongilpalayam, Madathupalayam and. Mettupudur under Perunduai Panchayat of Erode District, benefiting around 2,100 people.

THIRUVACHI TEMPLE GROUND CLEANING WORK

DURING CLEANING WORK

THIRUVACHI TEMPLE GROUND CLEANING WORK

AFTER CLEANING

Under the auspices of the college, volunteers created awareness among people on cleanliness and sanitary measures in the adopted villages as well as toilet habits.

Students organized camps to make the villages Open Defecation Free (ODF). They removed plastics and non- bio degradable material from the surroundings. This cleaning process involved the local people. NSS /NCC volunteers launched a door to door awareness programme. They distributed leaflets and handouts regarding cleanliness and ODF status. There was a good response from the village people.

SWACHH BHARAT – AWARENESS PAMPHLETS DISTRBUTION AT VIJAYAPURI & MOONGILPALAYAM

Volunteers were involved in cleaning public places like the railway station, daily market, Government hospital, etc. Awareness was created in markets and railways stations about the need to avoid using plastic bags. Paper bags were distributed for use instead of plastic bags.

Outcomes

- The College as 11 hostels accommodating around 4,180 students.
- All the hostels have 24/7 water supply systems (both hot and cold) and modern toilet facilities
- Drinking water (hot/cold/normal) is available 24/7 through water dispensers.
- There are separate toilets for differently abled men and women
- An RO water treatment plant of 12,000 liter per hour capacity is functional
- Advanced systems are in place for solid and liquid waste management with a Bio-Mass Gassifier Plant and 10 lakh liter per day capacity Sewerage treatment plant.
- Solid and food wastes are used for bio-gas production and treated water is used for gardening and landscaping.
- The hostels have state-of-the art cooking facilities, chimney and high-tech waste disposal facilities.
- The dining halls are spacious with modern seating facilities.
- The campus 50% green cover with well manicured lawns and landscaped garden areas.
- Efficient water management is done through sprinklers in all green areas.
- Treated sewage water is used for gardening.
- About 480 Kwh solar power is generated to help provide 24/7 uninterrupted power supply to the entire campus.
- The campus has adopted five villages, benefiting 2,100 people in all.

Lenora Institute of Dental Sciences

East Godavari, Andhra Pradesh

The Lenora Institute of Dental Sciences, with 500 students and 155 faculty members, has two hostels within the campus --one for the girls (undergraduates & postgraduates) and one hostel for boys. Both have western and Indian toilets, which are well-maintained and have solar water heaters.

Solid and liquid wastes are managed properly. The waste material is collected in colour-coded bins and segregated. The segregated waste is ultimately collected by a biomedical waste management company for further processing, leaving the campus pollution-free and clean.

The kitchen has chimney and rice boilers. The dining area is clean and neat. The campus is surrounded by lush greenery. Organic vegetables are grown on the campus. Dedicated staff maintain the plantations and lawns. Rain harvesting pits are in place to recharge ground water.

A solar power plant of 50 KV capacity is connected to the grid. Another 50 KV solar power plant is being installed.

Outcomes

- Two hostels within the campus. Both have western and Indian toilets with solar water heaters.
- Solid and liquid wastes are managed properly. Waste material is collected in colour-coded bins and segregated. The segregated waste is ultimately collected by a biomedical waste management company for further processing, leaving the campus pollution-free and clean.
- The kitchen has chimney and rice boilers. The dining area is clean and neat.
- Campus is surrounded by lush greenery. Organic vegetables are grown on the campus.
- Rain harvesting pits are in place to help recharge ground water.
- A solar power plant of 50 KV capacity is connected to the grid. Another 50 KV solar power plant is being installed.

Raising awareness in Narendrapuram village

The institute has adopted Narendrapuram village in East Godavari district, covering approximately 200 families. Nearly 250 students from BDS and MDS courses participated in programmes organized to generate awareness among school students.They visited villages in groups with the motto "Cleanliness is not a work; it is a good habit and healthy way for healthy life", creating awareness among kids and elders alike.

This helped many individuals in learning about the advantages of maintaining personal hygiene.

A door-to- door campaign was launched to highlight the importance of washing hands before eating.

Outcomes

- Adopted a village with 200 families.
- Nearly 250 students participated in programmes organized to generate awareness among school students.
- Villagers were motivated with the slogan "Cleanliness is not a work; it is a good habit and healthy way for healthy life"
- A door-to-door campaign was launched to highlight the importance of washing hands before eating

Lovely Professional University

Phagwara, Punjab

Lovely Professional University, with 2064 faculty members and 30,400 students, and a total staff of 4604 members, is spread across huge acres of lush green landscapes. The University has 15 hostels with 6621 spacious and well ventilated rooms, with 22,350 hostel inmates. The hostels have all the modern installations and facilities with an attached washroom to every room. Coolers and geysers are a part of standard fitment in all rooms with a provision of upgrading to air conditioners when needed.

All the toilets and bathrooms are constructed considering the contemporary architect and hardware with colorful tiles, wash basins, mirrors, cleaned and properly maintained with close coupled toilets. Besides, to cater to the needs of the differently-abled people, all hostels have special elevators, ramps and washrooms with accessories at a suitable height.

Water supply system of the university is another constituent which gives a unique dimension to the campus with perpetual water supply running 24 hours. The University has 30 bores and 280 water purifiers and commercial RO systems. It has placed 4 RCC tanks with a humongous capacity of 26.43 lacs liters. Also, there are 594 PVC tanks with additional capacity of 11000 litres.

Solid and Liquid Waste Management

The University has proper solid, liquid and lab waste management system in place. For managing the solid waste, collection through 1300 dustbins and 16 dumping locations is done and for further disposal, the campus has compost pits, vermicompost-pits and biogas plant for managing the solid waste.

As far as liquid waste management is concerned, all the sewerage and liquid waste is collected in the 5 MLD Sewage Treatment Plant (STP). After the treatment, the treated water is used for irrigation in the agriculture fields inside the campus. Sludge generated is also used in irrigation fields as manure.

Hostel Kitchen Facilities

Food preparation area in all hostel kitchens are mechanised through flour kneader machine, mechanically operated choppers and many other automated equipments. There is proper ventilation for heat/steam evacuation from kitchen premises with chimneys. LPG banks are positioned outside the buildings.

The University offers state-of-the-art dining facilities with modern flooring vitrified floor tiles, stainless-steel furniture, hand wash basins and sinks, RO water dispensers, etc.

Campus Greenery

LPU has lush green ambience which is conducive for learning with 35% green area and 20% more area is available for the same. In addition to this, a dedicated 200 acre of farming land is used for teaching and experimenting purposes for the students of School of Agriculture.

Solar Power and other innovative usage: The University has adequate source of energy with 1000 KW (maximum permitted limit) at Unipolis rooftop and 3476 solar panels with 25 inverters converting DC to AC. Solar pumps are also installed at University farms to use renewable sources of energy.

Hexi Bikes and E-rickshaws in the campus: With a perspective of keeping the environment clean and pollution free, the University promotes the culture of commuting through cycles and e-rickshaws. Petrol/diesel vehicles are not allowed for students to commute within the campus to endorse the idea of pollution free environment.

Villages adopted

The University has adopted 16 villages - Maheru, Chaheru, Madhopur, Raipur Prohala, Hardaspur, Salarpur, Narang Shahpur, Barna, Nangal Majja, Hardofara, Semi, Khajurala, Sapror, Mehtan, Chak Hakim, Palahi from Jalandhar and Kapurthala region.

LPU takes pride in catering to the welfare and well-being of population staying in these villages. The University significantly emphasizes on providing quality education and standard of living to almost 18,000 to 20,000 villagers amounting to approximately 4000 families.

The University has ventured into multifarious campaigns such as:

Cleanliness drives: Students and faculty have been diligently working towards it by going into the vicinity of the campus and spreading awareness in the nearby villages by involving various stakeholders working for the welfare of the society.

Food Wastage Saving Drives is another imperative initiative taken by the University in which all and sundry, through seminars and campaigns are made aware of conservation of food products without using them recklessly.

Save Environment Awareness Drives are taken up by the University in which innumerable saplings are planted in order to generate inclination towards nature.

Open Defecation Free (ODF) The University through various resources has created awareness among villagers about maintaining hygiene and sanitation in their homes and peripheries in order to combat with this severe situation.

Capacity Building Programs are also organized on consistent basis to make people aware of solid waste management by conducting activities, seminars and training programs in which some pertinent methods are taught to manage the waste without making them detrimental to anybody's health.

Overriding on the theme 'Skill Development Mission' campaign, our university is paying enormous importance on the skill development of residents from these villagers. In one of a kind initiative, our faculty members are frequent paying visits to schools of these villages, empowering all and sundry about socially relevant aspects while making them well accustomed of numerous challenges occurring at the professional front.

Health awareness A number of camps like blood donation, eye check-up and free medical check-up are organized, reaching out to a substantial number of people. Focus is also on sensitizing women about sanitation through use of sanitary pads and utility of various hygienic elements related to it.

Agricultural Support The faculty and students in liaison with the farmers are working on projects like crop breeding, mushroom cultivation and are in continuous process of improving the yield of crops as well as improving the standard of living of the villagers.

Outcomes

- To cater to the needs of the differently-abled people, all hostels have special elevators, ramps and washrooms with accessories at a suitable height.
- The University has 30 bores and 280 water purifiers and commercial RO systems. It has placed 4 RCC tanks with a humongous capacity of 26.43 lacs liters. Also, there are 594 PVC tanks with additional capacity of 11000 litres.
- For managing the solid waste, collection through 1300 dustbins and 16 dumping locations is done and for further disposal, the campus has compost pits, vermicompost-pits and biogas plant for managing the solid waste.
- After the treatment, the treated water is used for irrigation in the agriculture fields inside the campus. Sludge generated is also used in irrigation fields as manure.
- In kitchens, there is proper ventilation for heat/steam evacuation from kitchen premises with chimneys. LPG banks are positioned outside the buildings.
- 35% green area coverage and 20% more area is available for the same.
- 200 acre of farming land is used for teaching and experimenting purposes for the students of School of Agriculture.
- Adequate source of energy with 1000 KW (maximum permitted limit) at Unipolis rooftop and 3476 solar panels with 25 inverters converting DC to AC. Solar pumps are also installed at University farms to use renewable sources of energy.
- Promotes the culture of commuting through cycles and e-rickshaws i.e., Hexi Bikes and E-rickshaws in the campus.
- Petrol/diesel vehicles are not allowed for students to commute within the campus to endorse the idea of pollution free environment.
- The University has adopted 16 villages and through various resources has created awareness among villagers about ODF, maintaining hygiene and sanitation in their homes and surroundings.

Manav Rachna International Institute of Research and Studies

Faridabad, Haryana

Assimilating Swachhta from a clean environment

Cleanliness is central to the gamut of activities of the Manav Rachna International Institute of Research and Studies, Faridabad, Haryana. The focus has always been on providing a totally clean and green environment to students so that they not only study well in their respective domains, but also simultaneously imbibe this spirit in themselves. MRIIRS students participate in Swachhta Summer internship with enthusiasm.

The campus has 192 toilets for students and staff. The toilets are kept clean by housekeeping staff and regularly sanitized. The hostel kitchen and mess is run by Sodexo. They follow FSSAI guidelines, be it for cooking mechanism, food storage, menu preparation, food distribution, utensil sterilization, procurement of food stuff or serving. They use for fuel oorja sticks, which are eco-friendly, apart from LPG. The water source is groundwater and supply is maintained round the clock.

Potable water is supplied from roof-mounted RO system. Regular water testing is conducted so as to provide safe drinking water. Efficient water fixtures and fittings have been installed for water conservation. Recharge structures and RWH via rooftops are in place. Garbage is managed well. For using food and garden waste, a bio-composting machine has been installed. The machine generates 7.5 kg of organic compost per day. E-waste & hazardous wastes are given for proper disposal to recycler approved by HPCB.

The institute has 30% green cover. The greenery is maintained by the Horticulture Department. There is a medicinal garden on the campus with a rich collection of medicinal plant species. It is maintained by the Department of Biotechnology, FET, MRIIRS.

A waste water treatment plant, with capacity of 2 lakh litre per day, has been set up on the campus to recycle water, which is used for gardening purposes. There is a grid connected to roof-top Solar PV system of 313KW capacity, developed as part of the institute's greening initiatives to reduce carbon footprint.

Outcomes

- Focus on providing a totally clean and green environment to students
- Students participate in Swachhta Summer internship with enthusiasm
- All toilets are kept clean and regularly sanitized.
- Hostel kitchen and mess run in line with FSSAI guidelines
- Potable water is supplied from roof-mounted RO system.
- Recharge structures and RWH via rooftops are in place.
- Garbage is managed well.
- For using food and garden waste, a bio-composting machine has been installed. The machine generates 7.5 kg of organic compost per day.
- The institute has 30% green cover.
- A medicinal garden on the campus has a rich collection of plant species.
- Water from a waste water treatment plant is used for gardening
- A grid connected to roof-top Solar PV system of 313KW capacity has been developed to reduce carbon footprint.

Transforming Mohna village and its environs

Manav Rachna adopted village Mohna in Ballabgarh Block, Shiv Temple and the Old Faridabad Railway Station, where through its diverse activities it has directly impacted several people. Teams from Manav Rachna campus visit these sites on a weekly basis and disseminate ideas concerning Swachhta. As part of other off-campus activities, Manav Rachna is involved at the district level in mega plantation drives, religious and social events, providing techno-support in water issues etc.

The motto that drives everyone is: "Clean Campus is my dream Campus"

Outcomes

- Institute has adopted Mohna village, Shiv Temple and Old Faridabad Railway Station
- Teams from Manav Rachna campus visit adopted sites on a weekly basis and disseminate ideas concerning Swachhta.
- Manav Rachna is involved in plantation drives, religious and social events, and provides technical support to address water issues.

Manipal University

Jaipur, Rajasthan

The Manipal University, with 8,500 students and 993 members of staff, has taken significant steps to create a swachh campus

The University has 2991 rooms in its hostels with modern toilets and proper water supply. The toilets have water flow restrictor, sensor-based urinals, anti-skid floor and centralized exhaust unit.

The University has adopted 3-bin policy (organic, in-organic and hazardous) for wastes on campus and hostels premises. This is to segregate and collect different types of wastes generated at source. The collected waste is sent to re-cyclers. This process thus achieves efficient waste segregation and reduces the burden on landfill.

MUJ has a 500kg/day capacity Bio-Digester which can generate 30 kg of bio-gas per day to treat 100% of organic food waste generated from kitchens and food courts. There are two STPs for campus and hostels to treat 100% liquid waste generated. Hostel blocks have a 1350 KLDMBR System and the campus has 500 KLD MBR system. The sewage water generated is treated to tertiary standards and used within the premises for domestic purposes like flushing and landscaping.

The kitchens in hostels use bio-fuel and combioven. Walk-in cooler and dish-wash mechanism have been provided. LPG through pipelines is used. Chimney and powerful exhaust unit are used. Gloves, head gear and aprons are mandatory while cooking/serving food. Hand wash soap dispensers are placed in

adequate numbers. The kitchen is spacious & well-ventilated.

Manipal University Jaipur has 37% green cover, which is nearly 67,096.5 sq m of landscape and naturally vegetated areas. MUJ has so far planted nearly 6300 trees on the campus. To restore the natural biodiversity of the region, landscapes are designed with native and adaptive species of flora.

Efficient irrigation systems like micro drip and sprinklers are used to irrigate landscape areas.

Manipal University Jaipur has reduced conventional energy demand by installing a solar PV array of 1485 kwp on various building rooftops which contribute to 20% of total energy consumption by hostels and campus. The University has renewable energy based hot water systems and heat pumps on the roof tops of hostel blocks to meet hot water demand in the building. The energy source for heat pumps is from the solar PV array.

Adoption and care

The University has adopted five villages viz. Dehmi Kalan, Dehmi Khurd, Sanjharia, Thikaria and Begus; Jaipur Railway Station and Mansarovar residential colony for promoting Swachhta. Other neighbouring villages also being supported like Devaliya, Bagru, Sanganer etc.

More than 1000 families have been covered. The activities taken up in the adopted villages include tree plantation, cleanliness drives, awareness camps, legal aid camp, maintenance of school at Dehmi Kalan and distribution of laptop, furniture, water cooler, books etc.

Outcomes

- The Manipal University has 2991 rooms in its hostels with modern toilets and proper water supply. The toilets have water flow restrictor, sensor-based urinals, anti-skid floor and centralized exhaust unit.
- The University has adopted 3-bin policy (organic, in-organic and hazardous) for wastes on campus and hostels premises.
- A 500kg/day capacity Bio-Digester generates 30 kg of bio-gas per day to treat 100% of organic food waste generated from kitchens and food courts.
- There are two STPs for campus and hostels to treat 100% liquid waste generated.
- Hostel blocks have a 1350 KLDMBR System and the campus has 500 KLD MBR system
- The kitchens in hostels use bio-fuel.
- Walk-in cooler and dish-wash mechanism have been provided.
- Manipal University Jaipur has 37% green cover, which is nearly 67,096.5 sq m of landscape and naturally vegetated areas.
- Efficient irrigation systems like micro drip and sprinklers are used to irrigate landscape areas
- Manipal University Jaipur has reduced conventional energy demand by installing a solar PV array of 1485 kwp on various building rooftops which contribute to 20% of total energy consumption by hostels and campus.
- The University has adopted five villages, Jaipur Railway Station and Mansarovar residential colony for promoting Swachhta, covering more than 1000 families

The Manonmaniam Sundaranar University

Tirunelveli, Tamil Nadu

The ManonmaniamSundaranar University, with 2204 students and 122 faculty members, has taken a series of steps to develop a Swachh campus.

It has five hostels with 24 x 7 water facility and dedicated helpline. The University has 24 x7 Ambulance Service and a dispensary. All hostels are equipped with latest facilities (urinals + Western & Indian toilets with automatic flush). Hostels are constructed such that fresh air is circulated everywhere. Toilets and bathrooms are provided with sufficient ventilation and exhaust fans.

A sound system is in place for solid and liquid waste management. Waste management is done using biogas and vermicomposting

The hostel kitchen has latest gadgets for steam cooking with separate space for utensil cleaning, wastage processing unit and a neat preparatory space. Food is prepared in hygienic way and the leftovers are converted into cooking gas with bio gas production unit installed in girls' hostel.

Almost all the place is covered with planted trees and bushes for deer and peacocks. Separate 'Construction & Maintenance' section keeps the campus plastic- and tobacco-free.

A 1 MW Solar Power Plant has been installed on the campus.

The University has adopted the nearby village, Vallavankottai in Tirunelveli District, with around 300 families.

Regularly interventions by students in the village assistance provided to villagers for securing benefits from the Govt. schemes have changed the face of the village. The villagers have been motivated to make their village open defection free and to keep it clean and neat always. The students raise people's awareness with regard to Digital India, Child Abuse, Gender satisfaction, Crime prevention etc.

Outcomes

- The University has five hostels with 24 x 7 water facility and dedicated helpline.
- It has 24 x7 Ambulance Service and a dispensary.
- All hostels are equipped with latest facilities, including modern toilets with automatic flush, both Indian and Western.
- Hostels are constructed such that fresh air is circulated everywhere
- Toilets and bathrooms are provided with sufficient ventilation and exhaust fans.
- Waste management is done using biogas and vermicomposting
- The hostel kitchen has latest gadgets for steam cooking with separate space for utensil cleaning, wastage processing unit and a neat preparatory space.
- Food is prepared in hygienic way and the leftovers are converted into cooking gas
- The campus has taken steps to make it plastic-free and tobacco-free.
- A 1 MW Solar Power Plant has been installed on the campus.
- The University has adopted Vallavankottaivillage that has around 300 families.
- Regularly interventions in the village have transformed the village. The villagers have been motivated to make their village open defection free and to keep it clean and neat always.

Mehr Chand Mahajan DAV College for Women

Chandigarh

Mehr Chand Mahajan DAV College for Women has about student strength of 5,471 and faculty strength of 199. It has 6 hostels catering to 980 students with 130 toilets (including toilet for Divyangjan). 24-hour running water facilitated by water storage capacity of 1,03,000 liters.Toilet-student ratio of 1:7.5. With regards to modernity of toilets 2 Sanitary napkin vending machines and 4 incinerators were installed in students' toilets for promoting menstrual hygiene. Geysers and fully-automatic washing machines are placed in students' washrooms.

System or technology in place for solid and liquid waste management

There are 150 garbage bins in the campus and daily segregation of waste at source is done.

- MCM DAV is the pioneer in installation of a functional Biogas Plant which is fed by mess food waste.
- Solid waste used as a substrate for growing of edible mushrooms.
- Compost and vermi-compost units to manage garden, kitchen and paper solid waste.
- MoU with Ramky Envirno Engineers Ltd. for e-waste management.
- Liquids wastes of laboratories, after neutralization, are added to acid and base baths; Solvents (organic) are recovered using a rota-evaporator and re-used in subsequent experiments.

Hostel kitchen facilities

The institute has three spacious dining halls. A dedicated mess inspection committee implements Food Safety measures in accordance with FSSAI Guidelines. Hostel kitchens with modern equipments like 'chappati' making machines, refrigerators, commercial masala grinders, potato peelers, oil extractor machine and chimneys. Hazard Analysis Critical Control Points (HACCPs) has been generated for canteen and mess services.

Campus greenery

- Dedicated Horticulture Committee for maintenance of green cover.
- Total green area of the college is approximately 3 lac sq.ft.
- Botanical Garden, Green House.
- Biodiversity audit
- More than 600 trees of 62 varieties.
- Artificial forest created with about 70 medicinal and ornamental plants.
- Sprinklers are used for watering the well-manicured lawns.
- In house production of organic fertilizer from compost and vermi-compost.

Solar power and other innovative usage

The college has dedicated Renewable Energy Committee for maintenance and implementation of the sustainability paradigm. A functional 125 kilowatt capacity solar-powered photovoltaic (PV) plant (which generated 2,39,360 uznits from April, 2017 September, 2018 with a revenue generation of Rs. 16,75,520) and 42 solar lights. Rain water harvesting system constructed (under RUSA) by the institute. Under RUSA, the campus has constructed water boosting system. There are organic farming workshops conducted for Skill Development.

Village adopted

Village adopted by institution is Badheri village, Chandigarh. Approx. 8000 people and 2000 families covered.

Interventions undertaken in area are:

Social outreach work in the adopted village Badheri conducted by various departments of the college. The volunteers conducted cleanliness rallies and door-to-door campaigns covering more than 80 dwelling units. Residents of the village were sensitized on key issues like clean toilets, safe drinking water, garbage segregation at source, use of eco-friendly ways to manage waste and dumping water at designated areas.

- Promotion of menstrual hygiene among village women.
- 'Donate a Pad' drive and the sanitary napkins collected were distributed.
- Lecture-cum-demonstration on making affordable sanitary napkins at home.
- Digging of compost pits.

After the interventions by the institute the village residents imbibed lifestyle changes regarding health and hygiene. Behavioral changes in women regarding the use of clean napkins, manufacture of sanitary napkins at homes, compost making, eco enzyme making and vermicomposting started by villagers.

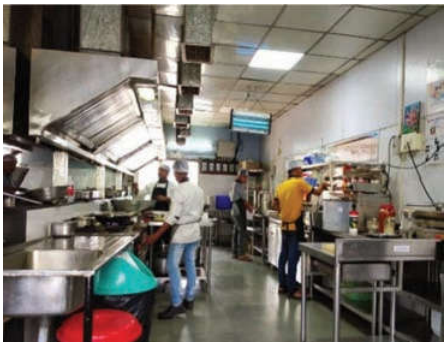
Outcomes

- MCM DAV is the pioneer in installation of a functional Biogas Plant which is fed by mess food waste
- With regards to modernity of toilets 2 Sanitary napkin vending machines and 4 incinerators were installed in students' toilets for promoting menstrual hygiene.

MGM Medical College

Mumbai

MGM Medical College has a student strength of 928 students and 437 faculty members. The college has 4 Hostel Buildings (1 for UG female students, 1 for UG male students, 1 staff quarter and 1 PG Hostel building). There are 208 toilet blocks which have adequate and ample water supply that uses recycled water. The toilets have self closing entrance doors, air fresheners and stand at the standard height of 17 to 19 inches. Each flush toilet has flush tank of 6 liters capacity. There is separate toilet block for differently-abled persons.



Hostel Kitchen Facilities

The type of fuel used for cooking is LPG. The hostel kitchen is of modular type with free ventilation for the smoke and drainage facility for each cooking, cutting and washing area. The overall cleanliness is excellent. The water is available 24 hrs. The hygiene of food and water is maintained and is checked on periodical basis. The canteen staff is equipped with required apparel. The kitchen staff undergoes periodical health checkup (at 3 months interval) and record being maintained.

Green Campus

Almost 40% area of the campus is under green cover. The green area in the campus has diverse local species of plants and trees (Total No. of trees- 1299, Total number of plants- 1643, Decorative plants- 400, Plantations- 140, Tree pots – 717). There is separate man power for garden maintenance. Sprinklers are used for saving water.

Solar Power

The college has roof top solar power plant installed with power capacity of around 1 MVA. It also has installed LED lights in new electrical works. (600+)

Villages Adopted

The college adopted 7 villages i.e., Tara, Dehrang, Dhamni, Dhodani, Maldunge, Tawarwadi and Waghachiwadi, in Raigad district. Approximately 1200 number of families are covered by the effort. Before the intervention by the college, the village area was full of filth. The people of the village were throwing garbage here and there and toilet blocks were not clean. The gutters were full of garbage and the water was coming on road. There was nuisance of flies and mosquitoes. The staff of MGMMC along with the students has created awareness in the villages about personal, home and environmental hygiene. Because of the efforts taken by the college, the villages have shown significant changes towards better living.

Outcomes

- The toilets have self closing entrance doors, air fresheners and stand at the standard height of 17 to 19 inches. Each flush toilet has flush tank of 6 liters capacity. There is separate toilet block for differently-abled persons.
- The hostel kitchen is of modular type with free ventilation for the smoke and drainage facility for each cooking, cutting and washing area.
- The kitchen staff undergoes periodical health checkup (at 3 months interval) and record being maintained.
- Almost 40% area of the campus is under green cover. The green area in the campus has diverse local species of plants and trees
- The college has roof top solar power plant installed with power capacity of around 1 MVA. It also has installed LED lights in new electrical works. (600+)
- Because of the efforts taken by the college, the adopted villages have shown significant changes towards better living.

MIT Academy of Engineering

Pune, Maharashtra

Developing tech for farms

The MIT Academy of Engineering, with 3,012 students, 177 faculty members and 229-strong non-teaching staff, is known for its Agro Tech Cell, which promotes the development of technology that is beneficial to the agriculture sector/farmers through academic projects.

The college has two hostels with a solar water heater plant. There are solar energy panels on the terrace of all buildings and on open ground for electricity generation.

It has 50 toilets and washrooms on the premises of various types like floor-mounted, wall- mounted and Indian style toilets. There are special washrooms and toilets for divyang/handicapped students and staff members. All the toilets and washrooms are cleaned every 2 hours.

Filtered drinking water is supplied from RO Plant. Water coolers have been installed for fresh drinking water on every floor in every building.

Garbage is segregated into dry and wet categories every day. Separate garbage bins are kept in corridors, laboratory, offices and faculty cabins.

The institute has vermi composting plant for composting organic wastes generated in the gardens.

The kitchen and food waste from the canteens is recycled using the bio gas plant.

The academy collects the e-scrap from students, staff and recycles it using e-waste vendors.

There are two canteens on the premises with very clean kitchen and dining areas. For fresh air, exhausts and chimneys have been installed in the kitchen and cooking areas.

The academy has around 3,000 trees and plants. About 15% of the total area of campus has green cover with landscape garden. Gardens are maintained using drip irrigation systems and sprinklers. Water collected from rain water harvesting structures is used for the gardens. The academy's Agro Tech Cell encourages engineering students to develop technology that is beneficial to the agriculture sector/farmers through academic projects.

Outcomes

- The Agro Tech Cell of the college promotes the development of technology that is beneficial to farms and farmers.
- The college has two hostels with a solar water heater plant and solar energy panel for electricity generation.
- The institute has 50 toilets and washrooms. There are special washrooms and toilets for divyang/handicapped students and staff members.
- Filtered drinking water is supplied from RO plant.
- Garbage is segregated into dry and wet categories every day.
- The institute has vermi composting plant.
- There are two canteens on the premises with clean kitchen and dining areas.
- About 15% of the total area of campus has green cover with landscape gardens.
- There are solar energy panels on the terrace of all buildings and on open ground.

Changing the face of Kelgoan

The academy adopted Kelgoan village in Pune district, covering 112 families. It created awareness about the significance of cleanliness in day-to-day life. The activities undertaken included door-to-door campaigns, movie screenings, awareness campaigns and cleanliness rallies.

An awareness campaign was taken up in the surroundings of Indrayani River on the use of public toilets by pilgrims. The campaign was organized to motivate devotees to make use of the public toilet and to reduce the rate of open defecation in the surrounding locality. Along with this,

students were present there to oversee the use of water for washing purpose by the people.

Thanks to the campaigns, the villagers resumed the use of garbage vehicle. Since the garbage vehicle was not functioning, people earlier used to throw garbage on the roads.

Students made door to door visits, covering 112 households in the village. They made the people understand how diseases can spread through contaminated water, open defection, inappropriate disposal of garbage, wrong habits in day-to-day life related to cleanliness and sanitation. People were educated about ways in which they could avoid contracting seasonal diseases. To enhance awareness about cleanliness, the institute organized movie screening, street plays, rally and slogan writing contest.

Outcomes

- The Academy adopted Kelgoan village, covering 112 families.
- An awareness campaign was taken up in the surroundings of Indrayani River on the use of public toilets by pilgrims.
- Thanks to the campaigns, the villagers resumed the use of garbage vehicle. Since the garbage vehicle was not functioning, people earlier used to throw garbage on the roads.
- Students made people understand how diseases can spread through contaminated water, open defection, inappropriate disposal of garbage, and wrong habits in day-to-day life.
- The academy organized movie screening, street plays, rally and slogan writing contest to put across messages.

Mohanlal Sukhadia University

Udaipur, Rajasthan

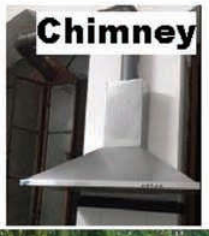
Preparing students for the future

The Mohanlal Sukhadia University has 12,340 students, 258 faculty members and 490 strong non-teaching staff. It has seven hostels, all equipped with modern facilities and availability of running water 24 hours. The University is leaving no stone unturned to prepare students for the future.

The campus has two vermi-composting units for bio-degradable waste disposal. The kitchens in hostels have hygienic cooking area with chimneys. The dining halls are hygienic.

The campus has 40% green cover, including varied species of plants. The greenery on campus is maintained by collaborative efforts of teachers, gardeners and students.

Solar power panels have been installed at all the buildings of the university.



Outcomes

- All seven hostels are equipped with modern facilities with water supply round the clock.
- There are two vermi-composting units for bio-degradable waste disposal.
- The kitchens in hostels have hygienic cooking area with chimneys.
- The dining halls are hygienic.
- The campus has 40% green cover.
- Solar power panels have been installed at all the buildings.

Transforming villages

The University adopted two villages viz Raghunathpura and Dhar, covering 1,000 people in all. Through ground level participation of NSS volunteers, NCC cadets and faculty members, faculty members and students changed the scenario of both villages in positive ways. Now both villages have ODF certificates. The villagers of the adopted villages are now actively participating in 'Green Nation-Clean Nation' movement of the government.

NIIT University

Neemrana, Rajasthan

Leaving no stone unturned to ensure greenery

The NIIT University, with 1,090 students and 60 faculty members, has taken multiple steps in the direction of developing a Swachh campus and bringing about change in villages adopted by it.

The University has four hostels, 2 each for girls & boys. The rooms are well-furnished rooms and served by 'Green Air Conditioning' with proper working space. The washrooms on each floor and wing have modern fittings with 24x7 availability of water.

Water is supplied through automated hydro-pneumatic pumps and electricity, along with 100% standby.

The University has sound waste management systems. Liquid Waste (toilet, bathing kitchen) is treated on Campus STP and re-utilized for

Horticulture / arboriculture / flushing line. Used lubricants are disposed through licensed vendors. All 'runoff water' (rain water) is diverted to 4 'Water Harvesting Recharge Wells' for conservation of water.

Solid Waste is segregated into e-waste, food/vegetable/plastic/paper waste and metal/wood/stone scrap. Food waste is utilized as animal feed through a contract with local piggery. Vegetable and horticulture wastes are converted to manure through composting pits. Paper waste is recycled through local vendor for making paper (executed by Anti-Litter Club). Plastic waste is collected for recycling by local vendor. E-waste is disposed through licensed vendor. Most of metal/stone/wood scrap is utilized for landscaping of garden.

The kitchen is equipped with modern appliances and exhaust chimneys. It is always hygienic. Samples of food are collected and stored for three days for verification. A daily update on food wastage is given as a way to spread awareness among students not to waste food. There are three spacious and clean dining halls serving hot food through electric food warmers.

About 70% of the university is covered with greenery. All new students and all visitors plant a tree. All plants are geo-tagged for future reference and maintenance. More than one lakh trees have been planted in the arid zone to resurrect the ecology and improve biodiversity. University aspires to convert the 'Kali Pahadi' (Aravalli Hills) into 'Hari Pahadi' in due course. Watering of saplings is done through drip irrigation lines and of lawns and fields through sprinklers with recycled water from the STP. The campus is a home to a variety of birds, bees and mammals.

Solar panels are used for heating water in winters. A new solar plant of 1MW capacity is being setup shortly. Smart street light based on solar panels has been activated.

Community Connect

The University collaborates with local community through a 'community Connect' and 'Each One Teach One' programs. Five schools from villages around the campus (Kali Pahadi, Mohalariyan, Neemarana, Janaksingh Pura and Kath Ka Majra) of Neemarana Tehsil,

Alwar (rajasthan) have been adopted by the University for comprehensive education of the students. University students adopt one student of the schools for improvement of education and spread of Swachhta and social awareness, which is further spread to the wider community through school children. The university works in correct with Pradhan and Sarpanch Neemrana.

The University has taken upon itself voluntarily to improve the ecology of this arid and water-stressed zone. Greening of 'Kali Pahadi' (Aravalli Hills) being one such initiative for which more than one lakh trees have been planted in last 9 years. More than 65% survivability has been ensured by irrigation through drip irrigation using recycled STP water. The second project under progress is revival of the Sabi River which has completely dried over last 25-30 years.

The University in collaboration with 57 villages of Rajasthan and Haryana has embarked on the mission to resurrect Sabi River through various modes of intervention and through technical support of the NU GIS Team. NU is also a well-wisher of 'Rally for Rivers'. The University employs a unique 'Geo Thermal Coupling System' to cool all buildings of the campus in summers by using three elements of the nature- 'Air, Earth and Water'. Air is bought in through Air Intake Towers, filtered, run 4 meters below surface through underground tunnels for heat exchange and further cooled with water. It is then delivered through Air Handling Units, a continuous Fresh Air System (Clean Air) with minimum carbon footprint and 50% reduction in Energy Consumption.

Outcomes

- Four hostels, 2 each for girls & boys, are well-furnished and served by 'Green Air Conditioning' with proper working space.
- Washrooms on each floor and wing have modern fittings with 24x7 availability of water.
- Water is supplied through automated hydro-pneumatic pumps
- Liquid Waste is treated on Campus STP and re-utilized for horticulture/arboriculture/flushing line.
- All 'runoff water' (rain water) is diverted to 4 'Water Harvesting Recharge Wells'
- Solid Waste is segregated into e-waste, food/vegetable/plastic/paper waste and metal/wood/stone scrap.
- Food waste is utilized as animal feed through a contract with local piggery. Vegetable and horticulture wastes are converted to manure through composting pits.
- Paper waste is recycled through local vendor for making paper (executed by Anti-Litter Club). Plastic waste is collected for recycling by local vendor.
- E-waste is disposed through licensed vendor. Most of metal/stone/wood scrap is utilized for landscaping of garden.
- Kitchen is equipped with modern appliances and exhaust chimneys.
- About 70% of the university is covered with greenery.
- More than one lakh trees have been planted in the arid zone to resurrect the ecology and improve biodiversity.
- Watering of saplings is done through drip irrigation lines and of lawns and fields through sprinklers with recycled water from the STP.
- Solar Panels are used for heating water in winters.
- The University collaborates with local community through a 'Community Connect' and 'Each One Teach One' programs.
- Five schools from villages around the Campus (Kali Pahadi, Mohalariyan, Neemrana, Janaksingh Pura and Kath Ka Majra) of Neemrana Tehsil, Alwar (Rajasthan)
- have been adopted by the University for comprehensive education of the students.
- The University, in collaboration with 57 villages of Rajasthan and Haryana, has embarked on the mission to resurrect Sabi River through various modes of intervention and through technical support of the NU GIS Team.

NMAM Institute of Technology

Udupi, Karnataka

The NMAM (Nitte Mahalinga Adyanthaya Memorial) Institute of Technology, an autonomous Engineering College in Nitte, Karnataka, is situated at the foot of the Western Ghats on the Padubidri-Karkala State Highway. The present total student strength of the institute, including those pursuing Bachelor's degree and Master's degree, is 4,572. The college has 321 faculty members and a 507 strong non-teaching staff.

The institute has two boys' hostels with 7 blocks and 2 girls' hostels with 4 blocks on sharing basis. Tiled floors in the hostel speak about the modernity of the hostel buildings. All the hostel blocks have adequate number of toilets with 24x7 running water facility. Treated water is used for flushes in toilets.

As part of efforts to introduce sound systems for disposal of solid and liquid wastes, the institute, with the co-operation of Nitte village Panchayat, started an SLRM unit on the campus. The unit collects all the solid and liquid wastes from the institute, nearby shops, hostels, and staff quarters and effectively manages to segregate different types of solid and liquid waste generated in environmental friendly manner. The institute has dedicated staff for collection and segregation of dry and wet wastes.

The hostel runs vegetarian and non-vegetarian mess that offers North Indian and South Indian food. The mess areas are clean and neat. Modern kitchen gadgets are used, including roti/chapathi making machines, steam boilers under hygienic conditions. LPG is used as the only fuel in the process of cooking. Adequate number of tables and chairs are available in the dining hall for the students to sit in a relaxed posture and enjoy the taste of the food which is served to them.

About 45% of the campus has green cover. The gardens are maintained by dedicated staff. Sprinklers are being used for minimizing water use in the gardens. A solar power generation system of 18 Kilowatt capacity, placed on top of Research & Innovation Centre, electrifies electronic appliances such as TV, AC, Fans, Lights etc using DC mode.

Outcomes

- Four hostels of the institute have adequate number of toilets with 24x7 running water facility.
- Treated water is used for flushes in toilets.
- In collaboration with Nitte village Panchayat, the institute runs an SLRM unit which collects all the solid and liquid wastes from the institute, nearby shops, hostels and staff quarters and effectively segregates different types waste sustainable manner.
- Mess areas are clean and neat. Modern kitchen gadgets are used, including roti/chapathi making machines, steam boilers under hygienic conditions.
- About 45% of the campus has green cover.
- A solar power generation system of 18 Kilowatt capacity electrifies electronic appliances such as TV, AC, Fans, Lights etc using DC mode

Heralding change in five villages

The institute selected five neighbouring villages viz. Mundkur, Bola, Kallya, Bailur & Mala of Udupi Disrict to educate the rural mass and to empower the whole villages by organizing awareness activities, health camps etc. A total of around 5,000 families were covered under the efforts.

Students and staff members of NMAM Institute of Technology conducted cleanliness drives with the help of village panchayat in Mala and Bailur village during July 2018. Household surveys were conducted in the 5 villages to understand the major problems faced by the rural citizens. Faculty members conducted three-day leadership awareness and training camp for students of 9th standard of Govt. High School, Kalya from 7th to 9th September 2018.

Outcomes

- 5000 families in five adopted villages viz. Mundkur, Bola, Kallya, Bailur & Mala of Udupi Disrict educated and empowered through awareness activities, health camps etc.
- Cleanliness drives conducted in Mala and Bailur villages during July 2018.
- Household surveys conducted in the 5 villages to understand the major problems faced by residents
- Three-day leadership awareness and training camp conducted for students of 9th standard of Govt. High School, Kalya

PSG College of Arts and Science

Coimbatore, Tamil Nadu

PSG College of Arts and Science has a total student strength of 12,458 and 677 faculty members. The college has 12 hostels with 712 modern toilets with tiled flooring. The whole campus has 978 toilets with 24/7 continuous water supply system. For safe drinking water system there is provision of RO/ UV treated/ Dual filtered/De- odorized/Micron filtered systems.

Solid and Liquid Waste Management

There is system in place for solid and liquid waste management and compost pit method. For liquid waste management sewage treatment plant is set up. The biodegradable solid wastes procured from the college premises are treated in the compost pits by inoculation of EM solution (Effective Microorganisms). This makes the content effective source of manure, which is used by the institution as an eco friendly alternative to chemical counterparts.

Hostel Kitchen Facilities

Modern / Steam cooking equipment is available in the University. Cooks and staff involved in serving food are given aprons, disposable chefs' hats, paper gloves and are groomed regularly. More than 90% of the food prepared within the hostel campus is mechanized. This is mainly done to make sure that the food prepared is handled with utmost hygiene by the staff members of the hostel mess.

Campus Greenery

- Total area consists of 57 acres. Apart from the building rest of the area is filled with greenery.
- Bio Diversity (5225 Trees & 72 Species of birds, 58 of them reside and other are migratory)
- Maintenance by 10 Gardening staff.
- A herbal garden, kitchen garden and a green house with sprinklers
- Semi natural Pond

Solar Energy

Solar Energy: Solar Grid – Tie PV Panels 200 KW (A Block – 80 KW: B Block- 40 KW: E Block – 80 KW) & Hostels – Solar Water heaters, Kitchen – Solar Steam Cooking

Wind Energy: 2000 KW + 2100 = 1,20,00,000 KWH/Annum Generation – Shared with PSG College of Technology/Hospital. Non – Conventional Energy to Conventional energy 2018 – 2019 >90%

Village adopted

PSG College has adopted Mallegoundampalayam village in Palladam Taluk, Tiruppur district. Around 1303 families have been benefited by the efforts of faculty and students of the Institute.

Interventions by the College

- Renovation of Public Toilets
- Water supply connection
- Street Play
- Awareness Rally
- Wall Paintings in School Walls
- Solid Waste Management

- Interaction with Children
- Drama
- Street Cleaning
- Door to door Awareness
- Planting of Saplings
- White washing

PSG College has made a difference in the lives of the villagers. Earlier the water supply was once in 15 days in the village. PSG Institution cleaned the well and provided submersible pump and connection. Due to such initiative, the villagers have access to water daily. They have also provided water connection to the public toilet to ensure cleanliness and created awareness on open defecation, and personal toilet construction. The school students were motivated through awareness programmes on good touch & bad touch, nutrition, hand washing and cleanliness. Roads too, were cleaned in the village with the help of community group called, Lovely Team. The villagers shared their problems, needs and also asked guidance for their future. Students learnt a lot about socio-economic, cultural, educational life of the school students and people at Mallengoundampalayam. NSS Volunteers were able to excel in professional skills such as leadership, communication, team work, organization, coordination, cooperation, rapport building, reporting and so on. Government buildings like Panchayat Office, VAO Office, Public Toilets, and School were cleaned & renovated.

Scope for Future Work

- Income Generation Programmes for the village women can be planned (candle making, soaps, tailoring)
- NGOs can be formed to ensure women empowerment (area to be concentrated Indra colony, Nesavalar Colony)
- Water body behind the S.R.D Vidya Sala can be cleaned.
- Intake of vegetables and fruits among the children in the village is very low and hence, programmes can be planned on nutrition.
- Can introduce the kitchen garden, medicinal garden in the school premises with the help of school students, and ensure it should be maintained by them.

Outcomes

- For safe drinking water system there is provision of RO/ UV treated/Dual filtered/De- odorized/ Micron filtered systems.
- The biodegradable solid wastes procured from the college premises are treated in the compost pits by inoculation of EM solution (Effective Microorganisms).
- Cooks and staff involved in serving food are given aprons, disposable chefs' hats, paper gloves and are groomed regularly. More than 90% of the food prepared within the hostel campus is mechanized.
- Total area consists of 57 acres. Apart from the building rest of the area is filled with greenery. Bio Diversity (5225 Trees & 72 Species of birds, 58 of them reside and other are migratory)
- A herbal garden, kitchen garden and a green house with sprinklers
- Semi natural Pond
- Solar Grid – Tie PV Panels 200 KW (A Block – 80 KW: B Block- 40 KW: E Block – 80 KW) & Hostels – Solar Water heaters, Kitchen – Solar Steam Cooking
- Non – Conventional Energy to Conventional energy 2018 – 2019 >90%
- Around 1303 families have been benefited by the efforts of faculty and students of the Institute through village adoption.
- Earlier the water supply was once in 15 days in the village. PSG Institution cleaned the well and provided submersible pump and connection. Due to such initiative, the villagers have access to water daily.
- Government buildings like Panchayat Office, VAO Office, Public Toilets, and School were cleaned and renovated.

Reva University

Bangalore, Karnataka

REVA University is alive with the confluence of different minds and energies. The exchange and intermingling of these vivacities characterizes life at REVA. REVA University is located in Bengaluru on a sprawling green campus, spread over 57 acres of land, built with state-of-the-art infrastructure, having 70% greenery in the campus. Green Area is maintained by treated water using sprinklers. The Swachh REVA Abhiyan was carried out by 1200 staff members and about 12000 students.


There are 6 hostels (Boys – 4 & Girls – 2). Each room is attached with western toilet, separate bathing area and washbasin with 24hrs water supply. The well maintained sanitary facility includes 976 toilets, 1108 dustbins, 20 e-waste dustbins, 25 sanitary dispensers and 6 sanitary napkin incinerators.



A Sewage water Treatment Plant of capacity 600 lacs Liters per day has been established and 1100 lacs liters per day is under commissioning in the campus to recycle the waste water. A Solid Waste Management Plant has been established to segregate dry and wet waste. The dry waste is processed to convert as manure which is used in gardens and other green areas to create green campus.




The REVA hostel mess has modernized and centralized state-of-the-art kitchen facilities, hygienic dining halls with seating capacity of 3000 students and a variety of offerings ranging from meals with South-Indian and North-Indian dishes.

Solar power is being generated and utilized to save electricity in the campus. There are 120 rain water harvesting wells inside the campus which are being utilized to improve bore-well water level in the campus.




REVA University has adopted Shettigere Village (Jalahobli near International airport) to develop it as a SMART Village. Activities include – providing drinking water facility, Road works, Drainages, Transportation facility, Health Center, Street Lights, Pollution free village, Planting of Trees, Women & Children Education. The awareness camp in a village named Shivakote, Students and faculty of REVA University created awareness on Energy Conservation and Renewable Energy System.

Sl.NO	AREA	POPULATION			S.C	S.T	FAMILY		
		female	male	total			Families	toilet	BPL
1.	237.17	466	459	925	414	35	196	138	168

The students -

- Installed solar PV lighting and distributed LED bulbs to each family in the village
- Demonstrated the technique of waste management by rejuvenating the Gobar Gas plant in the village
- Set up facilities for health check-up and treatment
- Created recreation (parks) for adults and playgrounds for children
- Planted more than 500 plants to preserve nature and save the environment from pollution
- Created access for best practices in agriculture, horticulture, sanitation etc.
- Demonstrated the use of solar lanterns, solar cookers and smokeless chulhas to create environment friendly village


Outcomes

- Sprawling green campus, spread over 57 acres of land, built with state-of-the-art infrastructure, having 70% greenery in the campus.
- Green Area is maintained by treated water using sprinklers.
- There are 6 hostels (Boys – 4 & Girls – 2).
- The well maintained sanitary facility includes 976 toilets, 1108 dustbins, 20 e-waste dustbins, 25 sanitary dispensers and 6 sanitary napkin incinerators.
- A Sewage water Treatment Plant of capacity 600 lacs Liters per day has been established and 1100 lacs liters per day is under commissioning in the campus to recycle the waste water.
- A Solid Waste Management Plant has been established to segregate dry and wet waste.
- The dry waste is processed to convert as manure which is used in gardens and other green areas to create green campus.
- The REVA hostel mess has modernized and centralized state-of-the-art kitchen facilities, hygienic dining halls with seating capacity of 3000 students
- Solar power is being generated and utilized to save electricity in the campus.
- There are 120 rain water harvesting wells inside the campus which are being utilized to improve bore-well water level in the campus.
- Several developmental and awareness activities are undertaken in neighbouring villages.

Saveetha Institute of Medical and Technical Sciences

Chennai

The Saveetha Institute of Medical and Technical Sciences, with 7518 students and 818 faculty members, has launched several initiatives designed to create a swachh campus.

The Institute has 9 hostels and a total of 3,476 toilets with modern flooring and fixtures. There is 24/7 water supply to hostels, canteens, toilets and colleges. For drinking, RO purified water is made available at all the places. All the water lines, taps are rust-free and leak proof. Dual flushing type of fixtures provided in toilets provided.

The Institute has 1427KLD, STP Capacity :2000KLD (2 NOS OF 1000 KLD), 1398 KLD, Toilet Flushing - 627KLD, Green Belt Development in Project -270KLD, Green Belt Development In OSR 170KLD, Disposed to Thirumazhisai / Sriprrumbudur STR -286 KLD used for Gardening/Green belt development, using Sprinkler/Drip irrigation systems.

Sludge bed is treated with open solar bed method and the manure is mainly used for farms. Vermicomposting and manure are used for greenbelt development. Waste is disposed through TNPCB- authorized biomedical waste treatment & disposal facility.

Each college on the campus has its own hostel with kitchen and dining hall. The students are given the option to choose the type of accommodation -- like single or shared, deluxe or ultra deluxe rooms with inbuilt AC, unlimited WiFi, fridge, cabinet kitchen and washing machine. The dining mess offers food from different cuisines with provision of a la carte system and payment through ID card-cum-mess card .

More than 35% of campus has green cover, which is maintained with sprinklers and Drip irrigation using recycled water. There is a well-maintained nursery for regular plantation. Neem, naval, Pungam, Pupil tree, Thespusia, Terminaliyamantali, Cassia fistula, Alstonia, Rain tree, Peltophorum, Gulmohar, mimusopselengi are the part of greenery.

Installed capacity 1.1 MW online system & solar power will be consumed first; and, then the remaining from electricity board. Production per month is 3.7 lakh Units- 30% of total power used .

Village Adoption

The University has adopted Mannur Village (Sriperumpudur(TK), Kamchepuram) and Gudapakkam Village (Thiruvallur (Dt)) in Tamil Nadu, covering 3,825 people and 700 families. The interventions include door to door waste collection, Segregation of solid waste into non- biodegradable and biodegradable waste, construction of compost pits, transportation of household waste to appropriate site etc., and also creation of awareness on how mosquito breeding takes place, flies and causes of mosquito- borne diseases and water born disease.

Thanks to interventions, citizens have realized the importance of segregation of wastes. Earlier, most of the households lacked toilet facilities. The University team members planned and implemented IEC activities along with helping construction of 10 toilets. People were educated about hand washing techniques, feco-oral route disease transmission, importance of closed drainage system and health- related problems in open field defecation. The total hours spent was 200 hrs. More than 200 families benefited through health education and 10 families benefited through construction of toilets. Awareness camps were held urging people to avoid the use of plastics.

Outcomes

- The Institute has 9 hostels and a total of 3,476 toilets with modern flooring and fixtures.
- There is 24/7 water supply to hostels, canteens, toilets and colleges.
- For drinking, RO purified water is made available at all the places.
- All the water lines, taps are rust-free and leak proof.
- The Institute has STP and systems for disposal of solid and liquid wastes
- Vermicomposting and manure are used for greenbelt development.
- Waste is disposed through TNPCB- authorized biomedical waste treatment & disposal facility.
- Each college on the campus has its own hostel with kitchen and dining hall.
- The dining mess offers food from different cuisines with provision of a la carte system and payment through ID card-cum-mess card
- More than 35% of campus has green cover, which is maintained with sprinklers and drip irrigation systems using recycled water.
- The University has adopted two villages, covering 3,825 people and 700 families, where interventions have brought about significant change.

Seven Hills College of Pharmacy

Tirupati, Andhra Pradesh

Focusing on medicinal plants

The Seven Hills College of Pharmacy, with 610 students and 82-strong teaching and non-teaching staff, has developed 36 types of medicinal plants as part of its focus on campus greenery.

The college has two hostels with 24-hour water supply through a solar heater system.

It has modern toilets in Campus (Latrines 24, Urinals = 15) and Hostels (Latrines 89 and urinals 60).

In all, 75 dust bins have been placed across the campus. There are three compost pits for depositing biodegradable waste. Two cylindrical cement waste bin have been placed for depositing paper and plastic wastes. Once a week, students sort out plastic waste and take them to the disposal centre of the municipality.

The kitchen is semi-modern with a modern, hygienic dining hall that has access to water from RO facility.

The campus has more than 30% green cover. Sprinklers are available. Dedicated staffers maintain the greenery. In all, 36 medicinal plants are available. Solar heater and solar lights are available for the hostels. Water harvesting structures are in place.

Transforming Venkatramapuram

The college has adopted Venkatramapuram in Ramachandrapuram Mandal of Chittoor District benefiting 386 people belonging to 125 families. A programme to make the village Open Defecation Free was conducted on 06th April 2018 at the village. All the villagers were educated about the bad effects of open defecation. On 09.07.2018, Seven Hills College of Pharmacy conducted a seminar on A Step towards cleanliness at Sorayakayapalam Z P High School.

Students of Seven Hills College of Pharmacy conducted cleanliness programme on 11.07.2018 at Government Primary School, Venkatramapuram. The NSS unit of Seven Hills College of Pharmacy conducted cleanliness program at Venkatramapuram Village on 25th September, 2017. Students of Seven Hills College of Pharmacy regularly visit the houses of villagers at Venkatramapuram village and support them to maintain cleanliness in and around their home.

In July 2018, students of Seven Hills College of Pharmacy conducted cleanliness drive at Sorayakayapalam Primary Hospital.

Seven Hills College of Pharmacy, in association of Anti Corruption Bureau, Tirupati, conducted cleaning and plantation program in college and Venkatramapuram village on 02.08.2018. Staff and students participate regularly in campus cleaning activities.

No open defecation was observed in the village after the campaigning. People understood the importance of cleanliness and its effect on their health. People use soap after using toilet. Children in schools also became responsible. They water plants.

Door to Door cleanliness programme

Outcomes

- The College has developed 36 types of medicinal plants
- It has hostels with 24-hour water supply through a solar heater system
- There are modern toilets in Campus and Hostels
- In all, 75 dust bins have been placed across the campus.
- There are three compost pits for depositing biodegradable waste.
- Two cylindrical cement waste bins have been placed for depositing paper and plastic wastes.
- The kitchen is semi-modern with a modern, hygienic dining hall that has access to water from RO facility.
- The campus has more than 30% green cover.
- Sprinklers are available.
- Solar heater and solar lights are available for the hostels.
- Water harvesting structures are in place.
- The college adopted Venkatramapuram village and brought about change in the behavior of people.
- All the villagers were educated about the ill effects of open defecation. No open defecation was observed in the village after the campaigning.

Shri Shankaracharya Technical Campus

Durg, Chhattisgarh

The Shri Shankaracharya Technical Campus, belonging to the Shri Shankaracharya group of institutions, in Durg, Chhattisgarh, has 4,197 students and 299 faculty members. The campus has three hostels. It has 510 toilets --415 in hostels and 95 in Academic block and Administration blocks, separatefor Men and Women. They are well-maintained, cleaned twice a day.

There is 24x7 availability of running water on the campus. Water is supplied through Nagar Nigam tubewell. There are ample water storage facilities on the campus.Advanced water purifier systems are used.Rain water harvesting facility is available for water conservation

A sound system of waste management is in place. Solid and liquid wastes are collected separately.Garbage collection is available for every block and floor of the college campus.The waste is dumped into a compost pit.

The campus has state-of-the-art kitchen. The servers and cooks in hostels maintain utmost cleanliness.Modern sterilised equipment is used in the kitchens for

cooking.Commercial LPG cylinders are used. On every floor of the hostels, there are dining rooms that are well-tiled and fitted with modern furniture.

About 70% of the campus is covered with greenery and plantations.All plants in the lawns and gardens are well-trimmed and neatly maintained. The institute has installed solar-panel based electricity plant (100KV) with assistance from the Chhattisgarh Renewable Energy Development Agency.

Active in six villages

The NSS unit of the campus adopted Chikhali village in Durg District and five other villages. Students and faculty members worked in the villages to enhance awareness on education, health and Swachhta, covering 1200 families.

Outcomes

- The campus has 510 toilets --415 in 3 hostels and 95 in Academic block and Administration blocks, separate for Men and Women.
- There is 24x7 availability of running water on the campus.
- Advanced water purifier systems are used.
- Rain water harvesting facility is available
- Solid and liquid wastes are collected separately.
- The waste is dumped into a compost pit.
- The campus has state-of-the-art kitchen.
- Modern sterilised equipment is used in the kitchens for cooking.
- On every floor of the hostels, there are dining rooms that are well-tiled and fitted with modern furniture.
- About 70% of the campus is covered with greenery and plantations.
- The institute has installed solar-panels based electricity plant (100KV) with assistance from the Chhattisgarh Renewable Energy Development Agency.

SNS College of Technology

Coimbatore, Tamil Nadu

SNS College of Technology has a staff strength of 380 and a student strength of 3092.

There are 2 hostels (one each for boys (558) and girls (412)

There is access to 24hrs safe water source with a system to ensure safety in storage and handling. Purified drinking water (Hot, Cold & Normal) is available at all floors.

Modern well maintained toilets are available in campus and hostels. In the Ladies hostel Napkin incinerators are provided for safe disposal. Hot water facility is available 24 hours using the solar heaters in both hostels.

Solid and Liquid Waste Management

Compost Making: In dry areas, compost pits are dug for Solid waste Management. Materials for composting is added to the pit and then moved to another pit every two weeks to add air, mixed up with the materials and speed up the rotting process. The waste material is changed into new, and useful – black gold

Biogas Plant: Biogas and Gobar gas plants are installed in the farm allotted for B.E Agriculture Engineering.

Effluent Treatment Plant:

An effluent treatment plant with a capacity of 500 Kilo Liters per day is working 24 hours efficiently. The waste water from all the bathrooms and kitchen are collected and treated.

Hostel Kitchen Facilities:

College maintains clean kitchens in both hostel and canteen. The kitchen has been equipped with modern equipment and sterilized vessels. Proper safety and hygiene is ensured inside the kitchens.

Campus Greenery:

The college is a sustainable and environment friendly institution. Two acres of lawn and college is maintained with total of 996 trees and plants. Regular Green Audit is also conducted.

Solar Power Plant:

Total Capacity installed: 500 kW

All the air conditioners and lights are powered by the solar power generated. Nearly 65% of power utilized in the college campus is through the solar power plant.

All the buildings have rain water harvesting facility. Mechanisms are provided to recharge the rain water into the ground.

Separate Toilets are made available to the differently-abled students and Staff in the College and Hostel.

Adopted Villages

District: Oraikalpalayam Village, Sarkar Samakulam, Coimbatore District, Tamilnadu, India

625 people (160 families) are covered.

The area undertaken by the institution, Oraikalpalaiyam, is a rural area where there is high rate of illiteracy. The village is not provided with proper water facility. The area was earlier filthy and people did not have much awareness about keeping the village clean and hygienic. The NSS Volunteers continuously conducted many camps for the welfare of the people.

Social welfare activities done at the village

- Awareness Rallies, Stage shows, Door – door to Campaigns on clean hygiene
- Separation of Degradable and Non-Degradable Waste,
- Eye Camp
- Dental Camp
- Plantation of Trees
- Guest lectures on Clean India Mission and Cleaning hygiene
- Awareness About Open Defecation Free (ODF)
- Our students actively took part in the process of cleaning the whole village and we also took interest in educating the school students about cleanliness and plantation.
- Inculcated the Importance of YOGA to the Village people and School students.

Outcomes

- 24hrs safe water source
- Modern well maintained toilets
- In the Ladies hostel Napkin incinerators are provided for safe disposal.
- Hot water facility is available 24 hours using the solar heaters in both hostels.
- Biogas and Gobar gas plants are installed
- The kitchen has been equipped with modern equipment and sterilized vessels.
- Two acres of lawn and college is maintained with total of 996 trees and plants. Regular Green Audit is also conducted.
- Total Capacity of solar power installed is 500 kW
- Nearly 65% of power utilized in the college campus is through the solar power plant.
- Alll the buildings have rain water harvesting facility
- Separate Toilets are made available to the differently-abled students and Staff
- The NSS Volunteers continuously conducted many camps for the welfare of the people in the adopted village.

Sri Krishna Arts and Science College

Coimbatore, Tamil Nadu

Sri Krishna Arts and Science College is committed to academic excellence with upgradation of facilities, placement opportunities, industry-institution interaction and continual improvement. The college is an ISO certified co-educational institution.

The Institution is sprawled across an area of 14.17 acres of land with state-of-the-art buildings of about 34,148 Sq.mts and has over 55% green coverage area. It was ranked 22nd among the Arts and Science Colleges in India by MHRD under NIRF 2017 ranking and 64th in 2018.The College was re-accredited by NAAC with "A" grade with a CGPA of 3.26 in the year 2015-2016.

Campus

The college has 7120 students and 315 faculty members.The campus has a total of 497 toilets, out of which171 are in hostels. In this, 80 toilets are for boys and91 toilets for girls. Separate toilets are available for physically challenged people. The flooring and walls of toilets are fitted with vitrified tiles, Louvre glasses and exhaust fans. The girlstoilets are provided with napkin vending machine and Incinerators.

Waste Management Systems

The college has adopted scientific methods in handling Solid, Wet & E-waste management. Garden remains, waste foods and vegetables are treated by vermicomposting, an environmental friendly way of disposing the garbage. All the liquid waste produced from toilets and cafeteria is duly processed in the modern SewageTreatment Plant (STP) housed inside the campus. All e-waste is collected and disposed through government licensed vendors.

Hostel Kitchen

The College ensures and maintains a hygienic hostel kitchen by strictly monitoring the cleanliness of the employees and regular cleaning of kitchen equipment, utensils and floors.

Harnessing Renewable Energy

To harness solar energy, solar water heating system has been installed in the hostels with 5000 liters capacityfor cooking and bathing. 2KWp photovoltaic powered solar LED lamps have been installed across the college campus.

Campus Greenery:

About 55% of the campus is under green coverage. The garden is enriched with a variety of plants including Korean grass, Bermuda grass, Shade grass, Shrubs, Lime grass, golden bamboo, foxtailpalm, champion palm, Bismarkia palm and other ornamental plants. Maintenance equipment such as lawn mower,sprinkler and other tools are used.

The college has adopted five villages from Coimbatore district, in order to promote the cleanliness and hygienic conditions and to ensure the wellbeing of rural

people. Over 1000 families comprising of over4000 people have been covered. The villages adopted are Nathegoundan puthur, Mugasimangalam, Vadivellampalayam, Komaandamparai, and Palathurai. As a part of social upliftment initiative,the activities undertaken includes construction of toilets, awareness rallies & skits,tree plantation campaign, medicalcamps, nukkadnatak, waste management, awareness programmes on open defecation (screening of movies, rallies, camps, door to door campaign, etc.).

Outcomes

- Campus comprises of 14.17 acres of land with state-of-the-art buildings
- Campus has over 55% green coverage area.
- The garden has wide variety of plants including Korean grass, Bermuda grass, Shade grass, Shrubs, Lime grass, golden bamboo, foxtail palm, champion palm, Bismarkia palm and other ornamental plants.
- Maintenance equipment such as lawn mower, sprinkler and other tools are used.
- The campus has a total of 497 toilets, out of which 171 are in hostels. In this, 80 toilets are for boys and 91 toilets for girls.
- Separate toilets are available for physically challenged people.
- The girls toilets are provided with napkin vending machine and Incinerators.
- Garden remains, waste foods and vegetables are treated by vermicomposting
- All the liquid waste produced from toilets and cafeteria is duly processed in the modern Sewage Treatment Plant (STP) housed inside the campus.
- All e-waste is collected and disposed through government licensed vendors.
- Solar water heating system has been installed in the hostels with 5000 liters capacity for cooking and bathing.
- 2KWp photovoltaic powered solar LED lamps have been installed across the college campus.
- The college has adopted five villages from Coimbatore district, in order to promote the cleanliness and hygienic conditions and to ensure the wellbeing of rural people.
- Over 1000 families comprising of over 4000 people have been covered.

Sri Krishna College of Engineering and Technology

Coimbatore, Tamilnadu

Making students' life on campus pleasant and purposeful

The Sri Krishna College of Engineering and Technology (SKCET), established in 1998, has lush green campus, aesthetically appealing buildings, state-of-the-art library, convention centre, auditorium, seminar halls, cafeteria, sports and games fields, and sophisticated fitness centers, among other facilities. SKCET is one of the leading institutions in Tamil Nadu that offers 7 Bachelor's and 9 Master's Degree Programmes with around 5,000 students and 363 faculty members.

Hi-tech infrastructure has been created with lush green SKCET Campus advanced computers and internet facility. All class rooms have interactive smart boards, Google virtual classrooms with Wi-Fi facility have been set up across the campus.

There are separate clean, hygienic hostels for boys and girls that can accommodate around 2000 students comfortably. There are nine hostel blocks inside the campus which are well -maintained and well-ventilated with 505 toilets exclusively for hostels in the ratio of 1:3. All the toilets are modern, clean and hygienic with 24/7 water supply (hot and cold) with water heaters using renewable solar energy.

Lights on the campus are electrified with solar photovoltaics. SKCET makes students' life on the campus very pleasant and purposeful. SKCET hostel is bestowed with modern kitchens, well-maintained mechanized equipment, which include automatic dough kneaders, vegetable cutters, chimneys and steam ovens, automatic steam boilers, grinders, juicers etc.

Solid wastes are collected as organic and inorganic waste by placing separate bins in different locations. Organic waste such as kitchens waste and garden waste are managed by the aerobic composting plant and converted into manure. The same is used in gardens of our campus. Inorganic /Recyclable waste such as papers and plastics are managed by handing it over to recyclers.

SKCET campus has more than 40% lush green cover. Regular maintenance is done by estate department, which has nearly 100 employees, with 24/7 hours water supply. Water from a Sewage Treatment Plant on the campus is used for gardening. Wastewater generated within the campus from Hostels, Academic

blocks and cafeteria are collected and treated in the Sewage Treatment Plant with the capacity of 4.5 lakh liters per day. The sewage is treated with biological treatment of Activated Sludge Process and disinfection done using ultra filtration. Sprinklers are used at every 10 feet to maintain constant and covered water flow.

Special facilities

- Rain water is harvested across the college campus by providing proper pipelines and perforated concrete pathways to collect the rainwater. Collected rainwater is diverted into the soak pits for ground water recharging.
- Napkin vending machines are installed in all girls' toilets on campus and used napkins are disposed using incinerators.

Outcomes

- Lush green campus with aesthetically appealing buildings
- State-of-the-art library, convention centre, auditorium, seminar halls, cafeteria, sports and games fields
- Sophisticated fitness centers
- Hi-tech infrastructure with advanced computers and internet facility.
- All classrooms have interactive smart boards
- Google virtual classrooms with Wi-Fi
- Separate clean, hygienic hostels for boys and girls
- All 9 hostel blocks are well-maintained and well-ventilated with 505 toilets -- in the ratio of 1:3.
- All the toilets are modern, clean and hygienic with 24/7 water supply (hot and cold) with water heaters using renewable solar energy.
- Lights on the campus are electrified with solar photovoltaics.
- Solid wastes are collected as organic and inorganic waste by placing separate bins
- More than 40% green cover.
- Water from STP on the campus is used for gardening.
- Rain water is harvested across the college campus by providing proper pipelines and perforated concrete pathways to collect the rainwater.
- Napkin vending machines are installed in all girls' toilets on campus and used napkins are disposed using incinerators.

Metamorphosing Theethipalayam

SKCET, as a part of its social activities, adopted "Theethipalayam" a neighboring village in Thondamuthur(post) in Coimbatore District. The college has undertaken several initiatives for the welfare of the village. There are around 400 people in the village and students engage the village periodically in various activities like village survey, empowering village people with technologies, removing weeds from local places, cleaning the Government buildings, painting the dirty walls, tree plantation drive & saplings distribution and promoting cleanliness

The college took up a novel initiative by fabricating a model to treat sullage /grey water from kitchen and bathrooms in the household using a cost-effective method with naturally available materials and energy. The same model has been used to educate the people in nearby villages. This helps is reducing water utilization and recycling the grey water within the households.

Several awareness programmes were conducted including rally on pollution control, segregation of solid waste into non-biodegradable and bio degradable waste, development of compost pits, energy conservation programme & maintenance and repair of electrical appliances, computer literacy for government school children, yoga awareness programme, women empowerment programme - personal hygiene talks & craft work for self-employment to name a few.

The college took up a novel initiative by fabricating a model to treat sullage /grey water from kitchen and bathrooms in the household using a cost-effective method with naturally available materials and energy. The same model has been used to educate the people in nearby villages. This helps is reducing water utilization and recycling the grey water within the households.

Several awareness programmes were conducted including rally on pollution control, segregation of solid

waste into non-biodegradable and bio degradable waste, development of compost pits, energy conservation programme & maintenance and repair of electrical appliances, computer literacy for government school children, yoga awareness programme, women empowerment programme - personal hygiene talks & craft work for self-employment to name a few.

The village before and after cleaning is shown as below:

Outcomes

- Initiatives that helped around 400 people in the village
- Involving students in village survey
- Empowering village people with technologies
- Removing weeds from local places
- Cleaning Government buildings
- Tree plantation drive & saplings distribution
- Promoting cleanliness

Sri Ramachandra Institute of Higher Education and Research

Chennai

Sri Ramachandra Institute of Higher Education and Research, spread over 150 acres, has a student strength of 6861, faculty strength of 860 and nursing, para medical and administrative staff of 4262 (Total 5122).

The Institution has a green cover over 59.5% nurtured over three decades with flowering and fruit bearing trees, shrubs, vines, flowering plants, well manicured lawns with sprinklers, a water body for water sports (using entirely recycled water), which attracts large number of seasonal migratory birds.

In the campus there are 8 modern hostels for boys and girls with all facilities, comprising of western closets, showers, with 24 hours running water and garbage disposal on daily basis. For flushing toilets recycled and UV treated water is used. Hostels have attached modern kitchens which are hygienic, using cooking gas and ovens with automation in a few places, electric chimneys and hoods and well planned, spacious, airy, well lighted dining halls with stainless steel table tops.

Solar panels have been installed for water heating in the hostels and there is centralized RO system installed for drinking water for entire campus. Conventional lights bulbs and tubes are being replaced with CFL and LED bulbs and energy saving inverter type air conditioners with high star rating are being installed in the hostels.

Biomedical wastes are collected at source and disposed as per Tamil Nadu Pollution Control Board guidelines. Municipal solid wastes are collected from source, segregated and disposed for recycling. Food and vegetable wastes are converted into compost manure. Liquid waste from laundry, labs and other sources are treated in the Common Effluent Treatment Plant (CETP). Treated water from CETP is used for gardening and after UV treatment, used for toilet flushing and make up for cooling towers. Remaining treated water is let into the lake in campus which is used for water sports and is also home to migratory birds.

Neighbourhood Village Scheme

The Institution has been implementing various community projects on Health Care, Sanitation and Environmental Protection. All these are clubbed under Neighbourhood Village Scheme. These villages, situated in the Single Line Transact, 18 k.m. away from the University Main Campus and 5 k.m. from the University Medical College Rural Health & Training Center, Vayalanallur, have been covered under Summer Internship Programme.

The six neighbourhood villages covered are Karunakarachery, Annambedu, Bannaveduthottam, Kolappanchery, Vayalanallur and Pariwakkam. All these adopted villages belong to the Poonamallee Block of Tiruvallur District, Tamil Nadu. Number of households are 2,571.

Notable achievements are:

- Annambedu Village has become an 'Open Defecation Free' village under the programme and Summer Internship Programme, due to active involvement of the Institution.
- Karunakaracherry village has become 'total garbage free' village due to the active involvement of the Institution.

Outcomes

- The Institution has a green cover over 59.5% nurtured over three decades with flowering and fruit bearing trees, shrubs, vines, flowering plants, well manicured lawns with sprinklers, a water body for water sports (using entirely recycled water), which attracts large number of seasonal migratory birds.
- For flushing toilets recycled and UV treated water is used.
- Solar panels have been installed for water heating in the hostels and there is centralized RO system installed for drinking water for entire campus. Conventional lights bulbs and tubes are being replaced with CFL and LED bulbs and energy saving inverter type air conditioners with high star rating are being installed in the hostels.
- Biomedical wastes are collected at source and disposed as per Tamil Nadu Pollution Control Board guidelines.
- Remaining treated water is let into the lake in campus which is used for water sports and is also home to migratory birds.
- The Institution has been implementing various community projects on Health Care, Sanitation and Environmental Protection.

Sri Sai Ram Institute of Technology

Chennai, Tamil Nadu

Sri Sai Ram Institute of Technology has total staff strength of 300 and student strength of 2223. There are 2 hostels wherein students are provided with a second home for both boys and girls separately in an area of 20,529 Sq. m. The architecturally designed buildings and the surroundings offer a cool, green, pleasant and eco-friendly atmosphere, which stimulates positive learning. Besides, wells are built in and around the campus to supply adequate amount of water. The rest rooms are modern and always kept clean.




Solid and Liquid Waste management

The college students continuously monitor the waste and dispose it frequently. The biological waste like food waste is converted as manure by Vermi Composting. Also, the liquid waste treatment system is used for planting saplings within the campus.




Hygienic Food

Canteen in the college provides delicious food (both vegetarian and non-vegetarian) at nominal rates. In the canteen, all the workers wear appropriate aprons and gloves (cooking and serving) with a view to serve the food in the most hygienic way. The college also has its own perennial water resource with RO purifier to cater to the purified water to the whole campus. Gas stoves and gas cylinders are checked periodically. Chimneys are available in hostel kitchen, which release the exhaust air below the permitted level. The college has an excellent House Keeping System and so, the cooking and dining areas are maintained neatly.




Campus Greenery

Serene atmosphere is maintained in the campus with modern amenities to create a good environment for the faculty and students. In order to maintain this, the Institution has planted varieties of plants in and around the campus to make the campus green. Each and every tree has a name board with botanical names. Students have continuously planted many trees on special occasions.

Solar Power

The students with their innovative ideas have installed 50 grid connected solar panels (Solar power plant) with 50 kw power on the terrace of the college building to harness renewable energy source.

As per the rules of the Government, the college has also made provision for Rain Water Harvesting in many places inside the campus.

Adopted Villages

The college has adopted Ettaiyapuram, Dharkast, Rajagopal Kandigai, Erumaiyur and Pazhanthandalam villages in its surroundings. Initially, the students met around 300 people in the above mentioned adopted villages and conducted a survey to know about the facilities in their homes. The students actively involved themselves and cleaned the places. They also created awareness among the people on cleanliness. Also, a campaign was conducted to explain the importance of toilets and its uses. Besides, a rally



was also conducted in the adopted village by the students. In addition, the students also planted many saplings with a view to create a better understanding about the importance of trees in these areas. Hence, it was an eye opener for many people of the adopted villages. The people also promised to have a hygienic life by using toilet system and they also accepted to keep their village clean and green.

Outcomes

- Wells are built in and around the campus to supply adequate amount of water.
- The biological waste like food waste is converted as manure by Vermi Composting.
- Liquid waste treatment system is used for planting saplings within the campus.
- The college also has its own perennial water resource with RO purifier to cater to the purified water to the whole campus.
- The Institution has planted varieties of plants in and around the campus to make the campus green. Each and every tree has a name board with botanical names. Students have continuously planted many trees on special occasions.
- The students with their innovative ideas have installed 50 grid connected solar panels (Solar power plant) with 50 kw power on the terrace of the college building to harness renewable energy source.
- As per the rules of the Government, the college has made provision for Rain Water Harvesting in many places inside the campus.
- The students actively involved themselves and cleaned the places in the adopted villages.
- A rally was also conducted in the adopted village by the students.
- The people promised to have a hygienic life by using toilet system and they also accepted to keep their village clean and green.

SRM Institute of Science and Technology

Kancheepuram, Tamil Nadu

SRM Institute of Science and Technology (SRMIST, formerly known as SRM University) is one of the top ranking universities in India with over 38,000 students and more than 2600 faculty across all the campuses. The Institution offers a wide range of undergraduate, postgraduate and doctoral programs in Engineering, Management, Medicine and Health sciences, and Science and Humanities. SRM was accredited by NAAC with 'A' Grade in the year 2013. SRM Institute of Science and is placed in A category by MHRD. The campus has over 600 acres replete with a variety of facilities including State-of-the-art labs, libraries, Wi-Fi, knowledge centre, 4000 capacity AC auditorium, 100 online smart classrooms, Hostels with premium facilities, endless convenience on campus including ATMs, bookstores, dining options, cafeterias, prayer halls, and gym.

SRMIST has a total student strength of 51506, with 1023 PhD scholars, and a faculty strength of 3200.

There are 43 hostels. The toilet to student ratio in hostels: 1: 3.75. The toilets have 24 hour water supply, ceramic tiled flooring, hand sanitizers, tissues, hand driers, exhaust fans and health faucets. Special toilets are there for differently abled with hand rails and grab bars. The toilets are cleaned twice a day.

RO purified 24 hour drinking water supply is maintained. The well sources are recharged through rain water harvesting.

Solid and Liquid Waste Management

- Fully functional STP with recycling of the treated effluent for gardening
- Exclusive solid waste management yard
- Separate bins for recyclable and non recyclable waste
- 34% solid waste recycled
- Production of biogas from solid waste

Hostel and Kitchen Facilities

- Solar powered steam cooking
- Solar powered hot water supply
- Modern cookware – automated chapatti making
- Dishwasher
- Cold room and deep freeze room
- Dining hall (granite floored) to serve 1500 students simultaneously

Campus greenery

- 30% green cover
- Garden maintenance using sprinklers

Solar Power

410 KW solar power – mitigating 12000 tons of CO_2 emission

SRMIST has adopted village Orathur, Kundrathur, Kancheepuram covering 289 families with 1050 people. The Institute took up Eradication of Open Defecation in the village by investing Rs. 3 lakhs in toilets.

Outcomes

- There are 43 hostels. The toilet to student ratio in hostels: 1: 3.75.
- The toilets have 24 hour water supply, ceramic tiled flooring, hand sanitizers, tissues, hand driers, exhaust fans and health faucets.
- Special toilets are there for differently abled with hand rails and grab bars. The toilets are cleaned twice a day.
- RO purified 24 hour drinking water supply is maintained.
- The well sources are recharged through rain water harvesting.
- 34% solid waste recycled
- Production of biogas from solid waste
- Fully functional STP with recycling of the treated effluent for gardening
- Solar powered cooking and hot water supply
- 30% green cover on campus
- Garden maintenance using sprinklers
- 410 KW solar power – mitigating 12000 tons of CO_2 emission
- Eradication of Open Defecation initiative in adopted village - Orathur

St. Xavier's College

Kolkata

What makes the college Green Energy champions

The St. Xavier's College in Kolkata, with 8,931 students, has 264 strong faculty and 249 strong support staff. It is well-known for its massive equipment to produce green energy. Its Solar Power Plant is the largest among those in all the colleges in the eastern part of the country. With 410 hostel inmates, the college has an effective system of handling wastes that includes segregation, autoclaving and recycling of wastes. About 30% of its green cover is rich in biodiversity.

The hostels -- Fr. Leeming Hostel for Boys (230 students) and Mother Teresa Hostel for Girls (180 students) have 24 hrs water supply. The facilities in the toilets and washrooms are modern by contemporary standards.

The college has a proper and comprehensive waste disposal system. Dried cultures (solid) are sterilized by autoclave. Disposable petri-plates are autoclaved and disposed with other plastics. Glass goods are dry sterilized before being used. Acids and alkalis are neutralized before being released in the pipeline.

Chemistry Laboratory

Biotechnology Laboratory

Hostel dining area

Broken glass goods are segregated carefully. Dyes and other bio-hazardous substances are handled with proper latex gloves. Other wastes are put in designated bins and taken away by the Kolkata Municipal Corporation.

Hostel cooking area

The hostel kitchen facility constantly endeavors to live up to highest standards of cleanliness. The hostel's dining areas are clean and neat.

At the rural campus of St. Xavier's at Raghabpur, 30% of the substantial greenery is rich in biodiversity.

Solar Power Plant

The highlight of the college is the Solar Power Plant with 46 KW installed capacity on the rooftop of B.Ed. and Library building. Initiated as a follow-up action in the wake of Climate Change Conference in Paris (COP – 15), this green energy producing Solar Power Plant is the largest among those in all the colleges in the eastern part of the country.

Outcomes

- Largest Solar Power Plant in the eastern part of the country
- Hostels have systems of handling wastes that includes segregation, autoclaving and recycling of wastes; 24-hr water supply and modern toilets
- About 30% of its green cover is rich in biodiversity
- Hostel kitchen facility with highest standards of cleanliness
- Clean and neat dining areas
- Solar Power Plant with 46 KW installed capacity

How the college changed the face of four villages

Five villages in South 24 Parganas were transformed under the watch of St Xavier's College viz

Debipur (100 families), Bolorampur (60), Nurshikdarchowk (100), Paikhala (300) and Shalpukur(100).

Paikhala was adopted in 1999, while the other four villages were adopted in 2006-2007.

Over the years, students of the college organised weekly, monthly and yearly activities. The primary objective of adopting these villages was imparting education. Sports, health & hygiene, cleanliness, personal hygiene, health camps, rallies, work camps, waste disposal, etc. were part of the curriculum. Cleanliness became the focus of all activities. Through this intervention, open defecation has come down drastically, especially is Paikhala. Children too use toilets.

Paikhala School was provided with two dustbins. The parents, especially the mothers of the children, were educated on the impact of unhygienic conditions on the health of children. Overall, there has been a positive impact on these adopted villages with ample scope for further development.

Outcomes

- Five villages in South 24 Parganas transformed
- Students of the college organize weekly, monthly and yearly activities
- Open defecation has come down drastically.
- Parents educated on the impact of unhygienic conditions on the health of children

Swami Rama Himalayan University

Dehradun, Uttarakhand

A total number of 3166 students across all the programmes and 403 learned faculty members are present in the University.

Total 8 hostels are available comprising of separate hostels for boys and girls. All the hostels have more than adequate number of toilets, both Indian and Western style with cisterns/flush facility. Exclusive toilets are available for differently-abled students. Well ventilated toilets are equipped with exhaust fans and24 Hour supply of water is available in all the toilets & washrooms. Toilets are cleaned regularly thrice a day, by 24x7 available staff, manually and using machines.

The University has a Sewage Treatment Plant (STP) in place with capacity of 700 m3/ day, based on moving bad biofilm reactor (MBBR) technology. This plant treats the waste water of different buildings within the campus. The technology being used meets the parameters of Central Pollution Control Board and State Pollution Control Board. The quality of treated recycled water from the STP is as per the standards specified by the State Pollution Control Board. The treated recycled water is being used for horticulture purpose within the campus.

Well-spaced kitchen is equipped with LPG stoves, Electric Chimney, equipment for cooking & processing of food, cold storage for vegetables and refrigerators, water purifier for drinking water, sinks withadequate supply of cold & hot water with each unit along with proper drainage system. Well-spaced, well-furnished, and neat & clean Dining Halls within the hostels are available.

The entire campus is eco-friendly, covering more than 33% lush greenery and planted with variety of seasonal flowers, decorative plants, and variety of trees i.e. seasonal fruits, medicinal herbs etc. The green campus is a protective habitat for birds and other creatures. More than adequate full-time skilled & unskilled staff is available who use the machinery & tools to maintain the greenery. More than adequate water supply is in place.

The University has installed 1.0 megawatt grid connected roof top solar power plants on the buildings of all the constituent colleges / hostels roof thus contributing towards national solar mission. The electricity generated through solar PV panels is utilized in-house. Surplus electricity is being supplied to power grid through DISCOM.

427 villages covering 11 districts of Uttarakhand (Dehradun, Tehri, Haridwar, Pauri, Uttarkashi, Rudraprayag) and Uttar Pradesh (Shamli, Bijnor, Meerut, Hapur, Ghaziabad) have been benefited through various Projects, i.e. water supply, sanitation, hygiene, health care, education, self employment etc. To name few of the villages are: Kandoe Bondar,Sunieer, Lorli, Rajanu, Ehtan, Manva, Bajau,Agani,, Bayala Malla, Bayasu, Bugal Garhi, Bharatpur, Palasi,Kweely, Bamoli, Badethi Malla.

Approximately 20,000 families benefitted under various projects. More than 14000 individual toilets and more than 50 school / community toilets constructed, 245 Water Supply Projects executed, more than 17000 persons trained.

The major intervention undertaken and achievement in these localities are:

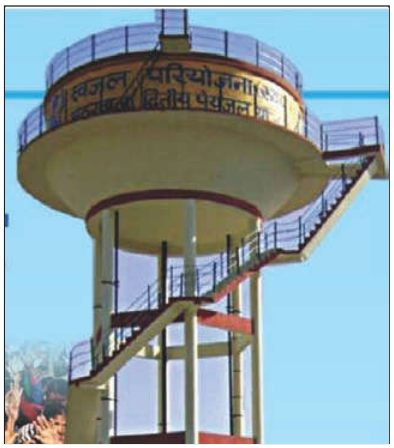
Reduction in Women Drudgery: Women folk save more than 2.5 hrs for fetching of water and travel distance reduced to 2.7 KM.

Water Availability: All households now have access to potable water. Water availability has increased to more than 40 lpcd at stand post & 70 lpcd in private connections.

Health: Practice of washing hands after defecation has increased from 15% to more than 90%. Frequency of incidence of diarrhea and other water borne diseases has reduced drastically. Ultimately medical expenses have reduced significantly.

Latrine Coverage: Open defecation was prevalent earlier but now Latrine coverage has increased to more than 90%.

Sanitary Condition: Village is clean through raised awareness and construction of latrine, garbage pit, soak pit, and compost pit.



Community Participation: The village community now plans and is involved in the construction of schemes. Women participate in the construction work. Communities have contributed upto 10% against capital cost for water supply & 70% for sanitation in cash/labour and 100% O&M Construction

Outcomes

- Total 8 hostels are available comprising of separate hostels for boys and girls.
- Toilets are cleaned regularly thrice a day, by 24x7 available staff, manually and using machines.
- The University has a Sewage Treatment Plant (STP)in place with capacity of 700 m3/ day, based on moving bad biofilm reactor (MBBR) technology.
- The treated recycled water is being used for horticulture purpose within the campus.
- The entire campus is eco-friendly, covering more than 33% lush greenery and planted with variety of seasonal flowers, decorative plants, and variety of trees i.e. seasonal fruits, medicinal herbs etc.
- The University has installed 1.0 megawatt grid connected roof top solar power plants on the buildings of all the constituent colleges / hostels roof thus contributing towards national solar mission.
- Surplus electricity is being supplied to power grid through DISCOM.
- 427 villages covering 11 districts of Uttarakhand are adopted. Open defecation was prevalent earlier but now Latrine coverage has increased to more than 90%.

Teegala Krishna Reddy College of Pharmacy

Ranga Reddy, Telangana

The Teegala Krishna Reddy College of Pharmacy, with 445 students and 48 faculty members, has taken significant steps in the direction of developing Swachh Campus. With 40% green cover, it has a well-maintained garden with rare medicinal herbs. Labor, housekeeping staff and gardeners ensure soothing greenery aided by sprinklers.

Its girl's hostel and boy's hostel are equipped with systems to ensure easy cleaning, flushing under hygienic conditions. An effective water supply system ensures that all areas are free from stagnation. Fresh water is supplied for daily use from overhead tanks, which are regularly cleaned and kept free from contamination.

Solid waste management system includes composting, generation of gobar gas, incineration and disposal with help from GHMC, Hyderabad. Water harvesting systems are in place. There is a spacious kitchen with exhausts and chimney, along with a well-furnished dining hall.

Apart from 40% green cover, the campus has huge playground. Dairy farm, poultry farm are being maintained by rearing cattle, ducks and chicks. A medicinal garden is available with rare medicinal herbs.

Outcomes

- 40% green cover
- Well-maintained garden with rare medicinal herbs
- Housekeeping staff and gardeners
- Use of sprinklers to minimize water consumption
- Hostel have systems to ensure easy cleaning, flushing under hygienic conditions.
- All areas are free from water stagnation. Fresh water supplied for daily
- Solid waste management includes composting, generation of gobar gas, incineration and disposal with help from GHMC
- Water harvesting systems in place.
- Huge playground

How the college metamorphosed Meerpet and Chegur villages

The college adopted Meerpet and Chegur villages in Rangareddy district and brought about a significant change in the outlook of the people. The effort covered 250 people in all.

Students and faculty members joined hands to raise awareness among the people with regard to cleanliness of surroundings and protection from disease like malaria, dengue and diarrhea. People in the villages were coached on ways of maintaining health. They were briefed about precautions to be followed while using medicines. Many NSS activities were taken up, including blood donation, polio vaccine and meditation camps.

The college authorities appreciate the people for following the suggested lifestyle to improve overall health.

Outcomes

- 250 people covered in two villages
- Raised awareness about cleanliness
- Steps outlined to prevent outbreak of malaria, dengue and diarrhea
- Instruction in ways of maintaining health
- Blood donation, polio vaccine and meditation camps taken up

Panimalar Engineering College

Chennai, Tamilnadu

Panimalar Engineering College has 6958 student strength with a faculty strength of 382. There are 4 hostels.

Toilets

The institution has modernized toilets separately for boys, girls and faculty with marble flooring, and 24 hours water facility. Toilets are cleaned minimum six times each day with cleansers.

Solid and Liquid Waste Management

The solid waste is converted to manure by a technique called Indian-Bangalore method. About 10 pits, each of 2m deep having sloping bottom have been constructed. As per the testing done, the compost obtained contains good proportion of N,P2O,K2O which gives good yield to the in-house vegetable gardens. Alternatively vermi compost pits are also available to generate manure for the in-house organic farming & vegetable garden.

Hostel Kitchen Facility

The Institute has a well ventilated, pest free and magnificent mess with marble seating arrangements. The college mess hall has a total seating capacity of 2,500 persons. It has a most sophisticated kitchen with the total area of 33,000 sq ft with ultra modern equipments that includes 9 boilers, 11 cookers (including 2 milk cookers + 4 idly cookers with 240 capacity), dough mixing machine, vegetable cutters, potato peelers, cake & biscuit ovens . Separate rooms are provided for cylinders, stores, sweets, ice creams, vessels and workers. There are 30 cooks, 320 suppliers (200 gents, 120 ladies) and 30 vessel cleaners. Separate area is allocated for vegetarians and non-vegetarians. In-house bakery unit caters to the snacks for the entire people in the campus.

Campus Greenery

Campus has 55 acres of lush green cover.

Solar Panels

As part of a long-term commitment to increase clean, renewable energy generation, solar panels have been installed in all the four hostels which cater to the electricity requirement of the hostels.

Innovative Systems

- Battery operated vehicles designed by students for in-campus transport to reduce pollution
- Vermi compost for in-house gardening
- Napkin Vending machine for personal hygiene
- Sewage water treatment plant to recycle waste water for organic vegetable farming
- E-waste management by making household decorative items by students
- Plastic free campus initiative
- Usage of vacant land to cultivate vegetables required for cooking
- Rain water harvesting in all buildings

Village adopted

Nazarethpettai, Thiruvallur District , Tamil Nadu

Families covered : Approximately 200 families

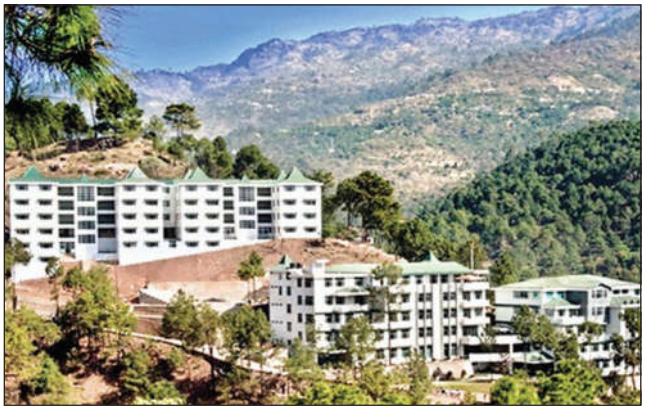
Water potability testing is done for the waterbodies in the village by the civil engineering department. The TDS was reduced and E.coli bacteria was analyzed and treated to improve the potability of water. Awarness programmes on ODF were conducted and today the village is 100% ODF. The tests were carried out in the households in the village and proved that they can use solid waste as biogas and electricity with less cost. The college has created a health center to cater to the medical needs of the village.

Outcomes

- The institution has modernized toilets separately for boys, girls and faculty with marble flooring, and 24 hours water facility.
- Napkin Vending machine for personal hygiene
- The solid waste is converted to manure by a technique called Indian-Bangalore method. About 10 pits each of 2m deep having sloping bottom have been constructed.
- Vermi compost pits are available to generate manure for the in-house organic farming & vegetable garden.
- Well ventilated, pest free mess with modern kitchen facilities
- Campus has 55 acres of lush green cover.
- Solar panels have been installed in all the four hostels which cater to the electricity requirement of the hostels.
- Battery operated vehicles designed by students for in-campus transport to reduce pollution
- Plastic free campus initiative
- Rain water harvesting in all buildings
- Awarness programmes on ODF were conducted in adopted village and today the village is 100% ODF.

Shoolini University of Biotechnology and Management Sciences

Solan, Himachal Pradesh



Shoolini University has 2800 Students strength with 193 number of faculties. Two girls hostel and 5 boys hostels, total seven hostels with 1656 students. 204 toilets for Male and 102 urinal pods in the boys and 198 toilets for girls. All toilets have western WCs and are built to international hygiene standards. Toilets are cleaned three times a day. Running water is available 24 hours a day with separate water distribution systems for WCs, bathing and drinking purposes. Heated running water is available 24X7 using solar heated water systems.

All water/ liquid waste (200,000 liters/day) is treated at Shoolini's Sewage Treatment (STP) and Effluent Treatment Plants (ETP), and then recycled. Approximately 200,000 liters of used water/ waste is processed everyday out of which 75,000 liters or recycled water is used for irrigation purposes every day. The STP and ETP plants are regularly inspected by the HP State Pollution Board.

University has over 700 color coded dustbins for collection of solid waste (red, blue and green) across the campus. Non-toxic biodegradable waste is recycled in the university's two vermi-compost processing pits and is used for gardening and farming purposes. Non-biodegradable waste is collected and processed at Solan's municipal committee solid waste plant. Bio-medical waste is outsourced to a specialist HP State Pollution Board recognized company.

All Hostels have individual kitchens with Solar Steam cooking facilities. Kitchens are modern, ventilated, use semi-automated

cooking and cleaning systems and have appropriate fire-fighting equipment. Messes are built and designed along the lines of McDonald Cafes.

University maintains a resort type environment, with over 80 percent greenery and 400 plus plant and tree species on its 20 acre campus. The University plants over 5,000 trees per year under its Myra Arboretum Initiative. In addition, Shoolini has multiple poly-houses, tree-houses, nursery's and farms across its campus. Recycled STP water and water harvesting systems are used along with drip irrigation and sprinkler mechanisms to maintain a truly green campus.

Implemented a 887.79 MWH (four solar farms) photo voltaic solar power system that produces over 125% of the University's usage. In addition, hostel kitchens are equipped with a solar steam power cooking plant and solar water heating systems.

Adopted villages

Shoolini University has adopted six villages under Unnat Bharat Abhiyan i.e. Manjholi, Bajhol, Kiar, Sultapur, Tatul and Barog. All villages are located in district Solan, Himachal Pradesh. In addition, the university has also adopted primary school Bajhol.

Outcomes

- Number of people and families covered: over 200 families across the six villages (approximately 1000+ people) have been covered by the effort.
- Interventions include:

  a. Cleaning of primary water sources in and around the villages

  b. Helping villages adopt three-tier garbage disposable systems and implement recycling of bio-degradable waste

  c. Developing plan for solar lighting on roads connecting the villages

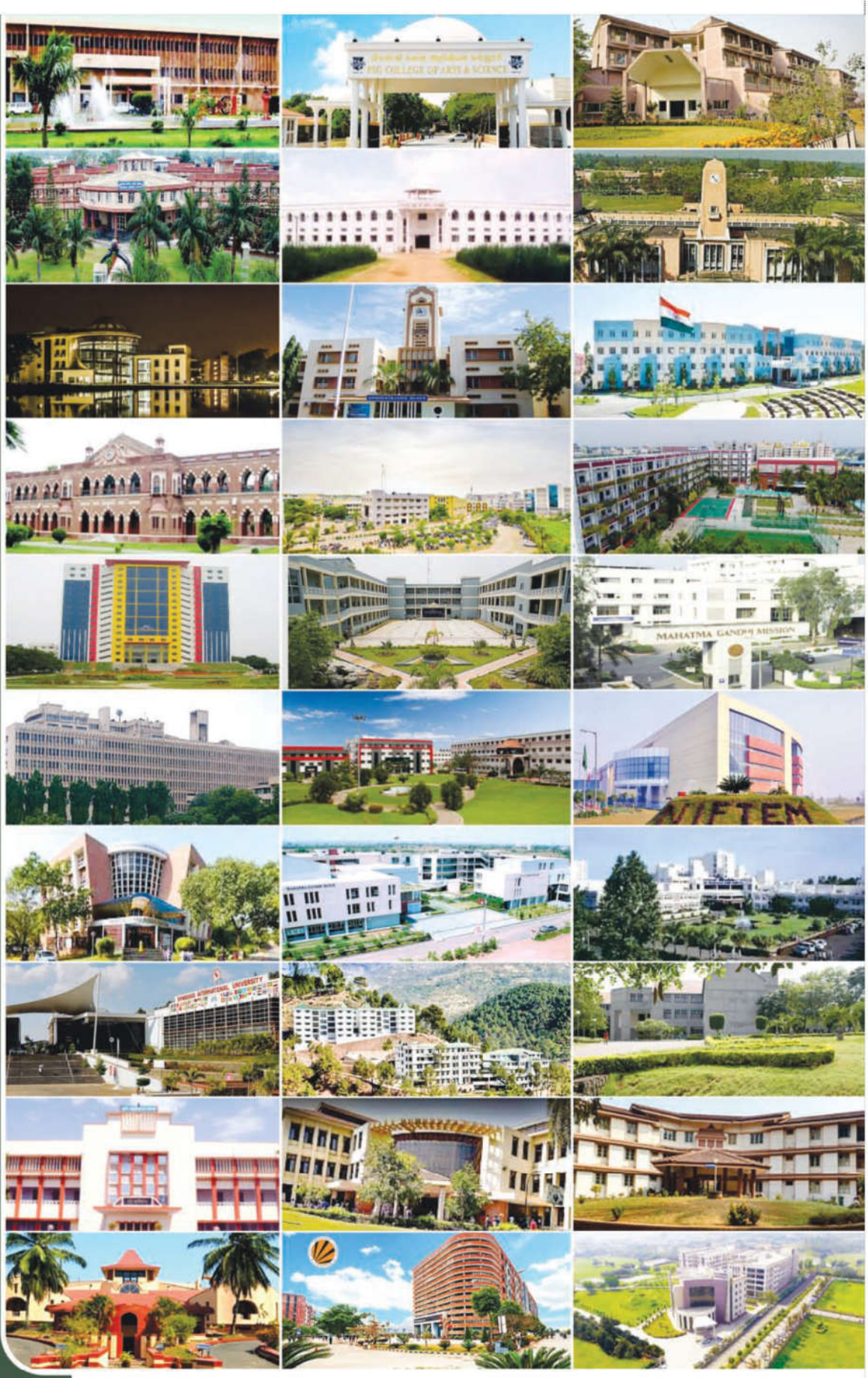
  d. Helping develop drainage systems and rain water harvesting procedures in the adopted villages.

  e. Swachh Bharat cleanliness Campaigns

  f. Plantation of economical important trees

- University has implemented over 700 locally made and patented dustbins (a dustbin at line of sight) across the campus. The dustbins are branded as Swachh Shoolini and color coded (red, blue and green) for segregation of different types of waste. This initiative has had a huge impact - no garbage is littered, and more importantly students and staff are changing their behavior towards using dustbins for garbage disposal.

swachh campus 2018



Mahatma Gandhi National Council of Rural Education

(Formerly National Council of Rural Institutes)

Department of Higher Education, Ministry of Human Resource Development, Government of India

5-10-174, Shakkar Bhavan, Ground Floor, Fateh Maidan Road, Basheerbagh, Hyderabad - 500 004.

Tel: 040-23212120, 23422105, Fax: 040-23212114, www.mgncre.in