

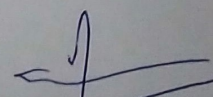


Guru Gobind Singh Indraprastha University
Sector 16-C, Dwarka, New Delhi- 110078 Website:

No.F.GGSIPU/DD/2020-21/ 662

Dated: 28.08.2020

1. As per the directions of the UGC, a Task Group was constituted by the Competent Authority to work on implementation of "UGC Quality Mandate: Suggestive Academic Activities" in the domain of sustainable development of campus.
2. The Task Group has submitted its recommendations in the form of a "Framework of UGC Quality Mandated Task Force on Eco-friendly And Sustainable Campus Development".
3. The draft report is enclosed herewith. The suggestions are invited on the same within a week's time on director.development@ipu.ac.in.


(Prof. A.K. Saini) 28/8/20
Director (Development)

Head, UITS to upload on the University Website

Framework of UGC Quality Mandated Task Force on Eco-friendly And Sustainable Campus Development

Institutional Statement

Guru Gobind Singh Indraprastha University (GGSIPU) is first University established in 1998 by Govt. of NCT of Delhi under the provisions of Guru Gobind Singh Indraprastha University Act, 1998 in the form of teaching and affiliating University with the explicit objective of facilitating and promoting "studies, research and extension work in emerging areas of higher education with focus on professional education. Situated in a sprawling 60 plus acre campus in the upcoming sub-city of Dwarka, (Known as West-campus of the University) with another 18 acre plus campus coming up in the East Delhi area of Surajmal Vihar near Karkardooma Court premises (Known as East Campus), the University is the only affiliating State University of the NCT of Delhi and have close to 140 colleges affiliated to it with over 93000 students studying in the portals of this university.

Statement of Objectives :

We believe that humanity is rapidly altering the Earth's ecological systems and consuming its natural resources in an unsustainable way. Resolving this crisis will require total system transformation by adopting the principles of sustainability. Respect for life and living within limits are two core principles to achieve this. We believe that higher education is in a unique position to lead this transformation. Therefore for the purpose of demonstrating what we preach as an educational institution, we understand that setting clear strategies and goals and a comprehensive approach needs to be taken which not only integrate the built environment but also goes beyond it and touches every aspect of learning, working, and living in campus. Creation of a campus compatible with the surrounding natural and cultural environments, integration of sustainable features into new building designs by adopting green building norms, enhancement of water and energy use efficiency, utilization of materials, services and technologies with less negative environmental impacts, efficient solid waste management are a few steps which are essential for campus sustainability.

In view of the objectives stated above this 'Framework for Eco-friendly and Sustainable Campus Development' aims to provide for a mechanism whereby the University Campus is transformed into a 'living laboratory' for sustainable development, wherein the faculty, students, support staff and the residents of the University (which includes the families of Faculty and support staff) shall be integrated into university sustainability movement. The Campus Sustainability Framework provided here is a process of continual improvement in environmental and social and economic performance leading towards sustainable development, to be achieved through incremental steps.



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Listing the Existing Greene Arrangements :

1. Energy Efficient Electro-Mechanical Fixtures and Green Features

While measures have been taken for use of renewable energy and simultaneously steps have been taken to reduce the energy foot print of the campus. In this line energy efficient screw chillers which have low power consumption per tonnage of Air Conditioning have been used in Central air conditioning plant. The electrical luminaries used have electronic power chokes and CFL luminaries are now being taken up for replacement with LED luminaries. Window in buildings have been fitted with green reflectsol glasses, external surface have been tiled with clay tiles and under deck insulation has been provided on the roof reducing the heating load in the buildings and also reducing air conditioning load.

Further all the Academic buildings have been designed with Central Courtyards open to sky providing natural ventilation and light and also improves air circulation. Fly Ash based bricks have been extensively used in construction of buildings. There is extensive use of sensor based fittings for urinals, wash basins etc.

2. Use of Renewable Energy (Solar)

Full impetus has been given to use of non-conventional source of energy at Dwarka Campus. For this purpose eight unit of Solar water heaters with capacity to provide 40000 ltr of warm water have been installed and operational in 4 hostels in campus.

Further, grid connected Solar power plant of capacity 140KW has been installed and operational on roof top of Academic, Library and Administrative buildings. The system has been designed in a manner such that in case of surplus power available from roof top solar plant than the local consumption, then the excess power is fed into the grid of local power company. About 3,00,000 units of power is being generated through renewable energy source in Dwarka Campus.

3. Liquid Waste Management

Sewage disposal of Buildings in Dwarka Campus for both Academic and Residential buildings is through network of Sewer lines by gravity flow terminating into 500 KLD Sewage Treatment Plant based on extended aeration system. Sewage Treatment plant has been designed on modular basis catering to need of phase-I buildings (500KLD) and extendable in future phases upto 1000KLD.

Sewage after treatment through extended aeration in equalization, aeration, settling and sludge tank is filtered through sand filter and activate carbon filter. The treated water is used for horticulture purpose through a network of garden hydrants spread over the campus. Part of the treated water is further treated in water softening plant to meet the requirements of hardness and supplied to cooling towers of Central Air Conditioning plant and Diesel Generating Set. No liquid waste of Dwarka Campus is disposed off in the municipal Sewer

line. About 100 KL of recycled water is supplied for horticulture purpose per day and 60 KL is supplied for air conditioning

4. Solid Waste Re-cycling System

Solid waste generated by various buildings and horticulture waste is recycled in compost plant installed at garbage shed near STP. The compost plant has capacity of recycling 50 kg of waste on daily basis and has recycling period of 7 days. The manure produced by the compost plant is used for horticulture purposes.

5. Water Conservation

University Campus is spread over an area of 60 acres out of which about 30 acres area is under soft landscape. Most of the soft areas have been confined to retain the storm water thereby preventing surface runoff and thus allow maximum ground recharge. Entire storm water drainage system for run off from Roof Top/Open Terraces of buildings and road/pathway has been designed for ground water recharging with a network of 26 recharge pits spread over the campus and three (3) recharge basins. Roof top rain water and surface run off from road and path first enters the storm water network which then flows into the recharge pits passing through the desilting chamber. Each recharge pit has three bores of 150mm dia with slotted PVC pipe encasing upto 3m below the underground aquifer allowing the ground recharging. The overflow from the recharge pits then enters back the storm water drain system and flows into the recharge basins. These basins have retention capacity of 100KL, 50KL, 40KL each for ground recharging. The recharge basin in Academic area is been designed with stepped seating surrounded by stepped seating and greenery.

The cleaning of filter media in the recharge pits is taken up every year for efficient ground recharge alongwith cleaning of sump for removal of silt deposition.

6. Existing Institutional Practices Relating to Sustainability Goals

University Canteen is already using bio-degradable plates, spoons and other items. Use of single-use plastic is banned in all the meetings, university events as well as daily servings in University Canteen. University Schools of Studies organise events relating to environmental issues, such as World Environment Day, Biodiversity Day, Workshop on Air Pollution just before Deepawali to sensitise the University community about the impact of polluted air on human life as well as environment. Lot of official communication by University Schools of studies is being done through emails to save paper. Similarly single side printed papers are also reused by University staff for their official purposes regularly.

Srijan Clubs are doing many activities related to nature, environment and sustainability issues. Film and Photography Club is conducting regular campus walks and photo sessions on natural life of University campus. Nature Club is doing nature awareness activities. Wings of Dwarka, a book on birds of campus was published under the aegis of Nature Club in 2013 with 80 birds. Likewise butterflies, dragonflies & damselflies, mammals, herpetofauna, wild

flowers, etc are being regularly listed by University Students and researchers. Plantation drive is another activity which is organised every year to make campus clean and green.

Landscaping and Biodiversity

Developing strategies to alleviate the adverse impacts of severe weather conditions in the summer and winter by way of designs and layouts of campus infrastructure, including building, vegetation and other landscape features

Ensuring that all campus development is compatible with the surrounding natural environment, that protects and enhances the natural biodiversity of the local area and aiming to conserve locally endangered flora and fauna

Enhancing habitat quality of flora and fauna by increasing structural complexity and promoting use of native species for landscaping in the campus and valuing old trees and their habitat role for birds and other forms of organism

Conducting an ecological survey of the campus every five years using relevant and appropriate ecological indicators

Cultivating a Green Culture

Creating an institutional culture which support sustainable thinking reflected in the curricular and co-curricular activities

Establishing a teaching, learning and research environment by incorporating sustainable practices in all kinds of developmental and academic activities

Contributing to sustainability knowledge development and innovations by conducting sustainability related research studies

Transferring sustainability knowledge to the larger community by way of outreach programmes

Evaluating procurement policy of goods and services based on cost, complexity and actual/potential sustainability.

Implementing the Sustainability Idea :Campus Sustainability Office

There shall be a Campus Sustainability Office (CSO) to take care of the institutional objectives of sustainability concerns. The constitution of the office shall be as follows:

1. A Professor Incharge (nominated by the Vice Chancellor)
2. One faculty member from Each School (Nominated by Dean and approved by the Vice Chancellor)
3. One Faculty member from the local residents (Co-opted by members of COS and approved by the Vice Chancellor)

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4. One member from the support staff residing in the university campus (Co-opted by the members of COS and approved by the Vice Chancellor
5. The Superintendent Engineer In Charge of UWD (Ex-officio)
6. One Student Nominee from each Scholl (Nominated by The Dean of Respective school)

The functions of the Campus sustainability office shall be as follows :

1. Preparing and updating the campus sustainable policy from time to time and getting it duly approved by the Board of Management, wherever necessary.
2. Nurturing environmental awareness amongst the faculty, students and support staff and the family members of faculty and support staff residing in the campus.
3. Ensuring that all campus activities undertaken comply with all the relevant legal requirements on environmental protection and good practices recommended by government and local authorities.
4. Initiate education, traing and awareness programmes and create a network of communication by using social media, short films, outdoor activities, etc to disseminate campus sustainability information and advice to staff, students and neighbouring societies, where appropriate.
5. Motivate University Schools of Studies to integrate the sustainability concept in the exising curricula, wherever possible.
6. Analysing and exploring the possibility of strengthening sustainability programmes.
7. Regularly reviewing all operations and maintenance programmes in the campus to maintain sustainability performance standards stated in the sustainability policy of the campus.
8. Conducting a campus wide audit of sustainability practices to understand where it stands with regards to sustainability objectives.
9. Organising field games and excursion events to bring students and the other campus community close to nature.
10. Creating student sustainability forums/clubs/discussion groups on thematic areas such as energy, biodiversity, water, waste disposal, integrated sustainability etc.
11. Organising annual events or lecture series, inviting eminent environmentalists in the University.
12. Preparing documents for periodic submission to an appropriate campus sustainability ranking system created/identified by the UGC or any other governmental agency.

First Plans of CSO

1. Preparing Campus Biodiversity Register
2. Constructing Green Canopy Talks (every month, on popular issue related to UN's Sustainable Goal)
3. Publishing Biannual Newsletter from this Office on the University's Activities on Sustainability
4. Every School can organize atleast 1 event in a year with a theme of Sustainable Development Goal, local/regional/national/international Biodiversity issues (priority

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should be from local to international) or environment based like air pollution, law and legal aspects of environment, etc.

5. Know your Campus Biodiversity : Walks in the campus as a guided tour by experts
6. Functional Vermicomposting unit: to show case too
7. Segregation of solid waste at source and solid wastemanagement
8. Botanical, medicinal, horticulture and Butterfly garden concept in appropriate place of campus.
9. Roof top and vertical garden on all suitable locations.
10. Display of sustainable environmental activities on prominent locations in the campus.
11. Environmental slogans display through small penal holding on the trees in the campus.

Dr. Anshu

Dr. Amit Ahuja

Dr. Anjali Shokeen

Dr. Sumit Dookia

Prof. Varun Joshi

Prof. Udayan Ghosh

Prof. Amar Pal Singh

Prof. Rita Singh