Best Practice – II Sharda University Green Practices: Environmentally responsible and Resource-efficient

Objectives of the practice:

The University has adopted a conscious policy to introduce and evolve green practices to:

- minimize soil, air, water and noise pollution through eco-friendly practices of natural resource conservation and to reduce human carbon footprints;
- promote adoption and evolution of practices for environmental protection and direct social development for ensuring conditions for quality human life and health, apart from conservation of biological diversity and natural resources;
- integrate credit-based courses/programmes, training, etc. in environmental sciences so that the University, as an agent of social change, could impact local and global environment; and
- ensure environment friendly infrastructure development, resource management and green buildings.

The Context

The University is a microcosm inhabited by about 16000 persons engaged in many diverse activities over an area of about 63 acres. As an institution of higher learning and social change, one of the missions of the University is to ensure holistic development of students as future responsible citizens, and in this context it has been imperative for the University to adopt and evolve green practices, often going beyond the class rooms, in the broader community – across the diverse spectrum of disciplines. There is a conviction that benefits of green practices go beyond 'feeling good' about helping environment.

During the process of development and conduct of courses on environment it was experienced that 'learning by doing' would be the best approach to enable the students to reinforce the knowledge acquired. In this backdrop, the University has initiated the promotion of green practices in all its possible academic and non-academic operations.

The Practice

The University has a focused approach for sustainable green practices on the campus, geared towards implementing environmentally conscious activities, having spin-off short and long term financial benefits.

The University admissions, administration, finance, attendance, examinations are fully digitized, reducing the use of paper. The University 'Waste Management Policy 'provides for segregation of solid waste into biodegradable waste (wet waste); non-biodegradable waste (dry waste) and hazardous waste. The wet waste is converted as compost, the dry waste is segregated into the recyclable and non-recyclables for disposal. The food and wet waste is processed/ decomposed by an on-campus Compost Plant. Rainwater harvesting system of the University ensures reduction, recycle and reuse of water. There is a 400KLD capacity STP and 30KLD ETP for treating effluents; the recycled water is used for horticulture and

flushing system, and the sludge for manure. Biomedical waste is disposed-off in accordance with the statutory norms. Due process is also followed in handling hazardous chemicals and radioactive waste management. The e-waste management involves e-waste segregation and disposal through empaneled vendors following government guidelines.

For energy conservation, energy efficient appliances are used to reduce radiation, heat and expenditures. A solar power plant has been set up. Sensor-based switches have automated the on/off of lights, increasing the optimum use of energy. Reduce, recycle and reuse policy is implemented in case of water. For irrigation, sprinkler and drip irrigation system is used, wherever feasible.

University has procured automated water spray vehicle to control the dust in the campus. Battery operated vehicles have been introduced to move around the campus. The campus has been declared 'No-Noise Zone'.

Used paper is reused. Massive plantation has resulted in more than 4000 plants succeeding. Students through Students' club, NSS and Eco-Task Force actively engage in green practices and thereby safeguarding the environment. Landscaping and attractive greenery also serve the purpose of reduced pollution. Complete ban on smoking and burning any material on the campus has been imposed.

The University has embedded three-credit course on green practices in curricula and its relevance for conservation of natural resources and environment. Community Connect course also contributes in spreading awareness on issues such as pollution and the measures to contain the same by the community. The University has an undergraduate programme in environmental sciences and a Centre of Excellence on Solar Cells and Renewable Energy which is working on super capacitors for using energy resources more effectively.

Evidence of Success

The energy audit carried out by the University recently has brought out substantial savings on expenditure due to various energy saving practices adopted. The Solar PV energy, solar geyser system and replacement of tube lights (4200) with LEDs, etc. have led to annual electricity saving of more than 14.54 lakhs KWh/per year. The efforts of the University have been duly recognized by U.P. Government as 1st ranked institution in energy conservation. The large scale plantation has perceptibly brought down temperature on the campus. Similarly, rain water harvesting measures and conservation of water, structured waste management, etc., have contributed to the overall improvement in the maintenance and up keep of the University at a lower operational cost. Digitization of processes involved in admission, attendance, administration and examination, etc., has facilitated handling of work in a comparatively much faster and accurate manner, besides resulting in savings on account of purchase of papers, etc.

Increasing participation of students in environmental protection practices is a positive sign for a clean and green future. It is expected that the future generation will benefit from improved air and water quality, fewer landfills and more renewable energy resources, leaving a much smaller carbon footprint.

Problems Encountered and Resources Required

Green practices essentially are not practiced at individual levels but at the institutional level, whereas if the efforts in this regard are to succeed it is incumbent on all the stakeholders to contribute their mite, be it diligent use of dustbins placed all over the campus or in optimal use of power and water resources which are not inexhaustible. There is still a bias in favor of fossil fuel, as against solar and clean electricity operated vehicles. Even the energy generation through solar panels, for commercial use, is not without its share of challenges. Sometimes, implementation of the recent technologies to save conventional resources is not perceived as cost-effective and efficiently reliable. While technological challenges can be met with innovation and up-gradation of technologies, the decision makers need to be more pro-active for saving the Mother Earth. The success herein lies in increased participation by students and other stakeholders.

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