

Institutional Policy on Environmental Consciousness and Sustainability



Prepared By



**DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE
(Autonomous)**

**College with Potential for Excellence, Linguistic Minority Institution
Affiliated to University of Madras
Arumbakkam, Chennai – 600 106**

January 2021

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Vaishnav College
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Vision

Dwaraka Doss Goverdhan Doss College is obligated to environmental sustainability in all aspects of its mission and will instigate itself to perform all its functions in the most sustainable ways consistently. Dwaraka Doss Goverdhan Doss College's focus for leadership includes full adherence to preserve energy and water resources which are getting knackered in an increased pace due to indiscreet practices in the past and present and calls for immediate action to avoid predicament.

Mission

Dwaraka Doss Goverdhan Doss College, as part of the both local and overseas community, endeavors to be a responsible caretaker of the environment. Dwaraka Doss Goverdhan Doss College seeks to minimize its environmental impact both present and in the future; this is consistent with the financial and social feasibility of the institution and the relevance of its academic programs. Through its academic and research activities, Dwaraka Doss Goverdhan Doss College will create the environment in which sustainable practices and policies are apparent and obvious to everyone.

Environmental Policy Document

Dwaraka Doss Goverdhan Doss College takes glory in the scenic beauty of its campus. The plants and trees inside the campus have been a place of reflection and inspiration, and offer the understanding into the intricacy and balance of nature.

Purpose

This policy will have an essential role as Dwaraka Doss Goverdhan Doss College continues to develop an environmentally sustainable and economically feasible campus that reflects the institute's founding values of engagement and responsibility. This statement constitutes a commitment by Dwaraka Doss Goverdhan Doss College to meet the needs of faculty, student and administrative staff to preserve the environment for coming generations to come. Dwaraka Doss Goverdhan Doss College is loyal to preparing its students to become committed environmental citizens on and off campus, and in their lifetime. The institute will prepare the community about the best practices to improve the environmental imprint of the campus and its activities.


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Scope

This policy is applicable to all members of Dwaraka Doss Goverdhan Doss College community, including Teaching, Non-Teaching staff and students,

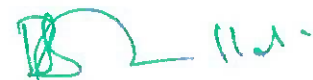
Guidelines

- The institute will examine the environmental impact of its development, communications, and procurement, curriculum, research and campus activities.
- This institution will augment its commitment to environmental education by introducing environmental content to curriculum material.
- The institute will seek to reduce its impact on waste junkyards through the furtherance of refuse, reuse and recycle
- The institute will encourage the use of environmentally conscious transportation to all members of Dwaraka Doss Goverdhan Doss College community
- The institute will collaborate with other educational institutions and government agencies to improve best practices in its activities

Environmental Audit Framework


The following audit framework issued for conducting Green Audit. It also shows the findings and observations for every criterion.

Waste Management		
Objective	Control	Audit Observation
Maximize the proportion of waste that is recycled and minimize the quantity of non-recyclable	Reduce the amount of waste from staff and students in campus	DDGDV campus already have initiated paper waste reduction campaigns through notice boards and email signatures with captions mentioned "Think before you print", "Easier saving paper than planting trees" A sign near printer mentioning "Save paper, Use both side" is placed. Though single use water bottles are used in canteen, wastes are segregated separately.



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Segregation of waste at source	DDGDV campus have initiated waste segregation through use of different metal bins with indications for paper, glass, plastic, metal, e-waste & organic waste in necessary locations.
Waste recycling through composting	Garden wastes were collected & Vermi-composting was practiced in small scale & the output was used as fertilizer for landscape within campus.
Organic Waste recycling Biogas system	Food wastes & vegetable scraps are collected daily from hostel mess & canteen to feed the biogas system & the generated gas is used for cooking purpose. Approximately 10-20 kg waste are feed & which in turn provide cooking gas for 3-4 hours.
Waste recycling through vendors	Segregated recyclables waste and garden waste are collected separately by service staff and disposed in every 3 days by local vendors.
W-waste disposal through vendors	Contract has been made with local vendor specifically for e-waste collection and disposal.
Biomedical waste disposal	First aid provisions are handled by SVDC and they take care of the biomedical waste with proper procedures as per their practice.
Hazardous waste disposal	The hazardous waste like used oil from DDGG set, cotton waste, filters are segregated through authorized vendor as per Hazardous and Other Waste (Management and Transboundary movement) Amendment rules 2016



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Energy Management		
Objective	Controls	Observations
Reduce consumption of energy, especially of energy derived from various fuels	Look into the possibility of on-site micro generation of electricity through renewable energy	DDGDV has installed 110KW solar panel in roof of various blocks and approximately 10-12% of energy consumption is catered by solar power. And solar water heated is installed in hostel block. Solar panels are cleaned on regular intervals.
	Give Preference to the most energy efficient and environmentally sound appliances available.	Campus has installed LED batten lights and procurement teams are much aware to purchase only BEE star rated products as per their Green policy.
	Encourage staff, students and conference guests to save energy through visible reminders and information to increase awareness.	Signage near switch boards to turn off when not in use is placed and staff particularly instructs the students to turn off while leaving the class rooms and break. Also cleaning staff are educated to turn off lights and fans when not in use.
	Monitor and understand the different sources of energy consumption and target for reduction or to identify unwanted energy spike in specific area.	Every DBs are placed in EB room and Chief Electrical Manager personally checks the consumption pattern of block and distribution boxes and leaves no room for excess usage of electricity.
	Conduct drills at regular intervals	Such drills are not planned in the current year.
	Ensure that all electronic and electrical equipment are switched off when not in use, or put in power saving mode during breaks.	Usually lab assistants and service staff are educated to switch off the computers and other lab equipment when not in use.


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	Personalized controls.	Class rooms, labs and staff rooms are adequately daylight and the few zones which need light can be only switched on and avoids unnecessary use of artificial lights. Automated controls like occupancy sensors are in future plans.
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Environmental Management

Objective	Controls	Observations
Ensure that Environmental awareness is created	Conduct Environmental awareness workshops are part of program	Botany Department is in charge for environmental activities which conduct campaigns during college functions
	Conduct events to spread awareness through students	Environmental committee is in place to maintain and develop organic farming and Bee keeping is practiced within the garden of campus. These activities are updated in the college website to create awareness about the biodiversity.
	Reduce the rate at which the college campus contributes to depletion and degradation of natural resources.	DDGDV campus does not directly or indirectly contribute in depletion or degradation of natural resources.

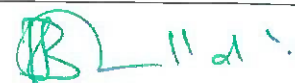
Water Management

Objective	Controls	Observations
Minimize Water consumption	Recycling and reuse of waste water.	One 225KLD and one 150 KLD STP are installed and waste water was treated and reused for flushing and Landscaping during pre-COVID conditions.
	Install appliances which reduce water consumption.	Water closets are dual flush which uses water based on the needs. Taps installed have flow rate of 7-9 LPM, which are on the higher side, however we suggest to close the down supply valve to 25% to cut down the gushing of water in taps.


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	Encourage a decrease in water usage among staff, students and guests.	Signage in washrooms and canteens are placed to close the taps when not in use and not to open the tap to full open condition.
	Repair sources of dripping taps and showers	Dedicated plumber is always available and Chief Maintenance Manager is in constant rounds to check any issues. However no overflow cut-off system is not provided in OHTs.
Green Standards		
Objective	Controls	Observations
Ensure that the buildings confirms to green standards.	Review architecture of existing buildings reduce usage of energy, water usage and reduce carbon emissions	Buildings are designed such a way to provide shade to each windows through sun shades which blocks the harmful solar radiations and keeps the inside space cool with large airy windows and nearby trees. Computer labs and AC spaces windows are tinted for blocking solar heat and any time or angle. Louvre kind of fins is placed in MCA block, which blocks direct sunlight. And as per their green policy, new constructions will follow green standards. With Solar panels and waste water recycling, campus has reduced the usage of energy and water and subsequently the carbon emissions.
Environmental Policy Management		
Objective	Controls	Observations
Ensure that the Environmental Policy is enacted, enforced and reviewed	Establish a campus Environmental Committee that will hold responsibility for the enactment, enforcement and review of the policy.	DDGDV campus has an Environmental Committee following the holistic green policy.



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Ensure that committee will have representatives of related departments including maintenance, finance, science departments.	Representative from all related departments are included.
Ensure that on Environment Committee there will be a Green officer from external agency who is engaged in profession of providing guidance on environmental impact.	DDGDV has enrolled an external green volunteer to provide guidance.
Ensure that the committee will review the policy on an annual basis and will monitor progress and set possible targets.	Committee has ensured to review the policy annually.
Ensure that the policy is enforced regardless of whether its requirements exceed the mandate of law.	Green policy is enforced
Require that every staff and student member recognizes their responsibility to ensure the commitments are properly put into practice.	Members of committee are working their best.
Ensure that audit is conducted annually and action is taken on basis of audit report, recommendations and findings.	Green audit is conducted.



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Energy Saving Guidelines for Institutional Responsibilities

General

To save electricity, computers can be set to energy save mode. For example, Personal Computers will be programmed for the "energy saver" mode using the power management feature. If network constraints do not make this possible, the monitors will be set to 'sleep' after 10 minutes of inactivity.

An institutional preventive maintenance and monitoring plan for facilities and systems, including HVAC will be implemented to complement behavior-based changes.

Air Conditioning Equipment

Occupied temperature settings will not be set below 20° C. In Dwaraka Doss Goverdhan Doss College every week, the compressors and AC vents are cleaned for better operation and energy efficiency. Air conditioner start times may be adjusted (depending on weather) to ensure a comfortable environment when space is reoccupied. Outside air dampers will be closed during unoccupied times.

Lift Usage

The institution encourages people to follow healthy habit of taking stairs and save energy as well. Some of the lifts are configured to stop specific floors to save time and energy.

Lighting

All external lighting will be switched off during day time. Preplanned programme schedules will be regularly checked for seasonal adjustments (e.g. daylight savings beginning and end). Every effort will be made to eliminate unnecessary night time external lighting, ensuring that safety and security are the highest priority. When appropriate, lighting will be designed for automatically shut-off when spaces are not in use.

Water

All leakages related to plumbing and/or intrusion will be repaired immediately.



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Green Shield and Landscaping

Dwaraka Doss Goverdhan Doss Vaishnav College is located in the heart of Chennai Metropolitan city of the state Tamilnadu, India. The Campus is significantly diverse with a variety of tree species. Most of these tree species are planted in different periods of time by the authorities of the College and have become an integral part of the campus. The trees of the college have increased the quality of life, not only to the college fraternity but also to the residents around of the college campus in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, by regulating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Different species of trees in the campus gives a spectacular green ambience with vibrant colors which gives the students a favorable study environment.

The survey/study of campus flora has revealed that, it encompasses a rich diversity of Plants of about 1715 in number belonging to different families. All the plants which were identified during green auditing in the campus were tabulated below with scientific names with Author citation.


In the category of trees, 1364 number of trees is found in the campus. Most of the Plants in the campus are having medicinal, religious and environmental importance, making the campus a rich heritage. In the category of shrubs 283 different types are found with different beauty of campus. Our campus has some unique rare plants like *Mitragynaparvifolia*, *Terminalia arjuna*, *Couroupitaguianensis*, *Borassusflabellifer* (Palmyra – Our state tree). These rare trees should be protected. Besides *Roystonearegia*, *Dypsisleptocheilos*, *Ptychospermamacarthurii* add greenery ambience to our campus.

Binomial Name	Common Name	Family
<i>Lagerstroemia speciosa</i> (L.) Pers.	Pride Of India	Lythraceae
<i>Ficusbenjamina</i> L.	Weeping fig	Moraceae
<i>Azadirachtaindica</i> A.Juss.	Neem tree	Meliaceae
<i>Polyalthialongifolia</i> (Sonn.) Thwaites	Indian mast tree	Annonaceae
<i>Phyllanthusemblica</i> L.	Indian gooseberry	Euphorbiaceae
<i>Peltophorumpterocarpum</i> (DC.) K.Heyne	Copperpod	Caesalpiniaceae
<i>Moringaoleifera</i> Lam	Drumstick tree	Moringaceae
<i>Citrus limon</i> (L.) Osbeck	Lemon	Rutaceae
<i>Cocos nucifera</i> L.	Coconut palm	Arecaceae



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<i>Delonix regia</i> (Hook.) Raf.	Flame Tree	Caesalpiniaceae
<i>Rhapis excelsa</i> (Thunb.) Henry	Lady palm	Arecaceae
<i>Dypsis leptocheilos</i> (Hodel) Beentje & J. Dransf.	Redneck Palm	Arecaceae
<i>Ficus religiosa</i> L.	Papal tree	Moraceae
<i>Mangifera indica</i> L.	Mango tree	Anacardiaceae
<i>Samanea saman</i> (Jaco) Merr.	Rain tree	Mimosaceae
<i>Cassia fistula</i> L.	The Indian Laburnum	Fabaceae
<i>Guazuma ulmifolia</i> Lam.	West Indian elm	Sterculiaceae
<i>Terminalia catappa</i> L.	Indian Almond	Combretaceae
<i>Borassus flabellifer</i> L.	Palmyra Palm tree	Arecaceae
<i>Pongamia pinnata</i> (L.) Pierre	Indian beech tree / Pongamaram	Fabaceae
<i>Bambusa vulgaris</i> Schrad.	Golden Bamboo	Poaceae
<i>Senna siamea</i> (Lam.) H.S. Irwin & Barneby	Ironwood	Fabaceae
<i>Bauhinia purpurea</i> L.	Purple Orchid tree	Fabaceae
<i>Plumeria alba</i> L.	White champa	Apocynaceae
<i>Calophyllum inophyllum</i> L.	Beauty Leaf	Clusiaceae
<i>Nyctanthes arbor-tristis</i> L.	Coral Jasmine	Oleaceae
<i>Punica granatum</i> L.	Pomegranate	Lythraceae
<i>Ficus racemosa</i> L.	Cluster Fig	Moraceae
<i>Tecoma stans</i> (L.) Juss. ex Kunth	Yellow trumpet	Bignoniaceae
<i>Murraya paniculata</i> (L.) Jack	Orange Jessamine	Rutaceae
<i>Butea monosperma</i> (Lam.) Taub.	Flame of the Forest	Fabaceae
<i>Tabebuia rosea</i> (Bertol.) Bertero ex A. DC.	Rosy Trumpet Tree	Bignoniaceae
<i>Cassia roxburghii</i> DC.	Red Cassia	Caesalpiniaceae
<i>Tamarindus indica</i> L.	Tamarind	Fabaceae
<i>Couroupita guianensis</i> Aubl.	Cannon Ball Tree	Lecythidaceae
<i>Madhuca longifolia</i> (J. Koenig ex L.) J.F. Macbr.	Indian Butter Tree	Sapotaceae
<i>Ceiba pentandra</i> (L.) Gaertn.	White silk cotton Tree	Malvaceae

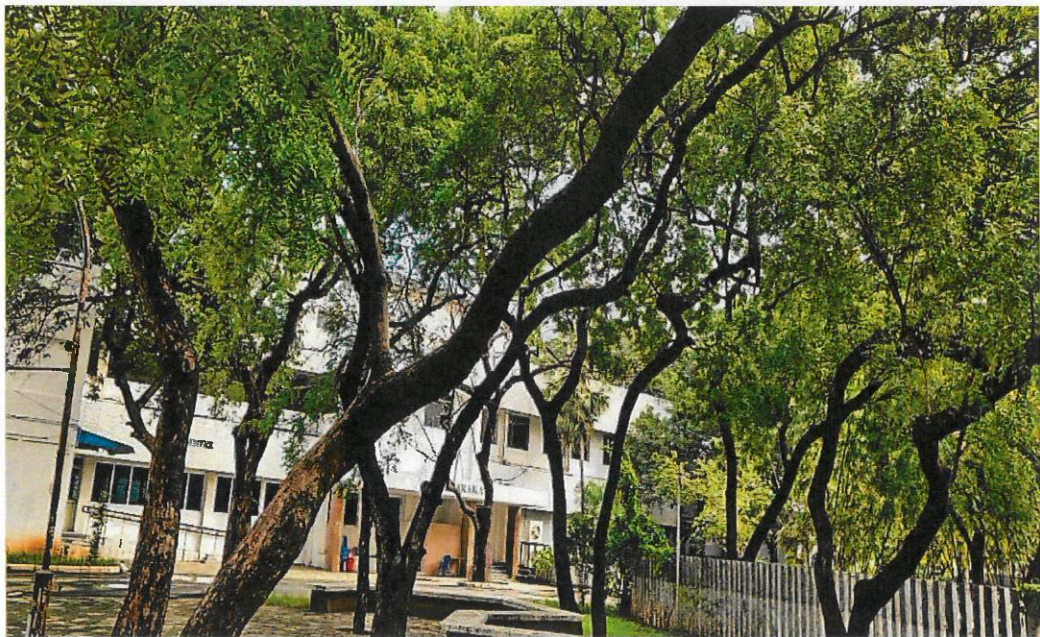
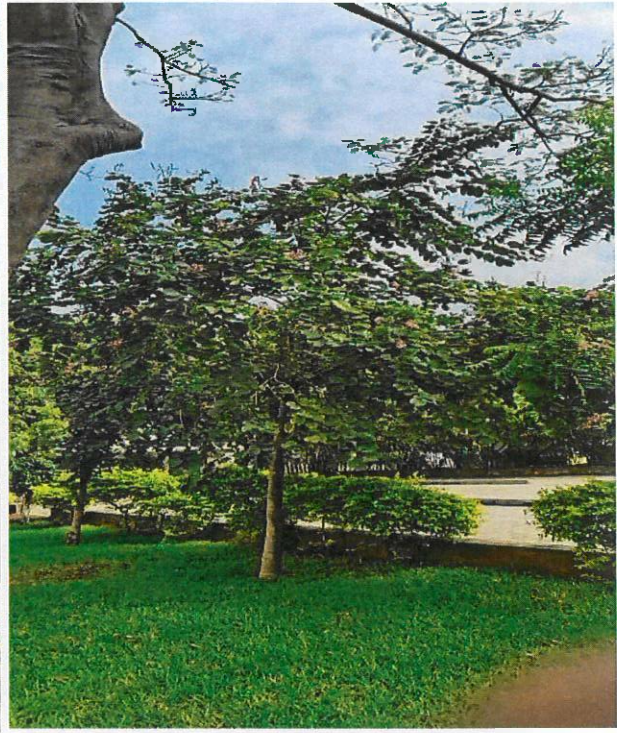
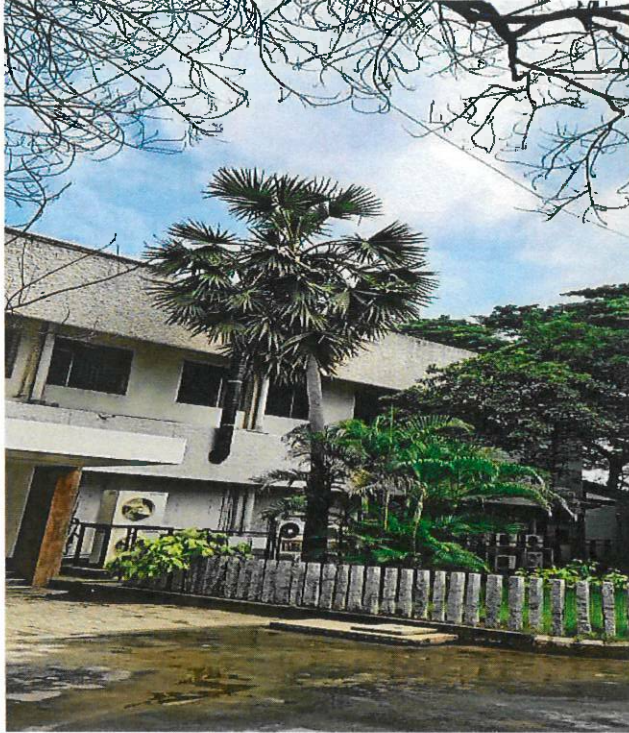

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<i>Eucalyptus tereticornis</i> Sm.	Forest Red Gum	Myrtaceae
<i>Carrica papaya</i> L.	Papaya	Caricaceae
<i>Roystonearegia</i> (Kunth) O.F.Cook	Royal palm	Arecaceae
<i>Caesalpinia coriaria</i> (Jacq.) Willd.	American Sumac	Caesalpinaceae
<i>Tectonagrandis</i> L.f.	Teak	Lamiaceae
<i>Terminalia arjuna</i> - (Roxb. ex DC.) Wight & Arn.	Arjun Tree	Combretaceae
<i>Muntingia calabura</i> L.	Singapore cherry	Muntingiaceae
<i>Gmelina arborea</i> Roxb.	White teak	Verbenaceae
<i>Psidiumguajava</i> L.	Guava	Myrtaceae
<i>Vitex negundo</i> L.	The Chinese chaste tree	Verbenaceae
<i>Syzygium cumini</i> (L.) Skeels	Jamun Tree	Myrtaceae
<i>Ficus benghalensis</i> L.	Banyan tree	Moraceae
<i>Mitragynaparvifolia</i> (Roxb.)Korth.	True Kadamb	Rubiaceae
<i>Morindacitrifolia</i> L	Indian Mulbery	Rubiaceae
<i>Markhamialutea</i> (Benth.)K.Schum.	Markhamia, Siala	Bignoniaceae
<i>Feronia elephantum</i> Correa	Wood Apple	Rutaceae
<i>Polysciasguilfoylei</i> (W.Bull) L.H.Bailey	Wild Coffee	Araliaceae
<i>Ficusauriculata</i> Lour.	Elephant Ear Fig	Moraceae
<i>Pisoniaumbellifera</i> (J.R. Forst. & G. Forst.) Seem.	Lettuce Tree	Nyctaginaceae
<i>Phyllanthus acidus</i> (L.) Skeels	Star Gooseberry	Phyllanthaceae
<i>Bauhinia tomentosa</i> L.	Yellow Orchid Tree	Caesalpinaceae
<i>Aegle marmelos</i> (L.) Corrêa	Bael Tree	Rutaceae
<i>Haldina cordifolia</i> (Roxb.) Ridsdale	Haldu	Rubiaceae
<i>Millingtonia hortensis</i> L.f.	Tree Jasmine	Bignoniaceae
<i>Mimusops elengi</i> L.	Asian bullet wood	Sapotaceae
<i>Sterculia foetida</i> L.	Java Olive	Sterculiaceae
<i>Plumeriarubra</i> L.	Plumeria	Apocynaceae
<i>Ptychosperma macarthurii</i> (H.Wendl. ex H.J.Veitch) H.Wendl. exHook.f.	Cluster palm	Arecaceae

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Green Campus of Dwaraka Doss Goverdhan Doss College



A handwritten signature in green ink, appearing to be 'B. L. M.' with a stylized flourish.

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Go Green

Clean Campus-Green Campus

Why Go Green:

The fundamental idea of Go Green is to make the campus Clean, Green and establish the importance of cleanliness and duty towards environment.

Facilitate step by step design of specific interventions for making the campus clean and green by following UGC guidelines.

Assessment has to be carried out by checking and evaluation of the existing waste management.

GO GREEN will highlight on the following points:

Identification of waste management in campus, example- Hostel, College canteen etc.

Three R's to be practiced: Reduce, Reuse and Recycle

Save water and execution of water resource management practices.

Initiate waste management in campus cleanliness in and around the campus

Environment-friendly activities endorsed and practiced in campus.

Raise the Greenery within the campus to provide pollution free air and lessen the carbon foot print.



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