



KALASALINGAM

ACADEMY OF RESEARCH AND EDUCATION

(DEEMED TO BE UNIVERSITY)

Under sec. 3 of UGC Act 1956. Accredited by NAAC with "A" Grade

Anand Nagar, Krishnankoil - 626126. Srivilliputtur (Via), Virudhunagar (Dt), Tamil Nadu | info@kalasalingam.ac.in | www.kalasalingam.ac.in



Criteria	Criteria-VII – Institutional Values and Best Practices
Key Indicator	7.1. Institutional Values and Social Responsibilities
Metric	7.1.6. Quality audits on environment and energy are regularly undertaken by the institution

ENVIRONMENT AND GREEN AUDIT REPORT

A copy of the environment and green audit undertaken by the institution is attached below.

Registrar

REGISTRAR
Kalasalingam Academy of Research and Education
(Deemed to be University)
Anand Nagar, Krishnankoil - 626 126.



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Anand Nagar, Krishnankoil-626126, Tamil Nadu, India.

GREEN AUDIT REPORT

August 2020

Report prepared by

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Bureau of Energy Efficiency Certified Energy Auditor
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Chief Executive Officer (CEO),
TryCAE Industrial Engineering Pvt. Ltd,
K.K. Nagar, Trichy – 620021.

m.vivekanandan

TryCAE Industrial Engineering Pvt.Ltd.,
D.No.24/77, 2A, SECOND FLOOR
AMPLE "ARUDHRA TOWERS"
RAJARAM SALAI MAIN ROAD,
K.K. NAGAR, TRICHY - 620 021.
TAMILNADU.

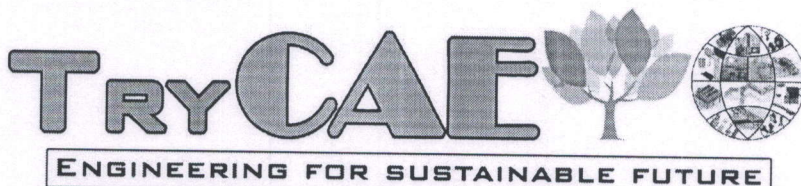


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ABSTRACT OF GREEN AUDIT

The green audit of KARE campus was done from the year 2018 to April 2020. The following are the comprehensive abstract of Green Audit.

The audit had been done in four categories: Water, Green, Waste Management, and carbon footprint, inference with water management is that college has 24 no's of borewell with good water retention, and also having 12 rainwater harvesting pits, in green management, the campus is having a 1.5-acre coconut farm, along with vegetable garden of 0.5 acre and medicinal plants for 0.1 acre, 60 species of plants and trees are maintained. Apart from the above measures, a Green Army a student club cultivates energy conservation among the students, with further improvement of green campus initiative. A nature club is also functioning with subsets Awareness, Photographic, Rescue, and research group. KARE has a well-defined Solid Waste Management Plan for converting the wastes into useful fertilizer through vermicompost and it is used for agriculture purposes. On average, 1.3 tons per day is recycled. Using an in-house technology, about 12 tonnes of compost is produced per month by vermicomposting and microbial composting. Mass multiplication of earthworm is also done yielding about 30 kg of worms per month. The university has 3 check dams within the campus area and they are used for storing the water and recharging the groundwater. The wastewater generated in academic and residential blocks are treated using an 800kL capacity wastewater treatment plant and sprinkler are used for irrigation of lawns and gardens. The institution is very keen on implementing effective green campus initiatives and that is evident from the awards like

- HE IMPACT Rankings (2020) - For Clean Water and Sanitation (101-200) (Global Ranking)
- Swachh Campus Ranking (2018): Ranked 7th in the country among the Technical Institutions (Universities)
- UI Green metric Ranking: Consistently placed in Top 10 among Indian Universities since 2016.

KARE also conduct a lot of student initiatives which was listed further in detail in the initiative by KARE towards sustainable environment

TO WHOM SO EVER IT MAY CONCERN

This is certify that myself M.Vivekanandan, Certified Energy auditor of Bureau of Energy Efficiency, India bearing the registration no. EA-19216, personally done Energy and Green audit at the Kalasalingam Academy of Research And Education, (Deemed To Be University), Anand Nagar, Krishnankoil - 626126, during August 2020 and recommendations to conserve energy is given in the report. I thank the management of KARE for providing me the opportunity, I also thank the team members of energy audit and green audit for rendering their support to the audit.

M. Vivekanandan

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M.Vivekanandan M.E., (Ph.D)
BEE Certified Energy Auditor (EA-19216)
CEO, TryCAE Industrial Engineering Pvt. Ltd.,
Trichy, Tamil Nadu



1.0: INTRODUCTION

1.1 About TryCAE Industrial Engineering Pvt. Ltd.,

TryCAE is an engineering services company from Tiruchirappalli, Tamil Nadu, India. The majority of the company's expertise domain lies in CFD Analysis, FEA Analysis, Design Automation, Equipment Design, and Energy Audits. TryCAE is engaged in the energy audit to various process industries like textiles, fish processing plants, matchbox industries, LPG cylinder manufacturing units, cold storage and dal processing units, besides TryCAE is involved in an energy audit and green audit for educational institutions, TryCAE is also involved in energy audit from 4 MW to 660 MW power plants. TryCAE is also engaged in utilizing data mining concepts and machine learning in power plant operations.

The company has been mentored by the industry experts like Dr. R. Vasudevan, Dr. V. Gopalakrishnan, Dr. C. Mani, and Mr. K. Sakthi.

1.2 About Kalasalingam Academy of Research And Education (Deemed to be University)

Kalasalingam Academy of Research and Education (KARE) formerly Arulmigu Kalasalingam College of Engineering was established in 1984 by the pioneering Kalasalingam Anandam Ammal Charities. Located at the pristine foothills of scenic Western Ghats, the college obtained the Deemed to be University status in 2006. The Institution has been serving society for thirty-four long years and it caters to the needs of students from all walks of society. KARE offers UG programmes, PG programmes, and Ph.D. programmes. It is the first Institution in India to introduce a special B.Tech programme in engineering for the differently able (speech and hearing impaired) students. The Institution has been re-accredited by NAAC with 'A' grade with a CGPA of 3.11 in 2015. Six UG programmes have been accredited by NBA under Tier-1. The Institution continues to do indefatigable work in getting projects and research centers. It has received DST funding to establish the National Center for Advance Research in Discrete Mathematics. KARE has got the state-of-the-art IRC with splendid high-end instruments for advanced research in material sciences and life sciences. Multi-

storeyed separate hostels with plenty of facilities provide accommodation to thousands of students. The institution has spent an exorbitant sum to create a world-class swimming pool and indoor auditorium for sports. Furthermore, KARE gives utmost importance to Intra-mural and Extramural activities for the holistic development of the students

1.3 ABOUT GREEN AUDIT

Green Audit is a process of systematic identification, quantification, recording, reporting, and analysis of components of the environmental diversity of various establishments. Green audit can be a useful tool for a KARE to determine how and where they are using the most energy or water or resources; the KARE can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve the waste minimization plan. It can create health consciousness and promote environmental awareness, values, and ethics. It provides staff and students a better understanding of Green impact on campus.

1.4 OBJECTIVES & GOALS OF GREEN AUDIT

- To minimize environmental effects.
- Determine how well the environmental management information systems and equipment are performing
- Verify compliance with the relevant national, local, or other laws and regulations
- Minimize human exposure to risks from environmental, health, and safety problems
- Highlighting wastage's in major areas.
- To physically ensure the installation of devices that reduce pollution and authentication of such devices by competent authority.
- To ensure optimum utilization of resources
- To suggest improvement in the system to promote a safe and clean environment.

2.0 GREEN AUDIT

The green audit to the KARE Campus is separated into the following four categories

1. Water Management
2. Green Management
3. Waste Management
4. Carbon footprint

Below are the energy auditor observations with respect to the above criteria's, detailed data collected with respect to the green audit are given below in annexure

01. Water Management

- The college is operating twenty-four (24) bore wells
- The present depth of water in the borewell is good
- The college is having a 400 m³ overhead tank
- There seems to be very less water leakage in the taps and connection's
- The wastewater goes to the sewage treatment plant
- Canteen, Boys & Girls hostels are the major consumer of water
- The college is having a 12 no's of rainwater harvesting pits
- Water management awareness to students,

02. Green Management

- The campus is having a 1.5-acre coconut farm, along with a vegetable garden of 0.5 acre and medicinal plants for 0.1 acre
- 60 species of plants and trees are maintained
- Trees are tagged with names
- Recycled water in the quantum of 400 m³ is recycled
- To increase the fertility of the soil, the manure is prepared by a process of 'Vermicompost' whereas the natural debris are adding along with the earthworms is introduced in our campus that induces rapid growth of plants

03. Waste Management

- The college is following a good waste management practice
- They are practicing zero garbage through composting
- KARE campus generates approximately 83 kgs of biodegradable waste and 190 kg of canteen waste daily, and it is composted in a 0.5-acre composting yard

04. Carbon Foot Print

- The college is having a good carbon footprint as most of them uses common transportation
- KARE campus is practicing good public transport or common bus transport, only 15% of the faculty and students uses the own 2 wheelers or cars.

Environmental Audit – Questionnaire

What is the total population of the Institute?

	Male	Female	Total
Students	4536	1928	6464
Teachers	325	127	452
Non-Teaching staff	281	45	326
Sub Total	5142	2100	7242
Approximate Number of Visitors (Per day)			50

Where is the campus located?

The campus is located in the Krishnankoil, Virudhunagar District.

Which of the following are available in your institute and its area?

Garden area	Available	101600 Sq.M
Playground area	Available	28328 Sq.M
Kitchen	Available	2323.42 Sq.M (3 Nos)
Toilets (number)	Available	2071
Garbage dumb (number)	Available	470 Dustbins
Laboratory	Available	12253.80 Sq. M (82 Nos)
Canteen	Available	1951.67 Sq. M
Car/scooter shed area	Available	1845.75 Sq. M (% Nos)

Which of the following are found near your Institute?

Municipal dump yard	20 KM
Public convenience	In Front of the Main entrance
Sewer line	-Nil-
Stagnant water	-Nil-
Open drainage	-Nil-
Industry - Mention the type	-Nil-
Bus / Railway station	15 KM
Market / Shopping complex / public halls	3 KM

I – WATER CONSERVATION

01.	List uses of water in your college.	Basic use of water in campus: 1. Drinking 2. Gardening 3. Kitchen & Toilets 4. Laboratories, washing facility & others
02.	What are the sources of water in your college?	Borewell and Open well
03.	How many wells are there in your college?	24
04.	No. of motors used for pumping water from each well?	24
05.	What is the total horse power of each motor?	71/2 HP
06.	What is the depth of each well?	800 feet
07.	What is the present depth of water in each well?	500' to 700 feet
08.	How does your college store water?	Sump and Overhead tank
09.	Quantity of water stored in your overhead water tank? (in liters)	4 Lakhs liters
10.	Quantity of water pumped every day? (in liters)	8 Lakhs liters
11.	If there is water wastage, specify why.	No
12.	How can the wastage be prevented / stopped?	Avoid overflow of water-controlled valves are provided in water supply system
13.	Locate the point of entry of water and point of exit of waste water in	Entry - Main gate Exit – From water drainage to STP plant
14.	Where does waste water come from?	Hostel, University, Quarters
15.	Where does the waste water go?	STP plant - 800kL treatment plant
16.	What are the uses of waste water in your college?	Garden

17.	No. of water coolers. Amount of water used per day? (in liters)	Hostel 8 Nos
18.	No. of water taps. Amount of water used per day?	22 Taps (22 X 150 liters) = 3300 liters
19.	Amount of water used per day in staff rooms, common, hostels?	6 Lakhs liters
20.	Amount of water used per day in toilet, urinals?	16,000 liters
21.	Amount of water used per day in water taps in the canteen?	2,40,000 liters
22.	Amount of water used per day for garden use.	6,00,000 liters
23.	Amount of water used per day in each lab.	10,000 liters
24.	Total use of water in each hostel?	Per hostels 65000 X 7 = 4,55,000
25.	Total use of water in University?	3,00,000 liters
26.	Total use of water in entire campus?	7,55,000 liters
27.	Is there any water used for agricultural purposes?	No
28.	Does your college harvest rain water?	Yes
29.	If yes, how many rain water harvesting units are there?	12 Nos
30.	How many of the taps are leaky? Amount of water lost per day?	Nil
31.	Are there signs reminding people to turn off the water? Yes / No	Yes
32.	Are there any waterless toilets?	No
33.	How many water fountains are there?	-No-
34.	How many water fountains are leaky?	-Nil-
35.	Is drip irrigation used to water plants outside? YES/NO	-Yes- 4 Nos
36.	How often is the garden watered?	Recycle water
37.	Quantity of water used to water the ground?	3,55,000 litres
38.	Quantity of water used for bus cleaning? (liters per day)	1000 litres

39.	Amount of water for other uses? (items not mentioned above)	--
40.	Is there any water management plan in the college?	-Yes-
41.	Are there any water-saving techniques followed in your college?	<p>-Yes-</p> <p>Techniques used:</p> <ol style="list-style-type: none"> 1. Close the taps after usage 2. Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage 3. Water conservation awareness for new students

II - GREEN MANAGEMENT

1	Is there a garden in your college? Area?	Yes, about 1,01,600 Sq.M (10.16 Ha)
2	Do students spend time in the garden?	Yes
3	List the plants in the garden, with approx., number of species.	60 Nos of species
4	Suggest plants for your campus (Trees, vegetables, herbs, etc.)	Yes
5	List the species planted by the students, with numbers	Neem tree and naval tree plantation
6	Whether you have displayed scientific names of the trees on the campus?	Yes
7	Are there any plantations in your college? If yes how much area?	-Yes- Coconut 1.5 Acre
8	Is there any vegetable garden in your college? If yes how much area?	-Yes- 0.5 Acre
9	Is there any medicinal garden in your college? If yes how much area?	-Yes- 0.1 Acre
10	What are the vegetables cultivated in your vegetable garden? Mention the quantity of harvest in each season	Banana, Drumstick, Ladies finger, Brinjal,
11	How much water is used in the vegetable garden and other gardens? Mention the source and quantity of water used?	Recycle water 4,00,000 Liter
12	Who is in charge of gardens in your college?	Estate Officer
13	Are you using any type of recycled water in your garden?	Yes
14	List the name and quantity of pesticides and fertilizers used in your garden?	Azadirachtin 3-5 liters / Year Vermicompost 4000kg/Year

15	Whether you are doing organic farming in your college? How	-NO-
16	Do you have any composting pit in your college? If yes what are you doing with the compost generated?	Yes- Vermicompost
17	What are you doing with the vegetables harvested? Do you have any student market?	Sold in student market
18	Is there any botanical garden in your campus? If yes give the details of the campus flora	No
19	Give the number and names of the medicinal plants in your college campus	Tulsi, Thuthuvalai, Karpooravalli, Neem tree, Veldgrape
20	Are threatened plant species planted/conserved?	NO
21	Is there a nature club in your college? If yes What are their activities?	Yes, Natural conservation, awareness, Plastic free zone awareness program
22	Is there any arboretum in your college? If yes details of the trees planted.	-
23	Is there any fruit yielding plants in your college? If yes details of the trees planted	Yes Mango, Naval, Pappaya
24	Are there any grooves in your college? IF yes details of the trees planted?	Yes, Neem, Tamarid
25	Is there any irrigation system in your college	Sprinkler system
26	What is the type of vegetation in the surrounding area of the college?	Trees and Shurbs
27	What is the natural awareness programs conducted in the campus? (2019-2020)	Yes

28	What is the involvement of students in the green cover maintenance	Bird watches and animal and bird senses align with forestry Department
29	What is the total area of the campus under tree cover? Or under tree canopy?	50 acres
30	Share your ideas for further improvement of green cover	Be developed more lawn area and plant trees

III - WASTE MANAGEMENT

1.	What is the approximate quantity of waste generated per day? (in Kg)	Biodegradable 273 Kg	Non-biodegradable 10.1 Kg	Hazardous -	Others -
2.	Whether waste is polluting ground/surface water? How?	NO			
3.	Whether waste is polluting the air of the college? How?	NO			
4.	How is the waste generated in the college managed? Methods 1. Composting 2. Recycling 3. Reusing 4. Others	Used papers are used to prepare college folders. Food / Kitchen waste are composted by Vermicompost facilities. Wastewaters generated are treated by STP plant.			
5.	How many separate boxes do you think you would need to put into a classroom to start a waste segregation and recycling campaign? What should be the use for each box? Develop a colour code with reasons?	As there is only biodegradable waste is generated, only one dust bin is kept in the class rooms. Non-biodegradable waste are collected using red colour bins which is available in each floors.			
6.	Do you use recycled paper in college?	Yes, Recycled papers are used to prepare college file folders			
7.	Is there any waste wealth program practiced in the college?	Yes. Workshops & awareness campaigns are arranged for students.			
8.	How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, please specify	Green army club students have organized various programs to the local community. Coastal clean-up awareness, Ozone layer protection, Water resource, Production of Vermicomposting			
9.	Can you achieve zero garbage in your college?	They are practicing various recycling & composting practices. Hence zero garbage			

	(Reduce, Recycle, Reuse, Refuse) If yes, how?	can be achieved through waste management plan.
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Composting

Do you have any composting pit in your college? If yes what are you doing with the compost generated?	Yes 2 pits, Organic Manure
Details of composting (Area, quantity of waste processed)	0.5 acre, 273 Kg

IV - CARBON FOOT PRINT

1.	Total number of vehicles used by stakeholders of the college (per day)	College Bus 42 Truck with water tanker 4 Truck 3 Auto 1 Ambulance 1 Cars 4
2.	No of cycles used	1
3.	No of two wheelers used (average distance travelled and quantity of fuel and amount used per day)	300 (30 KM)
4.	No of cars used (average distance travelled and quantity of fuel and amount used per day)	74
5.	No persons using common (public) transportation (average distance travelled and quantity of fuel and amount used per day)	2100
6.	No persons using college conveyance by the students, non-teaching staff and teachers (average distance travelled and quantity of fuel and amount used per day)	2400 Srivilliputhur, Madurai, Aruppukottai, Sattur, Malur, Sengottai
7.	No of parent-teacher meetings in a year? Parents turned up (approximately)	2 (3000)
8.	Number of visitors with vehicles per day?	75
9.	Number of generators used per day (hours). Give the amount of fuel used per day	Very rarely used
10.	Number of LPG cylinders used per day (hours). Give the amount of fuel used per day	14 Cylinders /day
11.	Quantity of kerosene used in the canteen/labs. Give the amount of fuel used per day	Nil
12.	Amount of taxi/auto charges paid per month by the stakeholders of the college	Nil
13.	Amount of taxi/auto charges paid per month by the transportation of office goods of the college	Nil
14.	Average amount of taxi/auto charges paid per month by the stakeholders of the college	Nil

15.	Use of any other fossil fuels in the college (Give the amount of fuel used per day and amount spent)	Nil
16.	Suggest the methods to reduce the quantity of use of fuel used by the stakeholders/ students/teachers/non-teaching staff of the college	Already KARE campus is practicing good public transport or common bus transport, only 15% of the faculty and students uses the own 2 wheelers are cars

4.0 INITIATIVES BY COLLEGE TOWARDS SUSTAINABLE ENVIRONMENT

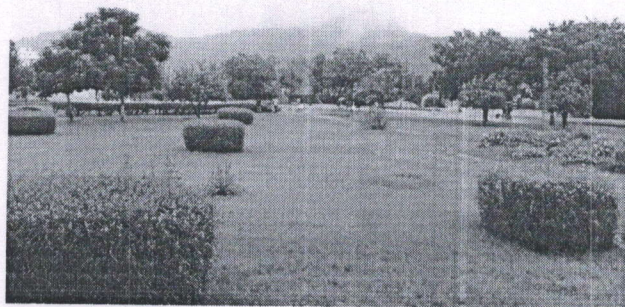
Green Army – To cultivate the energy conservation practices among the students:

The broad responsibility of “Green Army” are:

- Ensure judicious use of fans and lights inside and outside the class rooms to minimize electricity consumption
- Ensure litter free environment inside the class room and corridor of the respective buildings
- Organize minimum Two events in line with “Swachh Bharath” campaign within the campus and outside the campus under the leadership of Green Team (Faculty) members in a semester.
- Educate and advice fellow students to follow environment friendly practices inside and outside the class room and in the campus as well.
- Report to the Green Team if any abuse of environment by any stakeholders observed within the campus. Green Team will be responsible to support the Green Army in terms of resource requirement, identification of activities, provide needed resources to Green Army.
- As the activity evolves more students will be enrolled in the Green Army. All the Green Army volunteers can earn non-CGPA credits.

Green Campus Initiatives

Green landscaping with trees and plants: About 50% of the area of the campus is with green cover. The trees are planted on either side of the roads. All the front area of the buildings are planted and covered with beautiful plants and grass. KARE has installed a dedicated Sewage Water Treatment plant with a capacity 800kL/day. To develop and maintain the trees, plants and gardens an exclusive team is available inside the campus.



Students, staff using Bicycles:

Both the faculty and students are encouraged to use the bicycles inside the campus. Parking lot for bicycles is provided in the administrative building. The students are not allowed to operate motorized two wheelers and four wheelers inside the campus for transportation.

Transport Facility:

Bus facilities are available for both faculty and students to all important places within a radius of 100 km to avoid personal use of vehicles inside the campus. Shuttle trips are operated inside the campus.

Pedestrian Friendly Roads:

All roads are having 3 feet footpaths enabling the pedestrians to move freely without any hassles. Motorized vehicles are not permitted inside the academic area for safe movement of pedestrians and thereby noise pollution is also avoided.

Plastic free campus:

The campus is free from usage of plastic carry-bags. The usage of plastic cups and plates are not permitted in the canteen and the hostels; instead stainless-steel cups, plates and spoons are used.

Paperless office:

The Institution is moving towards the paperless office system. All the forms right from admission to issue of Degree certificates are made online and it is available in the student's ERP software (SIS). The faculty leave application and other applications are made

available in the Faculty/staff login. All the communication regarding organizing of programs

and attending a program to the Vice Chancellor are submitted online.

Clubs**Green Army:**

After Conducting Energy Audits within the campus, we felt the need for a dedicated team to work on all aspects of energy conservation and environment protection. This thought led to the birth of Green Team and the Green Army. The green team is a group of faculty members who will supervise and execute all measures to reduce energy and water consumption, keep the campus environment clean and

green. Green Army is the group of student volunteers who will be responsible to keep a watch on the judicious use of resources (Energy and water) and green environment.

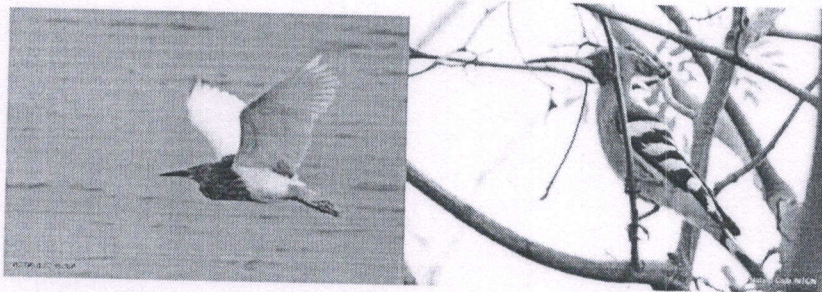
2. Nature Club

The motto of Nature Club is -“to strengthen the unity of mankind and nature-for nature’s sake”. At this let us awaken at nature’s need. Club has 4 groups:

1. Awareness Group.
2. Photographic Group.
3. Rescue Group.
4. Research Group.

Different Workshops, seminar and competition were organized to motivate the students and to inculcate the practices of energy and environmental conservation.

Bird watching camp:



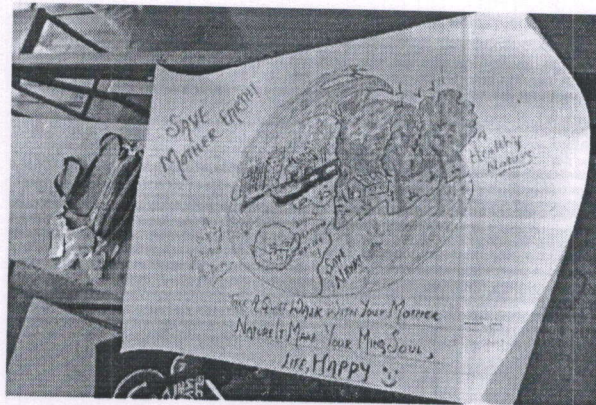
Viewed and Photographed ‘Indian Pond Heron and Common Hoopoe’ on 19/12/2015

Inagural Function 2016



Tree Plantation in the Event on 28/08/2016

VALARUNNA VITAIKAL 2K17

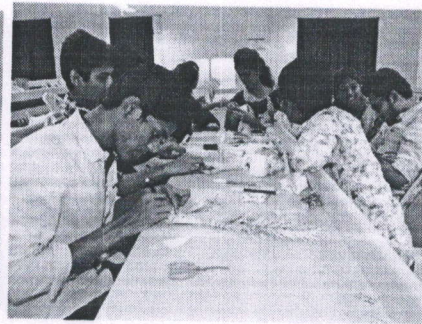


Painting by the Participant in the Event

INAUGURATION 2018 – THAZHAI 2K18

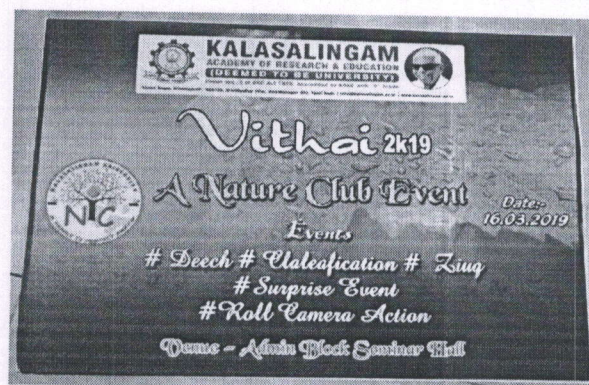


Event Brochure circulated for the 'Thazhai' event on 29/09/2018



Students Participation in Art from Waste Event on 29/09/2018

Vithai -2k19 (WORLD WATER CONSERVATION DAY CELEBRATION)



ARUVI 2020- Conducted on 29/02/2020 and Guest Lecture on Wildlife Conservation



Event Brochure Circulated and Placed in the Event on 29/02/2020

Sustainable Environmental Practices

Solid Waste Management

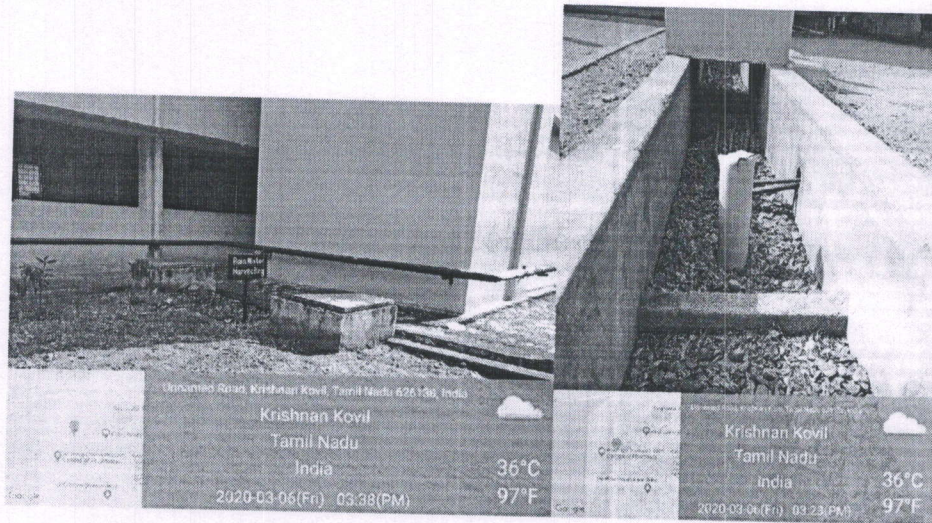
KARE has a well-defined Solid Waste Management Plan for converting the wastes into useful fertilizer through vermicompost and it is used for agriculture purposes. On an average 1.3 ton per day is recycled. Using an in-house technology, about 12 tonnes of compost is produced per month by vermicomposting and microbial composting. Mass multiplication of earthworm is also done yielding to about 30 kg of worms per month. The institution uses this in the agriculture farm and also sells the compost and earthworms to the farmers for a nominal price on non-profit basis. The present size of the vermicompost yard is 100 m. sq.



Rain Water Harvesting:

The university has installed rain water harvesting systems in all academic, administration, guest house and hostel buildings. The rain water collected is used to recharge the ground water.

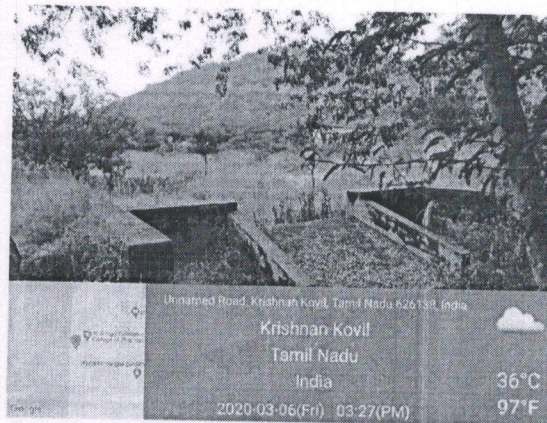
No of Blocks:



Check Dams :

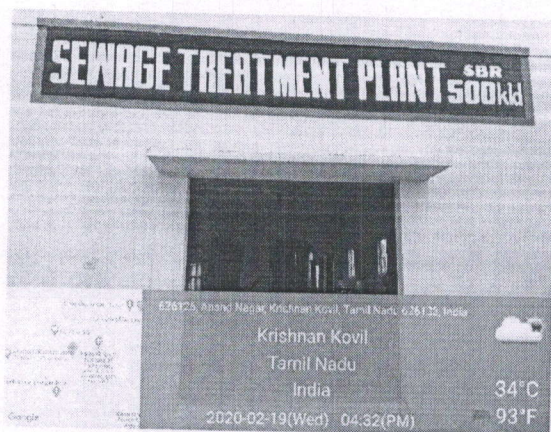
The university has 3 check dams within the campus area and they are used for storing the water and recharging the ground water. The check dams also have recharge pits of 10x10x10 feet and bore holes are made for a depth of 20 feet for effective recharging of ground water.

No of Check Dams: 3



Wastewater recycling plant :

The waste water generated in academic and residential blocks are treated using a 800kL capacity waste water treatment plant and the treated water is chlorinated and reused for flushing toilets using dual pipeline system and sprinkler is used for irrigation of lawns and gardens.



Maintenance of Water Bodies:

The university has approximately 3.5 km of rainwater drainage canals that is maintained properly; infiltration bore wells are constructed inside the canals for recharging the ground water. Farm ponds.

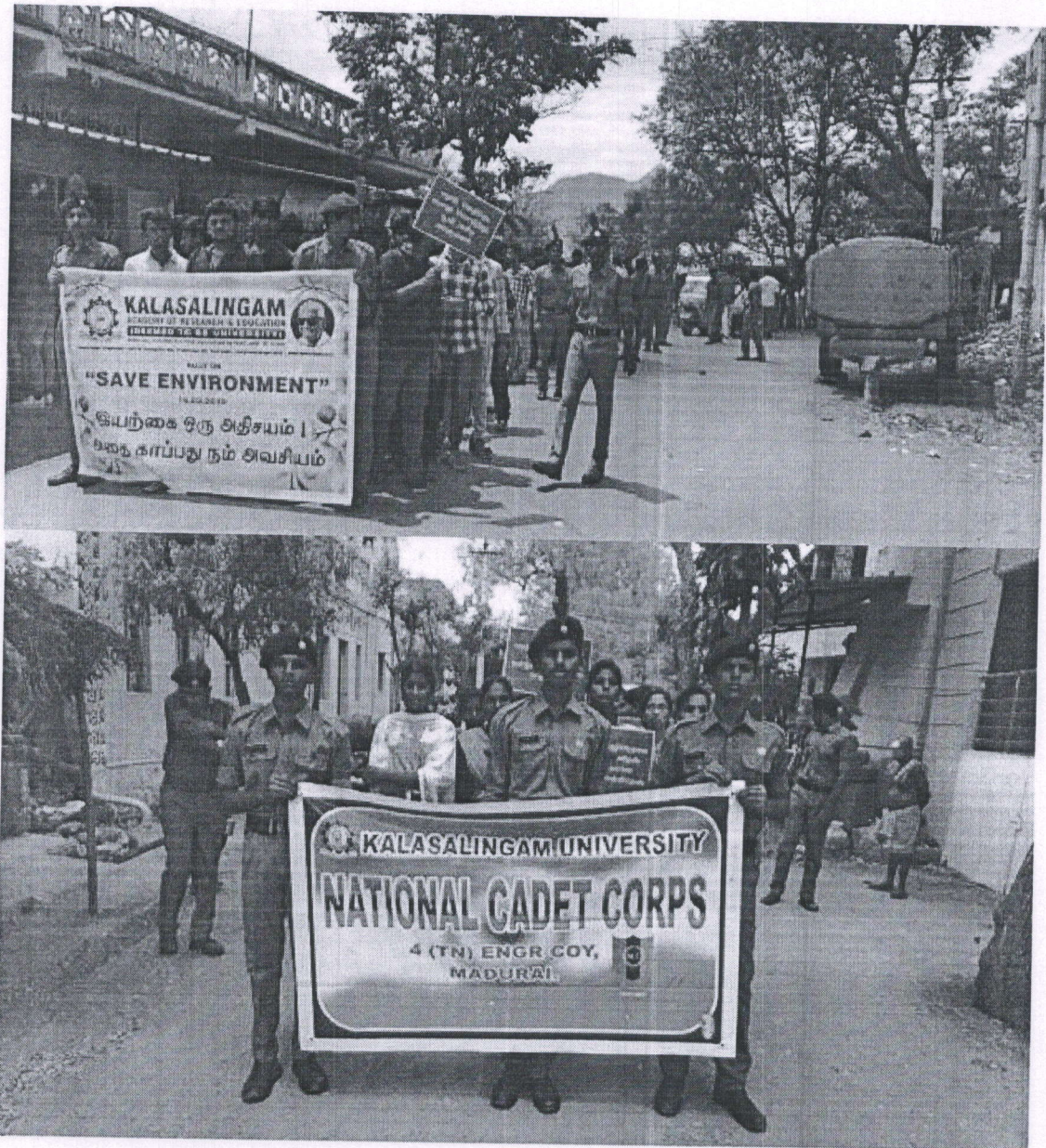
Other steps taken to conserve water:

In order to conserve water a ultra-modern laundry facility is provided in the campus by an external agency that consumes less water. This facility is used by the hostellers and by the families of faculty and staff who reside in the campus. STP, Pressure washer for Kitchen facilities. Food for the hostellers by a well-known external agency, who uses a modern kitchen which consumes less amount of water and they also adopt a zero waste policy.

Outreach Activities

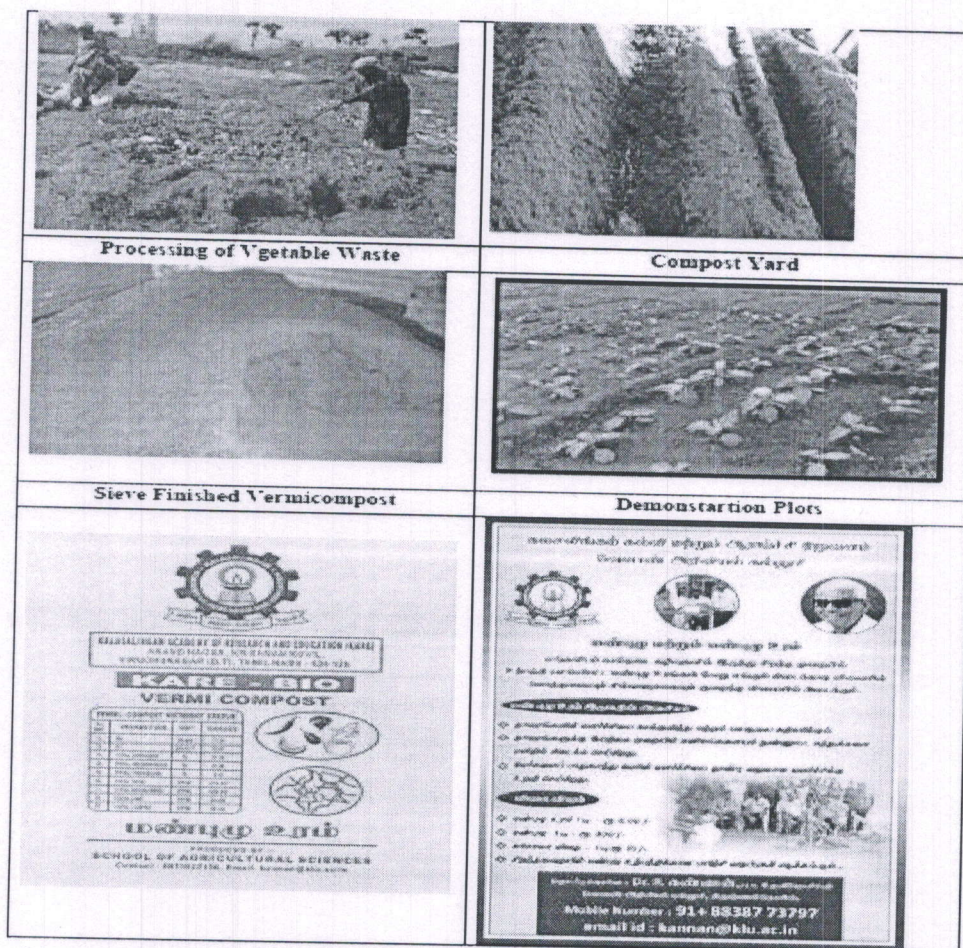
World Water Day by NSS students:

On the account of World water day (22 March 19) celebration, a rally was organized by NCC, KARE on 16th March 2019. The rally was connected in Ramacharapuram village. In this rally Placards focusing on the importance and conservation of water and save tree etc., were carried by the participants.



Offering a helping hand to the farmers in this rural area

The Vermicompost Yard that was established as part of the solid waste management plan of the institution is being used as a training and demonstration plant for the farmers in this region. Besides training the farmers in Vermicompost technology, this facility is also producing Vermicompost that is being distributed to the farmers in this region at a subsidized cost. The vermicompost training given to the farmers has helped in additional income generation for this section of the society.



Other Activities by the students

IN THE TIMES OF INDIA

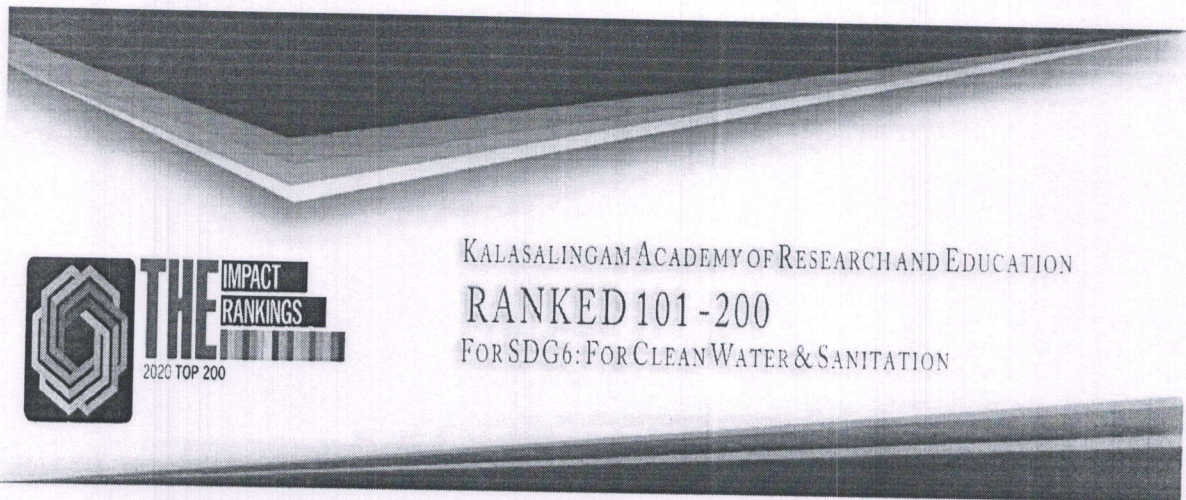




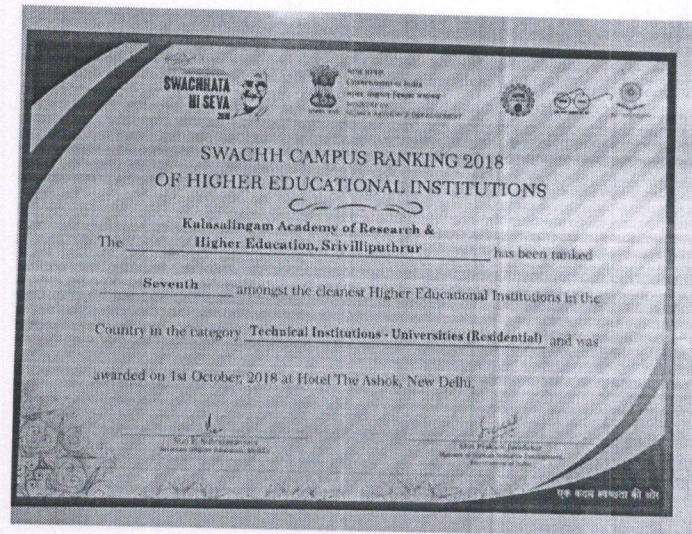
Awards

The institution is very keen on implementing effective green campus initiatives and that is evident from the awards that the institution has received.
(<http://kalasalingam.ac.in/site/rankings/>):

1. THE IMPACT Rankings (2020) - For Clean Water and Sanitation (101-200) (Global Ranking)



2. Swachh Campus Ranking (2018): Ranked 7th in the country among the Technical Institutions (Universities)



3. UI Green metric Ranking: Consistently placed in Top 10 among Indian Universities since 2016.

UI Green metric

About GreenMetric Rankings Participants News & Events Publications UICGM

List of Universities in Each Country (2018)

Ranking	University	Country	Total Score	Building and Infrastructure	Energy and Climate Change	Waste	Water	Transportation	Education and Research
1	Indian Institute of Information Technology and Management Gurgaon	India	2430	930	250	1280	420	1100	1110
2	Manipal Academy of Higher Education	India	1675	1080	1010	400	270	490	1025
3	Mangalore University	India	1620	1045	1205	875	970	1050	1010
4	Kulasalingam University	India	1570	1145	875	575	875	980	250
5	National Institute of Technology Patna	India	1450	850	1075	975	680	870	110

4.0 CONCLUSIONS

The Green audit of KARE campus was done from the year 2018 to April 2020. The following are the conclusions of the Green Audit.

- Audit had been done four categories: Water, Green, Waste Management and carbon footprint,
- Inference with water management is that college has 24 no's of borewell with good water retention, and also having 12 rain water harvesting pits,
- A Green Army a student club cultivates the energy conservation among the students, with further improvement of green campus initiative.
- A nature club is also functioning with subsets Awareness, Photographic, Rescue and research group.
- KARE has a well-defined Solid Waste Management Plan for converting the wastes into useful fertilizer through vermicompost and it is used for agriculture purposes. On an average 1.3 ton per day is recycled.
- The KARE has 3 check dams within the campus area and they are used for storing the water and recharging the ground water
- The waste water generated in academic and residential blocks are treated using a 800kL capacity waste water treatment plant and the treated water is chlorinated and reused for flushing toilets using dual pipeline system and sprinkler is used for irrigation of lawns and gardens.

The institution is very keen on implementing effective green campus initiatives and that is evident from the awards like

- HE IMPACT Rankings (2020) - For Clean Water and Sanitation (101-200) (Global Ranking)
- Swachh Campus Ranking (2018): Ranked 7th in the country among the Technical Institutions (Universities)
- UI Green metric Ranking: Consistently placed in Top 10 among Indian Universities since 2016.