



KARPAGAM ACADEMY OF HIGHER EDUCATION

Deemed to be University

Established Under Section 3 of UGC Act, 1956

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Distinctive Area

7.3.1 ENVIRONMENTAL MANAGEMENT – A HOLISTIC APPROACH BY KARPAGAM ACADEMY OF HIGHER EDUCATION

Preamble

Karpagam Academy of Higher Education is innate and spiritually attached to nature and committed to provide healthy environment to its staff and students from its inception in 1995 and continued till now. At the time of inception, the area in which this Institution was built was a barren land with hard rock and construction of building itself was challenging, leave alone making it green. Still, the Institution determined to make it green and planted trees by drilling the rock and watering the plants through trucks as there was no ground water. The process was done for two decades and at present, the Institution presents an enviable green campus which is eco-friendly with dense flora and fauna with 96 species and 624 trees. These trees, besides providing good shadow and pure air to the inmates has become a home for thousands of birds and the chirpings sound by the birds gives a pleasant environment particularly in the early morning and evening.

Now, providing healthy environment to the people has become the hot topic of the whole world and it has assumed such a great significance that “Environmental Protection” is considered to be a fundamental duty of every citizen of this country under Article 51-A(g) of Indian Constitution. Having understood the legal, social and moral importance of providing healthy environment to the staff, students and the society, the Institution has taken a Holistic Approach to Environmental Management which comprises of;

1. Environmental Aspects in Curriculum
2. Environmental Awareness
3. Green Buildings
4. Air Quality Management
5. Water Quality Management
6. Renewable Energy Management
7. Toxic Substances and Hazardous Waste Management
8. Solid & Liquid Waste Management
9. Environmental Research
10. Environmental Audit

Environmental Aspects in Curriculum

To enlighten students on environmental issues, the Institution has introduced a course on 'Environmental Studies' in all UG programmes and certain specific courses such as 'Design of Environmental Engineering Structure', 'Environmental Geo Technology', 'Environmental Quality Management', and 'Environmental Health and Safety in Industries' are offered under various programmes.

Environmental Awareness

Environmental Awareness is to understand the fragility of environment and the importance of its protection. To sensitize students on Environmental issues seminars / guest lectures and camps are organized and environment related activities are undertaken through NSS volunteers in the adopted five villages to sensitize the rural people. Environment Protection Day is celebrated on November 26th every year.

Green Buildings

The building materials such as asbestos, lead based paint, lead pipes are not used as they are harmful to the environment . The institution has a good indoor environmental air quality .

Air Quality Management

The air pollution has become a major health hazard and the air quality level of sulphur dioxide was 7.02 micrograms per cubic metre, carbon monoxide 0.5 milligram per cubic metre and nitrogen dioxide 59.1 microgram per cubic metre in Coimbatore. To reduce air pollution the trees in the campus help to reduce heat generated by the sun and nearby industries and filter harmful dust and pollutants and absorb 95.39 lakhs kg of CO₂ per year.

Water Quality Management

Pollution Control Board conducted test of water quality and indicated high level water pollution in Coimbatore. As against, the acceptable limit of 500 mg / L and permissible limit of 2000 mg /L for total dissolved solids, the reading showed 3936 mg/L

The Institution has taken all precautions to provide purified drinking water to all the inmates by installing water purifiers in 16 locations and supply 5000 liters approx. per hour.

Renewable Energy Management

In a few buildings, 'Solar Panels' with a capacity of 50 kw are installed to generate solar power and planned to increase capacity to 1 mw.

Toxic Substances and Hazardous Waste Management

The Institution pre-treats the chemical liquid wastes before mixing with effluent treatment. The contaminant wastes are disposed by autoclaving method. The non-contaminant wastes are disposed by chemical disinfectants. The campus is totally tobacco and plastic free.

Solid and Liquid Waste Management

The Institution has installed two Sewage Treatment Plants with 3.5 lakhs litre capacity. This treated water is supplied through pipes to irrigate the garden. Solid wastes generated are disinfected and used as manure.

Environmental Research

- i) Air Pollution Detection and Mitigation Device (Collaborative project with IIT, Delhi and Anna University, Chennai)

This device has been developed by the Institution in collaboration with IIT, New Delhi and Anna University, Chennai with financial support from DST to detect and mitigate the air pollution after various testing procedures. Two types of 'Air Purifiers' have been installed; one is for Bus stop and another for Public, Chowki. The Delhi Administration has initiated steps to install the Air purifiers in all the Bus stops in New Delhi and the trials are going on.

- ii) Menstrual Hygiene Management Centre

The Centre is established in collaboration with UNICEF, KIDI, MSSR Foundation and Government of Tamil Nadu. Under this centre biodegradable sanitary napkin technology is developed.

- iii) Advanced Battery Research Centre

It is established to undertake research to design battery as an alternative to gas-emission fuel vehicles a step towards environmental protection. Equipments imported at a cost of Rs. 50 lakhs.

Environmental Audit

This is done to measure the impact of certain activities on the environment against set standards. The Institution has engaged authorized agency M/s. RM. Mayileru & Co.,

Coimbatore to conduct environmental audit and agency has submitted its report. The recommendations are carefully considered and implemented.

Considering the above measures , the Institution has been certified with ISO 14001-2015 for its Environment Management System.

Concluding Remarks:

The Institution's holistic approach to Environmental Management is a way of thinking and changing students and faculty members environment in many different areas and contexts and accordingly, the teaching-learning and research activities of the Institution are designed. Above all, the noble idea behind the holistic approach is not only providing healthy environment but also make them understand the value behind the environmental protection for sustainable development. To achieve this, the action must start from the individual level and spread through people and the organization to guarantee healthy environment to present and future generations.

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