SATAT

FRAMEWORK FOR ECO-FRIENDLY AND SUSTAINABLE CAMPUS DEVELOPMENT IN HIGHER EDUCATIONAL INSTITUTIONS

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Government of India

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University Grants Commission
Bahadur Shah Zafar Marg
New Delhi - 110 002

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FOREWORD

Current scientific understanding indicates 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. In fact, in the recent age, sustainability has become a critical requirement for Higher Education Institutions (HEIs) campuses. HEIs need to foster a culture of sustain ability and promote green lifestyles in the campus community through curricular, co-curricular and extra-curricular activities.

For meaningful and successful campus sustainability programs, clear strategies and goals must be set 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. However, the first step in the direction needs to be sustainability initiatives tied to overall institutional strategy.

We understand that each (HEIs) has its unique environment and resources. Therefore, HEIs need to develop their guidelines for campus sustainable development by adopting the proposed framework in a locally appropriate way. The campus sustainability framework provided here aims to guide HEIs to enable a sustainability transition with an aim to transform them into a "living laboratory" for sustainable development. It is visualized that this initiative will formally integrate faculty, students and support staff into university sustainability movement. Implementing this framework 'SATAT' is a process of continual improvement in environmental, social and economic performance leading towards sustainable development. Therefore, this is not a one time activity but a goal to be achieved through incremental steps. I hope that our HEIs will adopt the 'SATAT' and contribute to India's journey towards fulfilling the promise made to achieve the Sustainable Development Goals.

I would like to express my sincere appreciation to all the members of the Expert Committee for their valuable contribution in developing a document on Campus Sustainability Framework in HEIs and for completing the task well in time. I also acknowledge all the necessary support and for the relevant inputs provided by Prof. Bhushan Patwardhan, Vice-Chairman, Prof. Rajnish Jain, Secretary and Dr. (Mrs.) Renu Batra, Additional Secretary, UGC.

Prof. D. P .Singh
Chairman
University Grants Commission

New Delhi
November, 2019

CONTENT

01

PREAMBLE

The 1972 Conference on the Human Environment held in Stockholm put forward the concept of green school to draw attention to the education of environment protection. The United Nation's World Commission on Environment and Development Report of 1987 gave the concept of sustainable development which meets "the needs of the present without compromising the ability of future generations to meet their own needs". It was opposed to the economic development based on only growth considerations which led to environmental threats, ranging from pollution, acid rain, deforestation and desertification, the destruction of the ozone layer, to early signs of climate change. In 1990, the Talloires Declaration at an international conference in France becomes the first official statement made by university administrators of a commitment to environmental sustainability in higher education. The declaration was signed by over 300 university administrators in over 40 countries and contained a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach at Higher Education Institutions (HEIs). The Talloires Declaration highlights that "Stabilization of human population, adoption of environmentally sound industrial and agricultural technologies, reforestation, and ecological restoration are crucial elements in creating an equitable and sustainable future for all humankind in harmony with nature. Universities have a major role in the education, research, policy formation, and information exchange necessary to make these goals possible." It also emphasizes that "Universities educate most of the people who develop and manage society's institutions. For this reason, universities bear profound responsibilities to increase awareness, knowledge, technologies, and tools to create an environmentally sustainable future".

In 1992, the UN conference on Environment and Development, held in Rio, Brazil, redefined sustainable development as "improving the quality of human life while living within the carrying capacity of supporting

". Recognizing emerging environmental concerns, in 1994 UNESCO initiated the "Education for Environment, Population and Sustainable Development" project in tending to accelerate the environment improvement and social sustainable development, by the environment education, population education and sustainability education. Further, the United Nations designated 2005– 2014 as the "Decade of Education for Sustainable Development" with its overall goal "to integrate the principles, values, and practices of sustainable development into all aspects of education and learning...[and to] encourage changes in economic behaviour that will create a more sustainable future in terms of environmental integrity, economic vitality, and a just society for present and future generations."

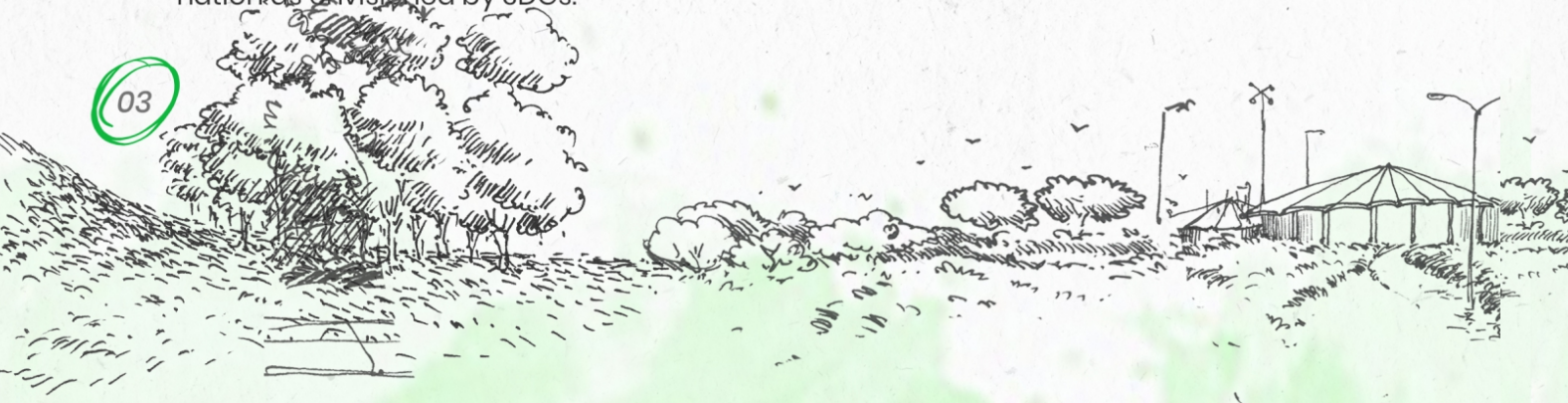
More recently, in 2008, G8 University Summit adopted the Sapporo Sustainability Declaration which recognized that the current global environmental crisis is far-reaching, complex, and characterized by a high degree of uncertainty. It also emphasized that universities have an important role in solving these sustainability challenges by educating future generations, doing sustainability research and policy analysis, and disseminating the same to society and policymakers. The Declaration highlights the function of the university campuses as an experimental model for sustainability. Universities may themselves significantly impact to the environment due to the high usage of energy, water, extensive transportation, massive waste, high consumption of materials, and extensive development of infrastructure including buildings and facilities. Therefore, the development of "sustainable" or "green" HEI (Higher Education Institutions) campuses can serve as both an experiment in progress and an ideal tool for educating future generations as well as a model for society. They can also function as a ground for creativity and innovation for the transformation needed to achieve the SDGs and Agenda 2030.

In 2015, India committed itself to the UN 2030 Agenda for Sustainable Development. Therefore, it is a prime duty of Indian universities to align their operation and educational priorities around relevant Sustainable Development Goals (SDGs) such as good health and wellbeing (SDG 3),

clean water and sanitation (SDG 6), affordable and clean energy (SDG 7), sustainable cities and communities (SDG 11), responsible consumption and production (SDG 12), climate action (SDG 13), life below water (SDG 14), and life on Earth (SDG 15). Indian HEIs are a formidable force to transform Indian society just by acting as a living example to emulate value, ethics and living practices for a sustainable future. These can transform themselves as a sustainable campus by minimizing their negative environmental, economic, and societal impact and using their resources by judiciously. This transformation will provide a clean, healthy and enjoyable campus environment that promotes reduces the ecological footprint.

Planning for sustainable HEI campuses of India is a challenging task, as it involves a huge system consisting of a large number of universities and their affiliated colleges varying hugely in size, location, climate, cultural trait, academic profile and history. Currently 37 million students are enrolled in 863 universities and 39527 colleges which vary widely in campus area, from three to four acres to several thousand acres, in altitude from sea level to about 4000 m, in surrounding population from a few thousand to 20 million or more and academic disciplines from one to more than a hundred. A document of common norms for sustainability for such a heterogeneous system is likely to have several limitations and may serve the purpose meaningfully only when it evolves over time based on learning from campus experiences. There are more than a hundred universities in the Indian Himalayas where heating during winters and land instability may be the main issues sustainability, unlike of the most other Indian universities which require energy for cooling and transport. While some of the Himalayan universities have developed amidst natural old-growth forests, in the plains universities have almost nothing of the original vegetation.

Keeping the need of the hour in mind and acknowledging the level of diversity of Indian HEI campuses, the University Grants Commission of India (UGC) has endeavoured to integrate sustainability principles into campus operations, developments and programme curricula to promote sustainability by proposing a generic sustainable campus frame work to sets out the principles for achieving green and sustainable campus environment.UGC believes that this initiative will emerge as a critical and necessary step forward in building a more sustainable nation as envisioned by SDGs.



02 Objectives

This framework intends to help Indian HEIs to achieve campus sustainability. It's not meant to be exhaustive but to provide overall directions which shall be applicable to all institutions in general. The framework encourages universities to adopt reflective policies and practices towards SDGs, to ultimately facilitate more rewarding economic, environmental and societal benefits. The specific goals are to stimulate Indian HEIs to:

- Implement sustainable initiatives within the campus environment by incorporating sustainable practices in development projects.
- Establish a teaching, learning, and research environment conducive to a safe and sustainable future by including sustainability-related topics, where appropriate, in academic programmes and research.
- Create an institutional culture which supports sustainable thinking by encouraging the HEI community to embrace green lifestyles, sustainability principles and practices.
- Foster a culture of sustainability and promoting in the HEI community through curricular, co-curricular and extra-curricular activities.
- Contribute to sustainability knowledge development and innovations by conducting sustainability-related research studies.
- Transfer knowledge of sustainability to the community beyond university campuses to raise environmental awareness.
- Ensure participative implementation by engaging students and faculty in the design, retrofitting, monitoring and reporting.

The overall objective is to create HEI campus as laboratory for implementation of SDGs.

The Framework

This framework acts as lighthouse for the campus activities which can be to performed mainstream sustainability through campus planning, designing and development, resource optimization, landscapes & biodiversity, campus building design, energy and water management, transportation, procurement, waste management, green catering, and event organization (Fig. 1). The framework also suggests implementation strategies for gaining the goal of sustainable campus development.

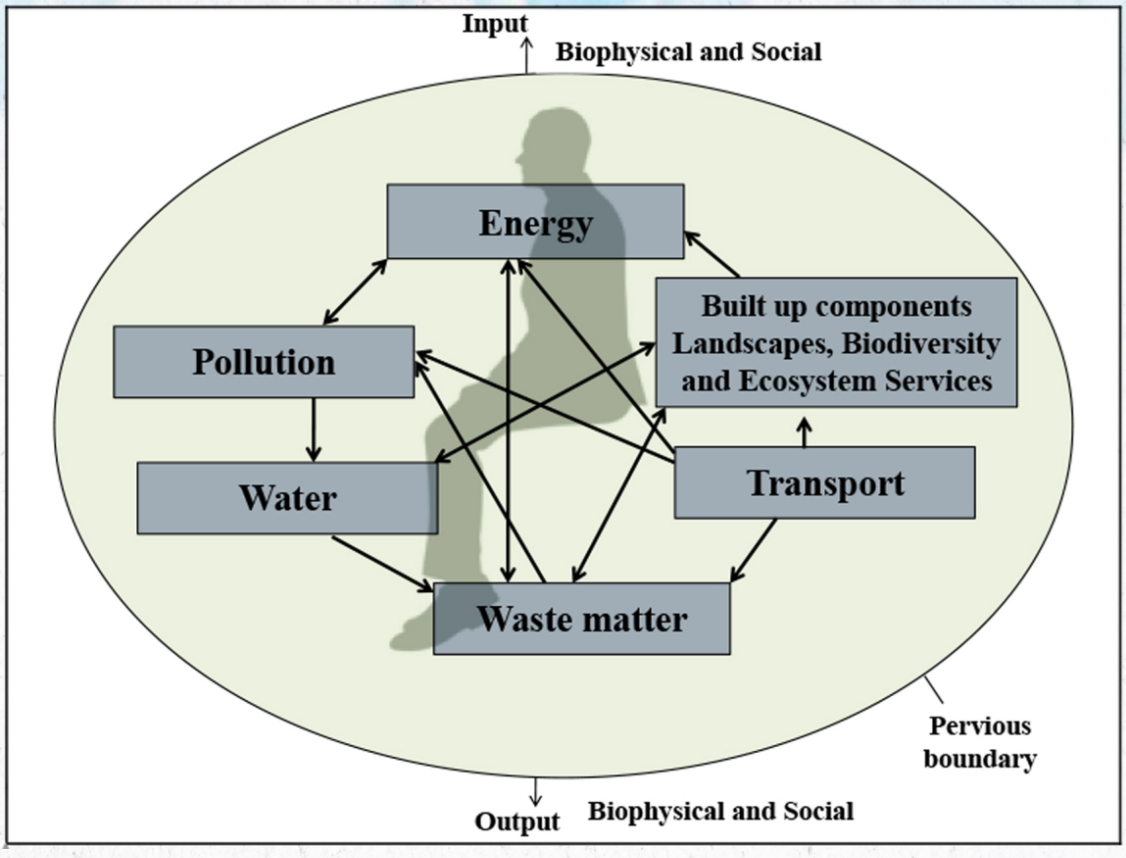


Fig. 1.

Generally, university campuses are predominantly open anthropogenic systems consisting of several interconnected subsystems or components as described in the text. But there is a lot of scope for improving them by enhancing sustainability and ecological elements. The campuses are open, hence exposed to outside pollution and other factors. If empowered, university campuses can play an important role in improving sustainability of cities through imparting knowledge.

03

CAMPUS PLANNING, DESIGN AND DEVELOPMENT

- Develop and refine the Campus Master Plan(s) to enhance the environmental quality of the campus and to adopt sustainable green and sustainable methods in its future development so that the campus is developed in an environmentally-responsible manner with a barrier-free access. Prepare the master plan based on a properly surveyed map showing open, built-up and green areas indicating existing and proposed plantation plans for future development.
- Plan campus growth on the most suitable sites possible and avoid or minimize unnecessary environmental impacts of the developmental activity on the surrounding natural landscape. Maintain a healthy open, vegetated, water bodies and build area ratios depending upon the availability of space and prevailing climatic conditions.
- During campus development, preserve vegetated buffers, to the extent possible and protect habitats of species of special concern such as threatened and endangered species.
- Develop a walk able campus by the majority of academic buildings accessible within easy walking distance.
- Comply with all relevant legislation and regulations while exploring ways to extend beyond stipulated standards.
- Estimate and declare the carrying capacity of the campus.

04

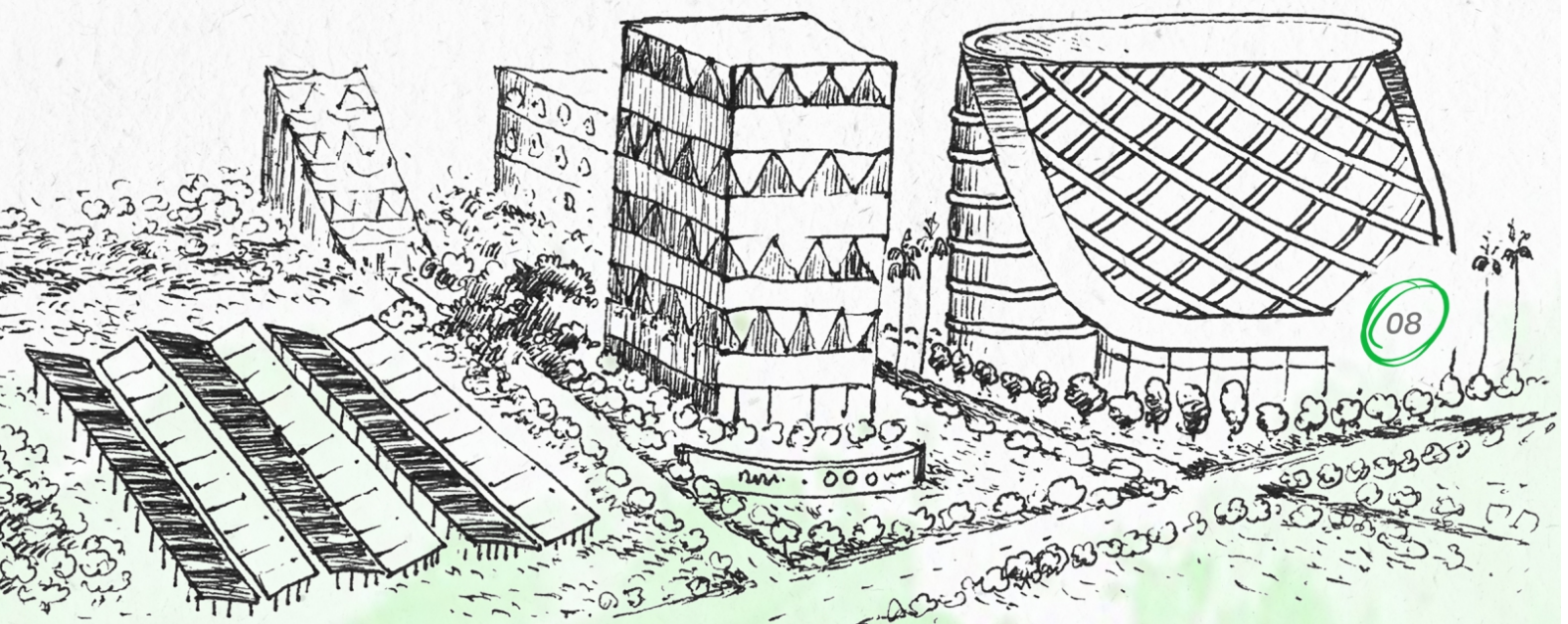
RESOURCE OPTIMIZATION

- Minimize consumption and depletion of material resources; especially those from non-renewable resources. Maximize the use of recyclable and reusable materials.

- Reduce the consumption of resources by using materials that have long service duration and, therefore, require less replacement.

- Use materials that can be readily recycled, are non-toxic and have minimal negative environmental and human health impacts.

- Reduce the quantities of construction and demolition waste generated from the campus projects.



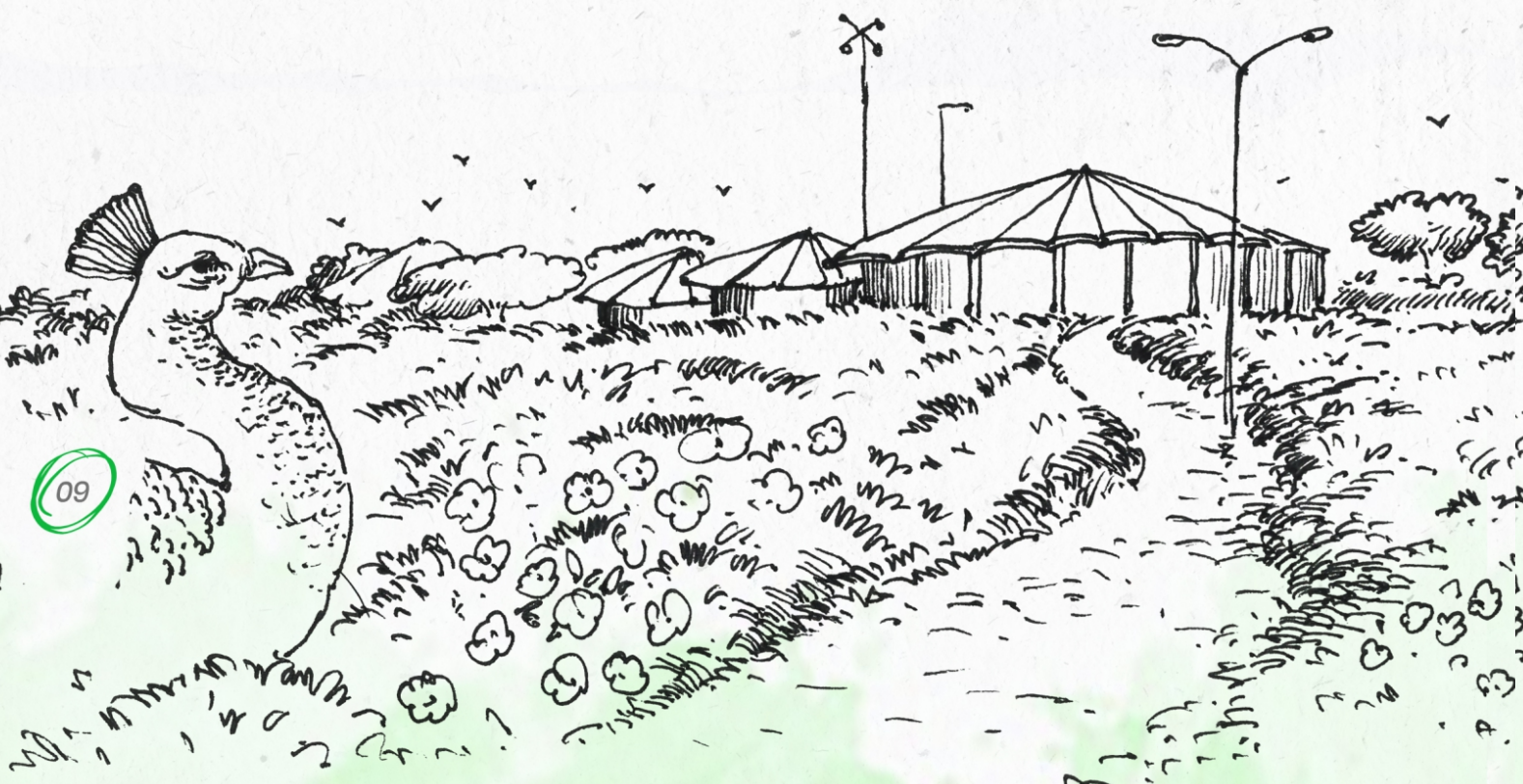
05

LANDSCAPES & BIODIVERSITY

- Develop strategies to alleviate the adverse impacts of severe weather conditions in the summer and winter by planning the strategic design and layout of campus infrastructure including buildings, vegetation and other landscape elements.

- Ensure that all campus development is compatible with the surrounding natural environment. It should protect and enhance the natural biodiversity of local areas and aim to conserve locally endangered flora and fauna.

- Enhance habitat quality of flora and fauna by increasing structural complexity and promoting use of native species for landscaping in the campus. Value old trees and their habitat role for birds and other forms of organisms. Maintain a botanical garden and if possible, a piece of native wilderness.



- Wherever possible create a wetland such as pond and swamp.

- Conduct an ecological surveyor the campus every 5 years by using relevant ecological indicators such as biodiversity and ecosystem services that it provides.

06

CAMPUS BUILDING DESIGN

- Integrate sustainable features into new building design by adopting appropriate green building rating system as the minimum starting point and aim to achieve the highest rating possible so that resources are optimised, and they provide healthy, productive environments.

- Incorporate at least one locally appropriate innovative sustainability feature, based on the accepted traditional knowledge, beyond the requirements of the selected green building rating system.

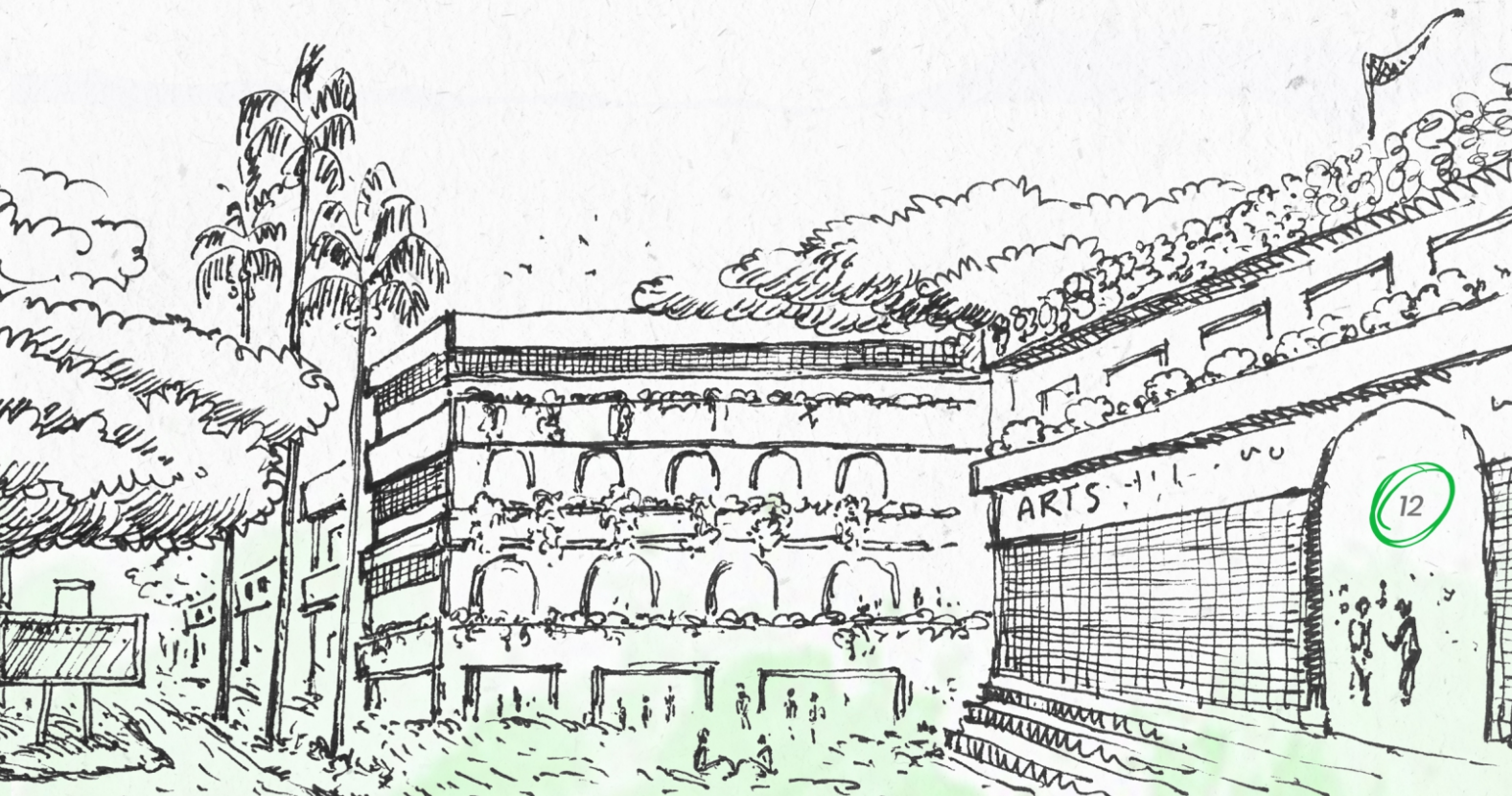
- Provide an indoor environment that maintains indoor air quality, enhances user comfort, well-being, and productivity. Use ample natural light and natural air circulation into interior spaces. Offer views of the outside features from the interior spaces wherever possible to link occupants with the campus ecosystem.

- Enable building spaces easily modifiable by maximizing standardization or repetition of building elements to serve a variety of purposes for a diverse group of users over the lifetime of the building.

- Retrofit the green building system in the existing buildings, wherever it is possible.

- Carry out environmental impact assessment when the new features/buildings are planned and conduct a post-occupancy evaluation of all buildings to ensure liveable and learnable environments for staff and students.

- Develop and implement training and awareness programs for the stakeholders about the benefits of green buildings, and how to develop and manage them.



07

ENERGY SUSTAINABILITY

- Reduce greenhouse gas emissions by minimizing energy use and switching to energy-efficient devices, clean and renewable energy sources such as solar, wind, biogas and renewable biomass energy.

- Set energy-saving target with a timeline and implement energy efficiency actions in buildings and infrastructure systems to reduce the energy use intensity.

- Utilize smart energy modelling for new buildings to optimize energy performance by building orientation to take advantage of natural light (day lighting), natural ventilation (e.g. operable windows), use of shading devices, occupancy sensors, etc.

- Specify standards for heating, ventilation, and air-conditioning (HVAC) systems for each building type. Replace old air conditioning and heating systems with more energy-efficient units.

- Install smart building management and digital control systems and smart metering for major campus outdoor and building energy uses to control and achieve the targeted consumption standards.

- Ensure energy efficiency in its operations and activities through regular monitoring and auditing exercises. Perform annual assessment of energy use and losses by conducting energy audits of buildings, water pumping systems and outdoor lighting systems.

- Verify and monitor the performance of building sand support system to ensure they have been designed, installed, and are operating to meet the maximum efficiencies intended.

- Use energy conservation practices by using efficient gadgets, equipment and systems of high star rating. Replace inefficient interior or exterior lighting, computers and electronic appliances/instruments.

- Install Solar PV Power plants to ensure the self-sufficiency to meet the electrical demand of buildings and other campus requirements.

- Enhance awareness of the need for energy conservation and educate building users about energy-efficiency features and systems, controls.

Promote and implement a zero-emission carbon neutral campus policy.

08

WATER MANAGEMENT

- Perform detailed water audit and calculate campus water balance to identify priority areas.

- Manage storm water to prevent it from leaving the campus, wherever sustainable.

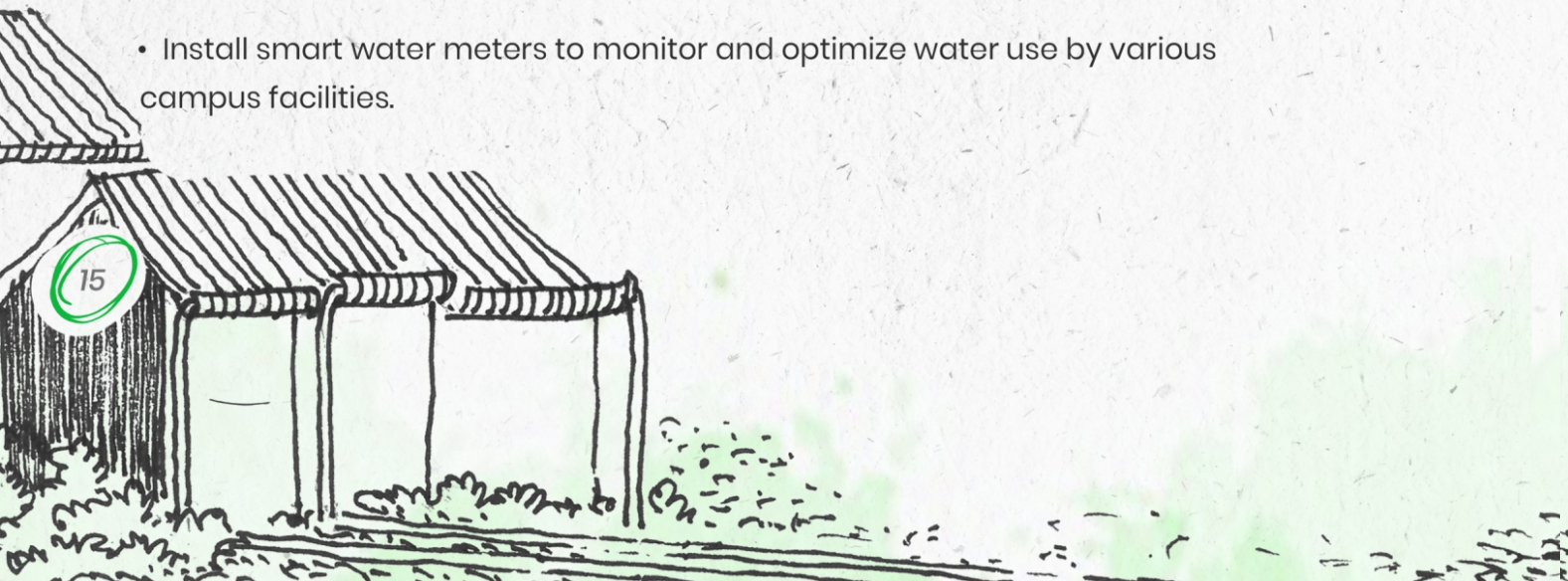
- Provide for infiltration of rain/storm water runoff by promoting permeable paving, incorporating bio-retention areas, rain gardens, vegetated basins, natural/constructed wetlands such as ponds, check-dams where possible.

- Capture and reuse of rainwater for non-potable uses (irrigation, laboratories, toilet flushing, cooling towers, construction works, swimming pools, etc.). Install rainwater harvesting structures for the recharge of aquifers and/or wetlands.

- Reduce water consumption by using low flow faucets and toilets, waterless urinals, sensors and electronic controls on sinks and lavatories, wherever practical.

- Setup an active maintenance and retrofitting programme to ensure installations are up to standard and reduce leakages.

- Install smart water meters to monitor and optimize water use by various campus facilities.



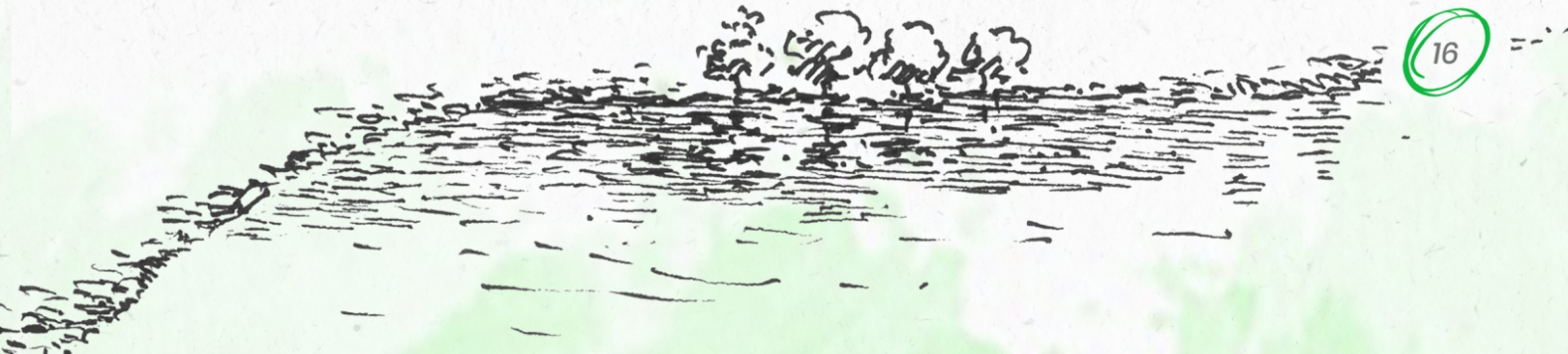
- Initiate steps to raise environmental awareness of the need for water conservation among members of the HEI community and implement behavioural change programs.

- Install a grey water recycling system for treatment of kitchen, laundry, sink and shower water.

- Install a black water recycling system to treat sewage for non-potable uses. Re-use non-potable water resources to the extent possible for irrigation and other non-potable water requirements (e.g. toilets, vehicle washing).

- Minimize the need for landscape irrigation by utilizing native and hardy plants. When required, draw on non-potable sources for irrigation systems, such as adjacent ponds or collected rainwater and use high-efficiency irrigation systems such as drip and sprinkler.

Promote water-self-sufficient campus, wherever possible.



09

TRANSPORTATION

- Initiate sustainable transportation options on campus to reduce dependency on fossil fuel-based vehicles and promoting on-campus use of fuel-efficient, zero-emission vehicles or hybrid vehicles using CNG, bio-diesel mix or electricity. Replace older vehicles with newer, fuel-efficient ones.

- Promote green commuting behaviours within campus such as the co-sharing of the vehicles, use of public transport, etc.

- Maintain a bicycle and pedestrian-friendly campus by establishing direct and safe bicycle paths and by clustering academic, research, administrative, residential and recreational uses within easy walking distance.

- Reduce traffic and parking demand by establishing campus bus service where the HEI has large and/or multiple campuses.

- Pay attention to parking requirements and provide eco-friendly open parking spaces. Promote smart parking system and fuel consumption calculation apps to incentivize non-fossil fuel.

- Use parking management as a tool to encourage walking and bicycling.

- Always seeking to reduce the need for travel and consider using video or teleconferencing wherever possible.

10

PROCUREMENT

- Recognize the fact that procurement decisions have a substantial impact on the environment, society, and the economy and incorporate sustainable purchasing principles into all design, planning, operations and maintenance activities on campus.

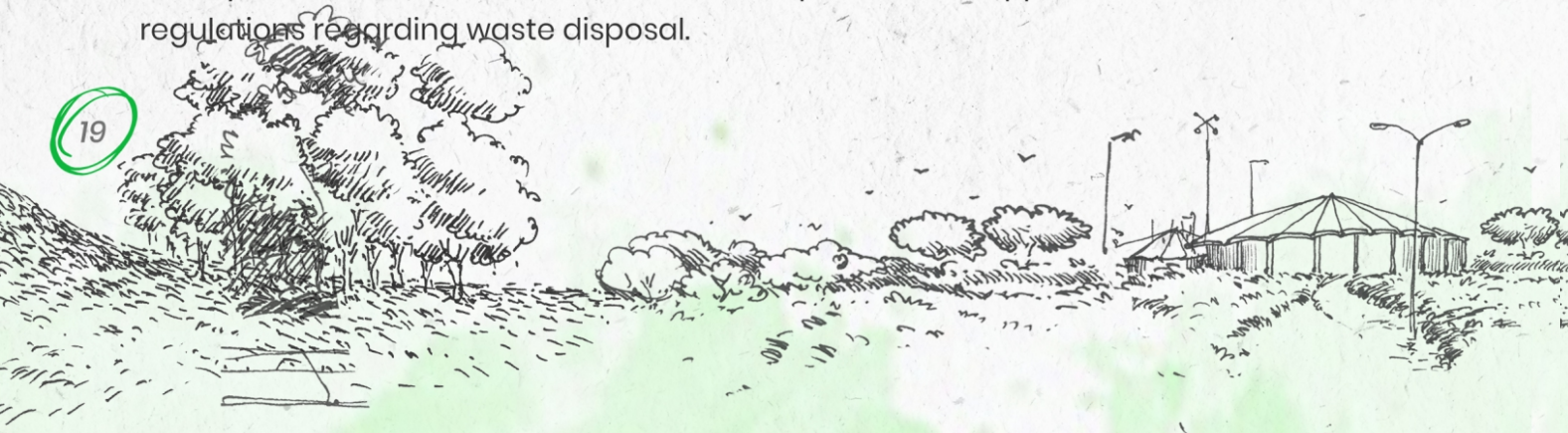
- Evaluate procurement policy of goods and services based on cost, complexity and actual/potential sustainability impacts to determine priorities. Include sustainability criteria in tender specifications itself. Practice the comparing tool for the 'Total Cost of Ownership' by taking into account the full life-cycle of all the products or services procured.

- Include sustainability objectives and targets in the service contract document and regularly monitor its compliance.

- Reduce unnecessary purchasing first and avoid single-use disposable items.

- Prioritize purchase of surplus or multiple-use products and give preference to products that are recyclable and/or with high recycled content, biodegradable, have reduced packaging and greater durability than other products on offer.

- Contract with suppliers of products (e.g. electronics, furniture, lab consumables) that have established (preferably non-manufacturer specific) end-of-life reuse, recycling, and/or take back programs for product liability at no extra cost to the HEI, and in compliance with applicable regulations regarding waste disposal.



- Purchase environmentally friendly products to fulfil day-to-day office supply needs. Select products and services supported with recognized green certifications and/or detailed information on proven environmental benefits and recyclability properties.

- Promote ‘service purchase concept’ over ‘product purchase concept’.

- Use vendors that eliminate packaging or use the minimum amount necessary for product protection. If packaging necessary, it should be reusable, recyclable or compostable, if possible. Encourage suppliers to remove waste, debris, packaging or used products in the same vehicle with which they are delivering purchased equipment or goods.

- Support locally manufactured products and consolidate orders wherever possible. Promote bulk purchases to reduce cost, set competition among the vendors at the tendering stage to challenge the better resource efficiency in the supply chain and at the source of manufacture.

11

WASTE MANAGEMENT

- Perform a waste characterisation study to identify waste stream components and prioritise response accordingly.

- Minimize waste generated on campus and facilitate the better management of waste through reuse and recycling.

- Provide provision of adequate storage spaces for waste and recyclables. Secure storage spaces for hazardous wastes to minimise the risk of spillage/leakage.

- Create a facility for on-site composting of food and garden waste for reuse on campus grounds. Initiate campus-based programs to process collected recyclables.

- Provide centralised bins to promote recycling behaviour and the phasing out of under desk bins from offices.

- Ensure that all waste handling practices comply with relevant legislation and codes of practice and shall have no harmful effect on the environment and human health.

- Provide adequate and appropriate facilities on campus to facilitate separation at source and local waste recycling by establishing collection centres throughout the campus both inside and outside of buildings, including event gathering places, parking areas, and community places.

- Create a campus-wide e-waste recycling system for computers and other electronic equipment. Repair or recycle all electronic hardware, devices, and consumables in a securely and sustainably by partnering with electronics recycling establishments.

- Reduce waste generation and disposal to landfill through green procurement practices, administrative approaches and awareness enhancement.

- Initiate steps to reduce the use of paper on campus. Promote paper reduction through use of the electronic communication and e-document handling. Digitise records and employ an e-filing system to gradually replace printed record.

- Use computer printing effectively by adopting a 'think before you print' attitude with a goal to finally achieving a paperless office.

- Minimize printing of publications and documents and disseminate information and news electronically and online. If printing is unavoidable, reduce the number of pages by printing both sides and number of quantities to bare minimum, and use recycled paper.

- Initiate campus-wide waste management awareness programs for behaviour change.

12

GREEN CATERING

- Provide sustainable, locally-produced and seasonal foods whenever possible and reduce consumption of high carbon footprint food materials.

- Provide/use reusable food-ware to serve. If the use of reusable items is not possible, ask for one-off plates/containers that are made from agricultural or other wastes. Avoid plastic and polystyrene foam boxes.

- Set up smart card systems for take away food wrapped in recyclable plastics to ensure that plastic is also returned

- Avoid single-serving packaged food items to minimise waste.

- Avoid serving bottled water or packed drinks but drinking water in a glass or provide drinking water dispenser.

- Reduce food waste through composting and recycling.

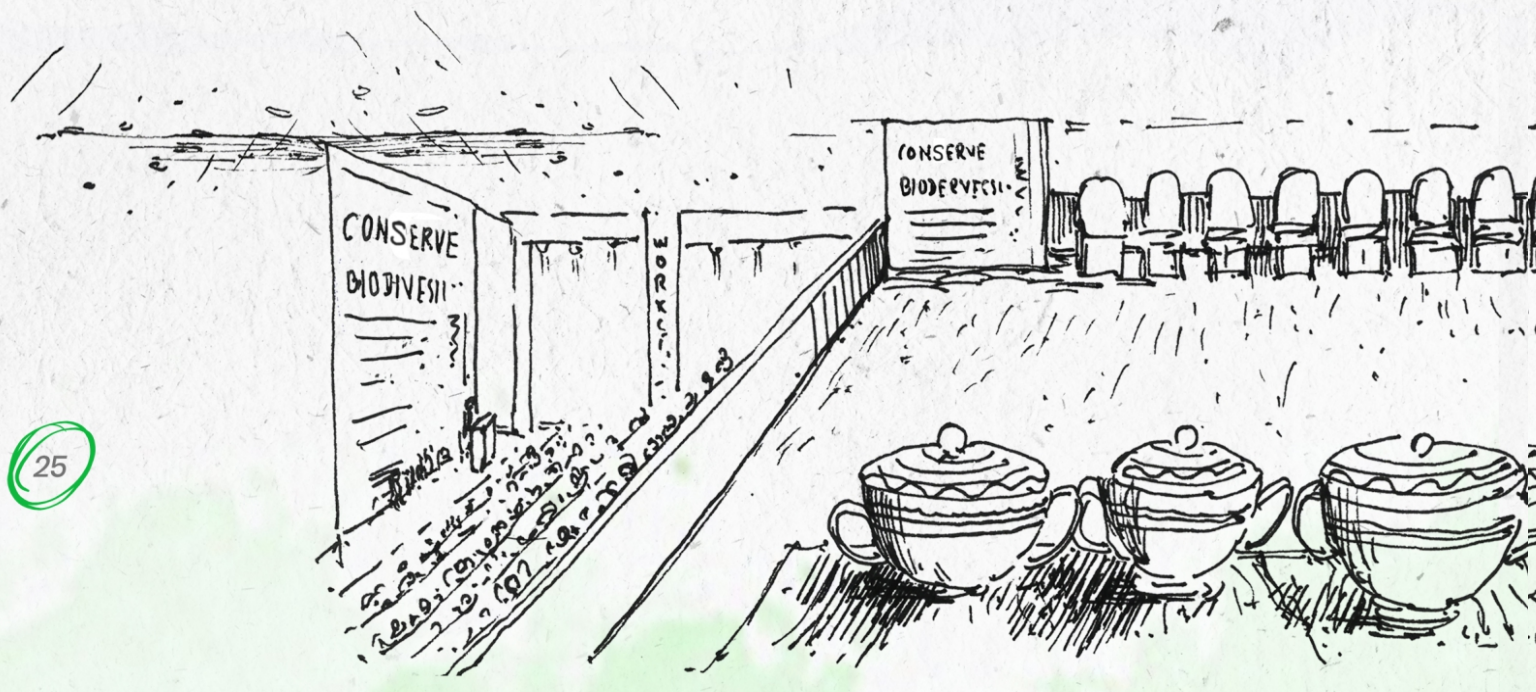
13

EVENT ORGANIZATION

• Avoid printing of banners unless there is a genuine need. If the banner is needed, choose environmentally friendly banner material and try not to show the year in the design such that they can be reused in the future.

• Minimize printed promotional material such as posters, leaflets and brochures, etc. Use electronic means for guest's invitation and registration instead of printed copies. Use digital display systems for activity information.

• Encourage 'Bring Your Own' culture by reminding participants in advance, e.g. bag, devices, pen, paper, etc. Avoid distribution of plastic and non-woven bags. Reuse name badges and collect them at the end for future events.

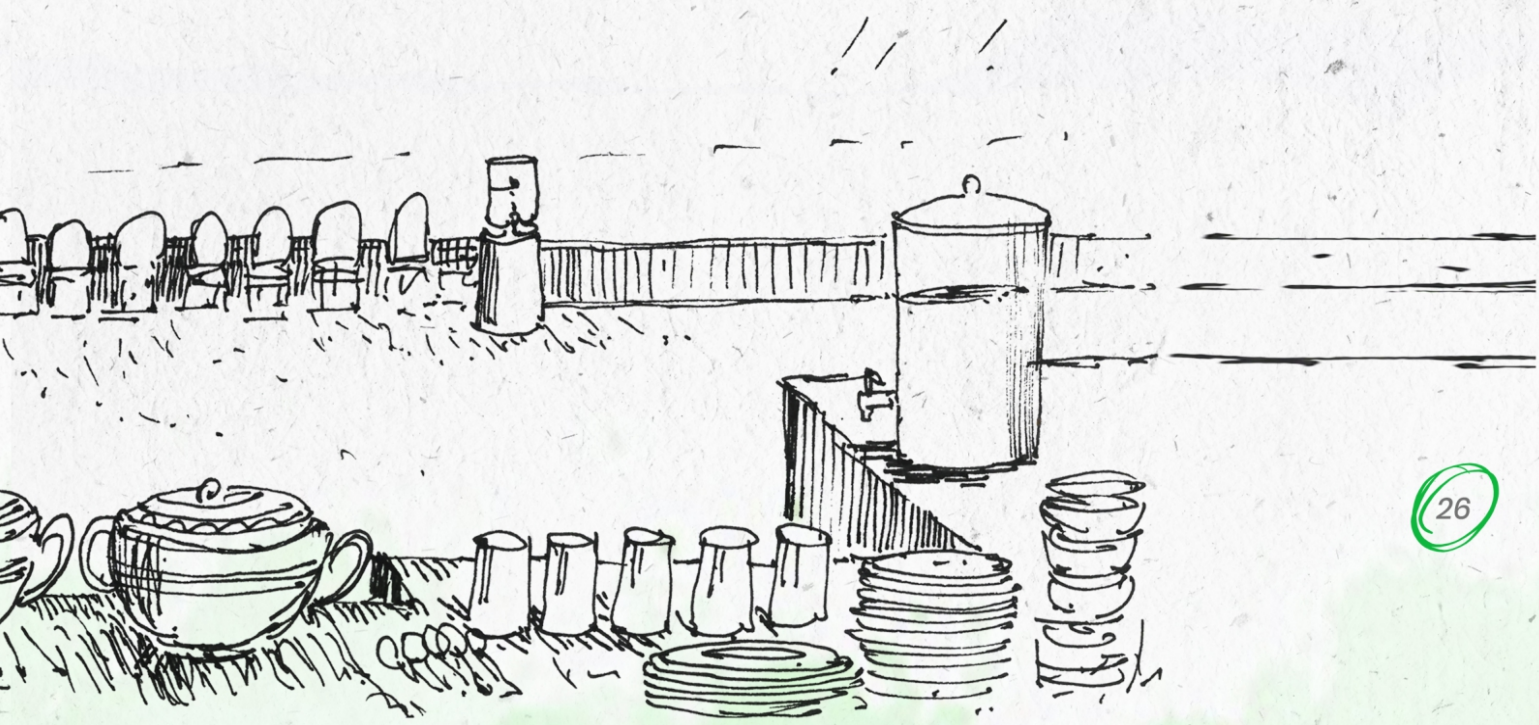


- Choose environmentally friendly decorations and reduce the use of disposable items.

- Avoid gifts and souvenirs. If required, explore green products (e.g. recycled products, local handicraft items, live plants) and choose products with minimal packaging.

- Facilitate recycling at all events. Provide well-labelled boxes at your event venue to facilitate recycling and reuse.

- Set practice of evaluating the events once completed in terms of resource efficiency and incentivize the event organisation based on efficiencies achieved.



14

RECOMMENDED IMPLEMENTATION APPROACH

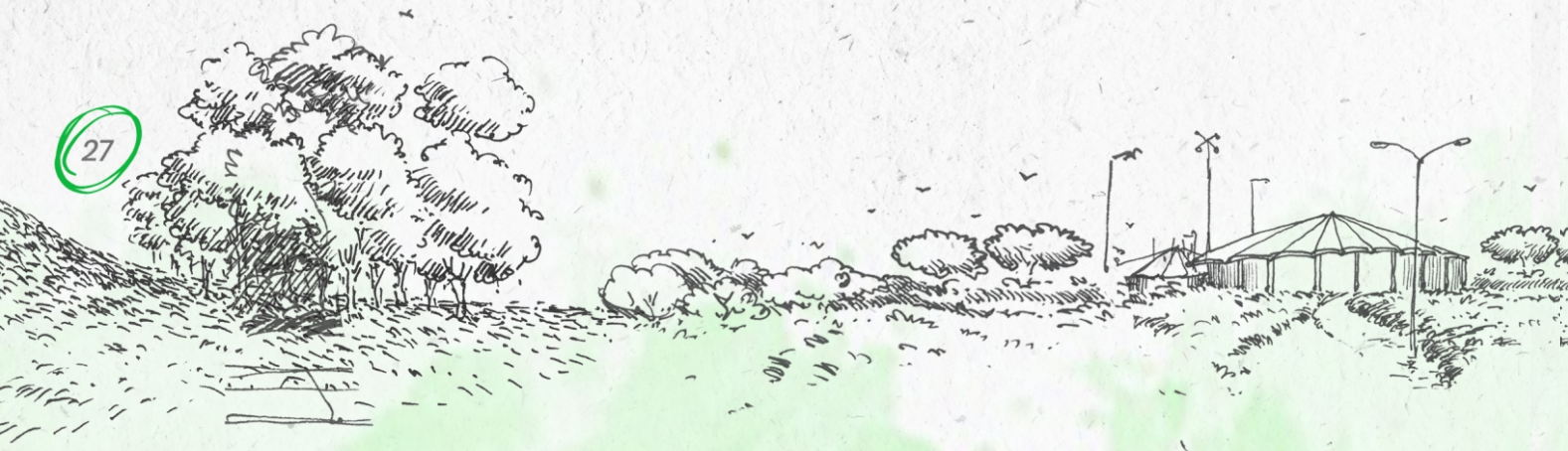
- Incorporate campus environmental sustainability to the existing mission and vision statement of the institution. Align the institution's core mission with sustainable development by integrating sustainability concepts into programme curricula, research activities and by increasing awareness of sustainability among stakeholders through promotional activities, campaigns and cultural development.

- Prepare a 'Sustainable Campus Policy' to include the above guiding principles for achieving sustainable excellence and nurturing environmental awareness in future generations.

- Ensure that all campus activities undertaken comply with all relevant legal requirements on environmental protection and good practices recommended by government and local authorities.

- Initiate education, training and awareness programs 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 society, where appropriate.

- Motivate departments/schools to integrate the sustainability concept in the existing curricula, where possible.



• Establish a Campus Sustainability Office (CSO) to facilitate the tasks of creating and establishing comprehensive campus-wide policies, objectives, and targets. The CSO will be managed by Campus Sustainability Committee having a Coordinator/Director/ Chairperson not below the rank of Professor and representatives of all stakeholders of the institution including students, faculty members, administrators, support staff, and representatives of the state forest department, the state pollution control board and the neighbouring society. This Committee will be responsible for:

o Preparing sustainability policy and a five-year strategic management plan for operations and getting it duly approved by the apex executive body of the institution.

o Analysing and exploring the possibility of strengthening government programmes related to sustainability.

o Establishing standards, guidelines and procedures for sustainable campus management including master plan, procurement, energy and water management, waste disposal, and any other step identified in the plan. Giving value to traditional knowledge with regards to sustainability while making such standards, guidelines and procedures.

o Regularly reviewing all operations and maintenance programmes of the campus to maintain sustainability performance standards stated in the Sustainable Campus/Environmental Management Policy and Plan and ensuring that sustainability commitments are effectively implemented.

o Conducting a campus-wide audit of sustainability practices to understand where it stands with regard to sustainability objectives, identifying areas and developing strategies for improving the institution's sustainability performance.

o Giving assistance and advice to the Director/Head of Unit/ Office on the coordination and implementation of campus sustainability policies, where appropriate.

o Organizing field games and excursion events to bring students and other campus community close to nature.

o Create student sustainability forums/clubs/discussion groups on thematic areas such as energy, biodiversity, water, waste disposal, integrated sustainability, etc.

o Liaising with the HEI apex executive body on matters related to campus sustainability, where appropriate.

o Preparing document for periodic submission to an appropriate Campus Sustainability Ranking System created/identified by the University Grants Commission of India.

o Dealing with any other matter which is related to any of the aspects of the campus sustainability elements as outlined in the Campus Sustainability Policy of the Institution.

Way Forward

Implementation of this programme will depend on the early incorporation of the above proposed framework in the HEIs' policy and budgeting process. The success of the programme will be ensured by immediately developing a suitable action plan and implementation strategy for sustainable campus development. HEI campuses may also network themselves for sharing of knowledge and skills for the successful implementation of this framework. As Mahatma Gandhi said, "Be the change that you wish to see in the world", HEIs have societal responsibility to demonstrate a proactive role with regards to environmental concerns such as air pollution, climate change, sustainable urban environment including transportation, waste and water management. By becoming an example themselves, HEIs will spread the message of a safe environment and sustainable future for our next generation.

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- Prof. Rommel Mehta, Professor & Head (Retd.), School of Planning and Architecture, New Delhi.
- Dr. Arun Kansal, Dean, TERI School of Advanced Studies, Plot No. 10, Institutional Area, Vasant Kunj, New Delhi – 110 003.
- Prof. S.P. Singh, Head, School of Energy & Environmental Science, Devi Ahilya Vishwavidyalya, Indore – 452 001.
- Sh. Rajendra Shende, Chairman, TERRE Policy Centre, 306, Multicon Square, Next to Manohar Mangal Karyalaya, Erandwane, Pune.
- Dr. Renu Batra, Additional Secretary, University Grants Commission, New Delhi (Co-ordinator).

NOTE

सत्यमेव जयते

UNIVERSITY GRANTS COMMISSION

QUALITY MANDATE

ज्ञान-विज्ञान विमुक्तये

Objectives

- Improve the graduate outcomes
- Promote student linkages with society and industry
- Train students in professional & soft skills
- Teacher Vacancy not to exceed 10 % of sanctioned strength
- All HEIs to obtain minimum NAAC score of 2.5 by 2022

Initiatives to be undertaken by HEIs

1. Student Centric Initiations including Induction Programme for students - *Deeksharambh*.
2. Learning Outcome based Curriculum Framework (LOCF)- revision of curriculum at regular intervals.
3. Use of ICT based learning tools for effective teaching-learning process including MOOCs and online degrees.
4. Imparting Life Skills *(Jeevan Kaushal)* to students.
5. Social and Industry connect for every institution: Every institution shall adopt at least 5 villages for exchange of knowledge and for the overall social/ economic betterment of the village communities. University-Industry linkages to be promoted to improve employability.
6. Evaluation Reforms-test the concept, and application
7. Student Career Progression and Alumni Network.
8. Faculty Induction Programme (FIP), Annual Refresher Programme in Teaching (ARPIT) and Leadership Training for Educational Administrators (LEAP).
9. Scheme for Trans-disciplinary Research for India's Developing Economy (STRIDE) and Consortium for Academic & Research Ethics (CARE).
10. Mentoring of non-accredited institutions (PARAMARSH).

All Higher Education Institutions shall strive by 2022 to:

improve the graduate outcomes for the students to ensure that they get access to employment/self-employment or engage themselves in pursuit of higher education.

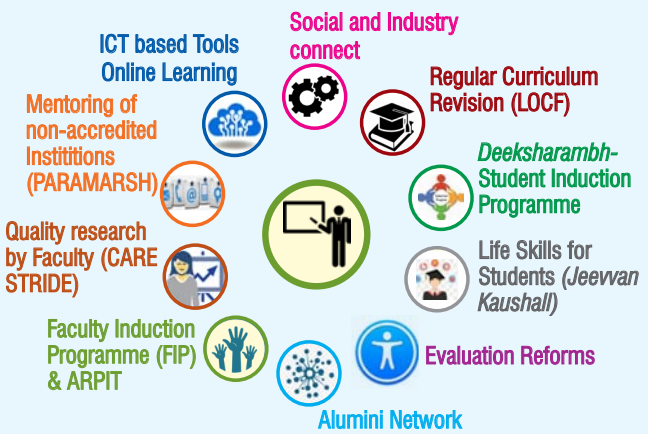
promote linkage of students with the society and industry to ensure that at least 2/3rd of the students engage in socially productive activities and get industry exposure during their period of study in the institutions.

train the students in essential professional and life skills such as team work, communication skills, leadership skills, time management skills etc; inculcate human value sand professional ethics, and the spirit of innovation/ entrepreneurship and critical thinking among the students and promote avenues for display of these talents.

ensure that vacancies of teaching posts at any point of time do not exceed 10% of the sanctioned strength; and 100% of the teachers are oriented about the latest and emerging trends including ICT in their respective domains of knowledge, and the pedagogies that disseminate their knowledge to the students.

every institution shall get NAAC accreditation with a minimum score of 2.5 by 2022.

Initiatives to be taken by HEIs



SATAT

FRAMEWORK FOR ECO-FRIENDLY AND SUSTAINABLE CAMPUS DEVELOPMENT IN HIGHER EDUCATIONAL INSTITUTIONS

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University Grants Commission
quality higher education for all

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