



**Deccan Education Society's
Fergusson College (Autonomous) Pune
Department of Environmental Science**

Green Steps/ Initiatives

Formation of Environment Committee:

The College is committed to set up an Environment Committee (department of Environmental Science) that will evolve guidelines, measures and oversee implementation of the various aspects of Green Initiatives.

Make Campus Pollution Free by Adopting to Zero Emission Strategies

- Vehicles operated on battery or on CNG will be encouraged to be used inside the campus. This will help to reduce on campus carbon footprint and to move towards zero emission carbon neutral campus.
- Use of bicycles is always expected from students and staff within the campus.
- All staff members and students are expected to park vehicles away from buildings and in designated parking areas only.
- Use of mass transport and car pool as an eco-friendly way is expected from all staff members of the College.
- Every year (once in each semester) College will observe 'No Vehicle Day' in order to promote a message of environment protection.
- Promote use of organic fertilizer, compost and eco-friendly pesticides to maintain vegetation in the campus.

Plastic Free Campus

- Make campus absolutely free from single use plastic especially water bottles and packaged food items and containers. We strongly discourage use of plastic items.

- No plastic Flex/ banners to be used for advertising/ publishing/ promotional material for seminars/conferences/workshops/college fests and other programmes. Such notifications should be made only through digital media.
- In exceptional cases, cloth banners can be used or recyclable material.

Promotion of Ecofriendly Programs and Festivals

- As far as possible, do not distribute writing material, pens and other stationary for workshops, you may ask participants to carry them and reduce on waste generation. We promote **“Bring Your Own”** culture.
- Use of the badges/labels should be discouraged OR It should be made from eco-friendly material. Also reuse of such a material for seminar/conference/college fests is encouraged to reduce waste generation.
- Demand fewer items and by that way generate fewer wastes for the programmes. Never ask for single use plastic containers and other non-degradable cover-ups especially for programmes or college fests.
- Encourage students to adopt green strategies for college fests.
- Ban on bouquet covered with plastic films, thermocol containers or any non-biodegradable material.
- Avoid use of chemical paints and colouring agents.
- Making rangoli using chemical colours is not allowed on any occasion. Instead promote use petals of wild flowers for rangoli can be used.

Initiatives for Wise Use of Resources

- Prepare an ‘Online Questionnaire Form’/ ‘Google Forms Feedback’ system to evaluate/seminar/conference/ any other programme, in terms of resource efficiency.
- Reduce consumption of resources by using materials that have long service duration and therefore require less replacement. E.g. use of metal water bottles and glasses.
- Adopt ‘think before you print’ attitude for computer printing. Use permitted social media platforms to pass messages/notices. If printing is essential, use both sides of the paper. Initiate steps to reduce the use of paper on campus for all purposes. Develop an e-filing system for all academic and administrative purposes. Its implementation will lead us to e-Governance.

- Do not encourage unnecessary printing of documents and other material. A system of paper auditing (Semester-wise or annual) for the Departments and Offices of the college can be put in place in order to reduce the use of printing paper.
- Design and modify existing structures to minimise use of electricity by providing proper ventilation and natural light during daytime. E.g. Avoid unnecessary use of window curtains for decorative purpose.
- Maximize use of LED bulb's and tube light. Use star rated appliances in laboratory and offices. Provide grid connected solar rooftop panels to ensure clean energy in campus.
- Promote and use alternative sources of energy to serve as backup and fuel. Wherever possible wind and solar and biomass energy will be promoted.
- Alternative Sources of Energy to be developed with the help of Government subsidy. Since we are blessed with the Fergusson Hill, we can set up plants to generate wind energy and as we have a huge campus, we can set up solar panel enabled campus lights to begin with an explore the other uses later.

Conservation and Documentation of Campus Biodiversity:

- New/additional constructions in the campus must protect and enhance campus biodiversity. Also, grow xerophytes to reduce water usage and enriching green zone.
- Develop and maintain maximum possible land to fill with greenery and parts of building for hanging gardens in campus.
- Plantation of native species, medicinal plants is encouraged wherever possible.
- Maintain Botanical garden by introducing and enhancing rare species of plants in the botanical garden.
- Small projects with reference to native species, their habitat and interactions with other components of ecological cycle (birds and other small animals) can be given to the students and such reports would serve as an authentic document on, how we maintain and enhance campus biodiversity.
- Create a wetland/small pond with water to protect native wilderness.
- Display permanent posters/photos of birds highlighting campus biodiversity in garden to sensitize everyone.
- Develop nature interpretation center using available biodiversity resources. Create a wetland/small pond with water to protect native wilderness.
- Create rock garden / butter fly garden in a campus by planting flowering and nectar producing plants.

- Prepare list, special features and small documentaries of native flora and fauna and put it on the college website.
- Tagging of plants with local and scientific name. Also, add scanning QR code to get detailed information of plant species.
- Define a space in garden as green classroom/ nature classroom to conduct interactive sessions in open space to understand the importance of environment and get real sense of nature.
- Take steps to curb the erosion of soil from the Hill, via playground and campus.

Implementation of Waste Management Practices:

- Provide colour-coded bins for waste segregation.
- Prepare policy and MoU with authorized agencies (MPCB approved) for E- waste and biomedical waste. Collaborate with electronics waste (e-waste) recycling agencies. Formalise the activity in the form of MoU and give them e-waste either monthly, once in few months or yearly.
- Collaborate with agencies for safe disposal of Laboratory waste generated particularly for all life Science departments.
- Installation of biogas plant to manage waste generated from canteen and hostel mess can be initiated and funding can be obtained through CSR funding.
- Promote and implement Zero Emission and Carbon Neutral Campus Policy. Do not burn any organic wastes at any time. Organic waste from canteens, mess and leaves of plants from campus can manage by various eco-friendly methods like composting, vermicomposting, biogas etc.
- Avoid purchase of single use disposable items strictly.
- Carry out recycling of the biodegradable wastes in the campus as much possible.
- Segregation of cooked food waste and raw food waste from the canteens and tiffins of staff members to be processed separately in compost pits and units to manufacture bio-enzymes. These can be excellent as sources of income for the campus if effectively managed.
- Students from the Life Sciences can be roped in these projects spearheaded by interested teachers and staff members to mentor these activities.
- Strict ban on burning of fallen tree leaves. The campus garden waste or green waste can be the easiest to turn into compost or fuel pellets. It can be a viable source of income due to the huge size of the campus and its rich flora that gives out this waste all through the year.

- The units can not only generate all the manure required for the college garden areas, but also can be sold to staff members and students at reasonable rates to nurture their gardens at home.

Environmental Audit

- Calculate the carrying capacity and other important tests by using scientific methods ways for campus.
- Ecological footprint of the campus can be monitored with the help of questionnaire/ available standard formats.
- Carry out Environmental Impact Assessment (EIA) and frequently monitor the changes with reference to physical and biological parameters whenever new additions/features are added to the infrastructure.
- Post construction evaluation should be carried out by staff and students. Prepare a report and document it.
- Green audits and ecological audits to be a regular feature for the College. Document the report and put it on college website. Regular seasonal field surveys to be conducted to track species trade-offs and to train students.
- Carry out energy, water audits, and identify areas, which need more water, prepare a report and implement the observations.

Water Resource Management

- Make provision to harvest rainwater. Use of paved paths instead of concrete to allow water percolation.
- Proper use of water will be carried out. Practices that save water will be promoted on campus.
- Installation of greywater treatment units and reuse of treated water for gardening purpose.
- Need to setup small STP/ETP for treatment of sewage and laboratory wastewater. Use of bioremediation /phytoremediation is also possible for this treatment.

Awareness Programmes

- Conduct training programmes for staff and students on importance of green building, environmental sustenance and maintenance of campus with regard to all environmental parameters.
- Issue clear and easy to follow guidelines to staff members in the form of dos and don'ts. Prepare posters and display the environment policy of the college.
- Conduct special training programs for non-teaching and cleaning workers to develop skills of handling and segregation of waste in campus.

Sustainable Campus

- Prepare 'Campus Sustainability Policy', which will enable all stakeholders to understand importance of environmental sustenance for the present and future generations.
- The beautiful campus has several niches or areas that can be developed as landscaped areas with the help of the professional course run by DES JRVGTI.
- The students can propose designs that can be approved by the Environment Committee that can approve aspects of the designs from different students' suggestions and get them implemented by the students in a group. This will cut the cost of the professional architect designers. Regular maintenance of the landscaped areas can be done in a similar fashion.
- Prepare videos, documentaries and online teaching guides to maintain and enhance green initiatives taken by our college and set examples for others.

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