Sustainable Environment Policy
(MARCH 2022)

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KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION
(Deemed to be University)
(Under the section 3 of the UGC Act 1956)
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SUSTAINABLE ENVIRONMENT POLICY

1. Preamble

KARE is committed to provide a clean and green campus congenial to the teaching-learning process, research and all the academic, cultural and sports endeavors of the stakeholders. The holistic growth is possible only when all dimensions are balanced and sustainability is taken care of in the eco system of the campus. The University will provide an excellent opportunity to maintain the pristine nature well surrounded by Western Ghats. The flora and the fauna that is unique to the campus is the pride of the place and it would be maintained at all costs. The University will maintain a clean air, water, and the whole bio-diversity congenial for healthy development of the body, mind and soul of the stakeholders. To provide a balanced eco-system, clean and green environment, pollution free habitat, sustain the nature in all its pristine form, this Policy envisages the participation of the stakeholders, establishment of the necessary infrastructure, maintenance of the roads, water bodies, alternative sources of energy and avoid any practice that is detrimental to the nature and bio-diversity.

2. Purpose

- To establish regulations and guidelines for reducing overall energy consumption and promote clean energy that could lead to reduction in greenhouse gas emissions
- To adopt practices for water conservation including rainwater harvesting
- To formulate guidelines for maintaining KARE as a green campus
- To make provision for establishment of the necessary infrastructure for creation and use of alternative sources of energy, recycled water, maintenance of water bodies, flora and fauna, the environment, bio-diversity.

3. Scope of the Policy

The policy is relevant to all the members of the campus community including faculty, staff and students and visitors of the campus. This would also be applicable to families of faculty residing inside the campus.

4. Policy Statement

The policy of the university is to protect its environment by adopting suitable eco-friendly technologies leading to waste reduction and disposal and, also energy conservation.

4.1. Alternate Sources of Energy and Adoption of Energy Conservation Measures

Considering the energy demand of the institution that is steadily growing, there is a need to reduce energy consumption and to adopt energy conservation measures. To reduce energy consumption, the university has considered generating alternate sources of energy particularly the solar energy, a form of renewable energy.

4.1.1. Solar Energy:

The institution would be adopting various measures to conserve energy such as investing in renewable energy production and energy efficient practices. This includes installation of solar panels on roof-top of all the buildings in a phased manner. To provide an optimum output they would be maintained regularly by cleaning the surface of the photo voltaic modules using water, monitoring the temperature and output power. Hot water would be supplied to the residents of the hostels by installing solar water heaters. The energy that is being generated by the solar plants are monitored by energy meters that are installed along with the plants. The generation reports are reviewed periodically.

4.1.2. Energy Conservation

As an energy conservation measure fluorescent lamps are replaced with LED bulbs and energy-efficient super fans are installed in the hostel rooms. In addition, sensor-based energy conservation units such as air-conditioners, refrigerators and freezers are installed at various places. Energy efficient water heaters and sensor-based solar street lights are also installed throughout the campus to conserve energy. The proper operation and maintenance of buildings, utilities and equipment helps in improving energy efficiency.

4.1.2.1 Adoption to Green Computing

KARE as a responsible institution is adopting Green Computing, an environmental-friendly approach. This minimizes the use of energy by computers and peripheral devices and, promotes sustainability. To minimize the energy utilization by computers the institution has switched over to Thin Clients and a server that host a variety of applications in a virtualized environment. This

approach considerably reduces the energy required by having individual desktop computers. Another approach KARE has adopted in saving energy is switching over to cloud servers instead of maintaining multiple file and web servers in the campus. This approach has reduced the energy consumption resulting in decreased carbon foot print.

4.1.2.2. Awareness Training on Energy Conservation

Need-based training for creating awareness on energy conservation would be provided to the students and staff. Energy audit through a certified auditor would also be conducted and the suggestions provided by the auditing team for conserving energy are implemented.

In addition, the faculty, staff and students are given orientation on various energy conservation measures. These include:

- Turning-off laboratory equipment, computers and other energy consuming equipment when not in use. The faculty, research scholars and students should turn-off the laboratory equipment as soon as an experiment is over. The technician in the laboratories including computer labs should ensure this. This should be monitored by the faculty member who is in-charge of a particular laboratory.
- Focus on utilization of natural day lighting rather than electrical lighting. Whenever possible natural day lighting should be used and the electrical bulbs should be turned-off.
- Efficient maintenance of air-conditioned equipment aimed towards energy conservation. The service technician should service the air-conditioners regularly and this should be ensured by the Estate Officer.
- Lights in common areas like corridors should be turned-off after the office hours and during weekends. This should be ensured by the building in-charge and the security officers who go on rounds.
- Efficient temperature management guidelines for air-conditioners so as to minimize energy use without disturbing the comfort of the people.
- Ensure switching-off lights, fans, air-conditioners when not in use. Students should also be advised about the importance of energy conservation and should be asked to switch-off lights and fans when they leave the class.

4.2. Water Conservation and Waste Water Recycling

The climate in Virudhunagar district, where KARE is present, is subtropical. Though the district receives rain during both southwest and northeast monsoons, the northeast monsoon is the primary contributor to the rainfall in the district. The normal annual rainfall over the district varies from about 724 to 913 mm. Hence, conservation of water resources is imperative to manage the requirements of the growing population of campus community. Being in a water scarce area, the university community is well aware of water conservation and related sustainability issues. The institution also has a responsible community and is willing to go beyond the minimum requirements in protecting the future. The institution is committed to the three Rs (reduce, reuse and recycle).

The institution ensures adherence to the regulatory requirements of all relevant legislation and be a role model in maintaining higher standards. The institution has included water conservation principles in the plans of the institute. The institutions would adopt the following measures towards water conservation.

  i. Invest in enhancing water availability through rainwater harvesting by constructing rain water harvesting structures and bore-wells at strategic locations.
 ii. Construct check dams, sink pits and ponds and to channelize the rain water properly to recharge the ground water.
iii. The waste water from various academic blocks and residential areas are collected at a central location and treated in a Sewage Treatment Plant (STP). The treated water is used for gardening purposes and flushing the toilets.
 iv. Supervise continuously and review at regular intervals the water usage and to provide need-based training for creating awareness on water use efficiency principles among staff and students

4.3. Reduction, Recycling and Reuse of Solid Wastes

The institution generates wastes such as waste paper, card board, computers, electronic equipment, glass batteries, wood. Wherever reuse is possible, the university is committed to recycling those material.

4.3.1. Reducing the Generation of waste

E-Governance: As the institution believes in reducing the amount of waste generation rather than re-use or recycle, the institution adopts e-governance processes. As part of e-governance, all

circulars to various administrative and academic unites would be sent through e-mail. Booking of room in the hostels, guest house and bus booking are done through online. In order to reduce paper usage and generation of paper waste, course plans and academic schedules are sent to the students through group email or though google class room.

Plastic Ban: As an eco-friendly effort the campus is declared as a plastic free campus. The use of single use plastic and plastic water bottles are banned inside the campus. The campus community is educated on the harmful effects of plastics and " No Plastic" sign boards are placed at various locations inside the campus. Alternatively, the hostels, canteens and coffee kiosks throughout the campus are advised to use stainless steel plates, bottles and glasses.

4.3.2. Collection, Segregation and Management of Solid Wastes

The HEI has installed different waste collection bins for different wastes, the wastes are collected at various points of the campus and are brought to a common place and are segregated to non-degradable and degradable waste.

Paper Wastes: Examination answer scripts collected are sent to an approved vendor for recycling.

Non-degradable Wastes such as metal and wooden waste is stored and given to authorized scrap agents for further processing. Sanitary napkins are disposed using incinerators.

Degradable solid organic waste collected from the hostels such as waste food, vegetables and, grass are taken to the composting yard and the organics are converted into fertilizer through microbial and vermicomposting. The compost that is produced finally, after value addition with microbial inoculants, is provided to the farmers at an affordable cost.

4.3.3. Generation of Biogas

Two Biogas plants, installed in the campus, process kitchen waste and convert the same into biogas. This results in saving the usage of LPG in the kitchen.

4.3.4. Management of Biomedical Waste

The institution is producing biomedical wastes that include tissue, blood soiled cotton and microorganisms and cultured cells. The waste generated in the Biotechnology department such as microbial cultures and cultured cells are disinfected through autoclaving and disposed. Soiled surgical equipment such as scissors and knife are disinfected, autoclaved, washed and reused. Animal Tissues and blood-stained material are sent for disposal through authorized vendors.

4.3.5. Management of E-waste

E- waste that is generated such as computers, monitors and electronic gadgets are collected from various divisions of the campus and stored at a centre place and are disposed through authorized agencies.

4.3.6. Awareness Training

Need-based training for creating awareness on recycling principles among students and staff is provided at frequent intervals.

4.4. Maintenance of Green Campus

Green landscaping with trees and plants

The Institution has a sprawling campus which is beautifully landscaped with lush green lawns. The institution puts in lot of efforts in keeping the campus clean and green. The green ambience of the institution is largely due to the beautifully maintained lawns and tree plantations. The environment is free from noise and pollution fostering the learning experience. Tree plantation programs are organized every year by NSS and Green Army volunteers this helps the university in increasing the green cover on campus. The trees in the campus provide shelter for a variety of animals and birds.

The institution ensures that the campus is maintained green by advocating the implementation of the following measures:

i. To encourage students to join Green Army

ii. To adhere vehicle free day inside the campus, every month, to reduce air and noise pollution.

iii. To encourage faculty members, staff and students to travel by public transport or college buses instead of individual cars and two-wheelers. The university provided good transportation facilities to various cities and towns. This will reduce the carbon foot-print.

iv. To conduct Green and Environment audit using certified external auditors and to implement their suggestions.

v. To provide well-laid roads throughout the campus and also to provide pavements for pedestrian use.

5. Awareness Program for Public:

As part of Unnat Bharath Abiyan, KARE has adopted 5 villages and has also conducted many activities to promote Swachh Bharath in various villages and also to promote environmental awareness among the public. The campaign to educate public include Global warming, Greenhouse gas emission and cleanliness.

6. Review of Policy and Revision:

A Sustainable Environment Policy Advisory Committee constituted by the Vice Chancellor will evaluate and recommend policy revisions at periodical intervals.