DR. HARISINGH GOUR VISHWAVIDYALAYA

CLEAN, GREEN AND ENERGY EFFICIENT CAMPUS FOR THE SUSTAINABLE ECOSYSTEM POLICY

Dr. Harisingh Gour Vishwavidyalaya,
Sagar (M.P.)
(A Central University)

1:31:(16): With the permission of the Chair, Prof. H. Thomas, Director, Research and Development (DoRD) presented the following policy documents for consideration by APC:-

1. Policy on Internal Complaints Committee.
2. Policy on Environment and Sustainable Development.
3. Policy on Academic Audit.
4. Policy on Advance Learners and Slow Learners.
5. Innovations & Start-Up Policy (GISP)
6. University IT Policy.
7. Policy for Maintaining and Utilization Physical, Academic and Support Facilities.
8. Library Policy.
9. Scholarship Policy.
10. HR Policy.
11. E-Governance Policy.
12. Group Health Insurance Policy.
13. In-Campus House/Flat Allotment Policy.
14. TA & DA Policy.
15. Non-Teaching Staff Appraisal Policy.
16. Finance Policy.
17. Code of Conduct and Ethics Policy.
18. NCC Policy.
19. NSS Policy.
20. Health Care Facilities and Sanitation Policy.
21. Outreach Program Policy.
22. Student Cultural Policy.
23. Water Conservation Policy.
24. NEP-2020 Implementation Policy.
25. Sports Policy.
26. Anti Ragging Policy.
27. Rajbhasha Policy.
28. Credit Bank Transfer Policy.
29. Examination Policy.
30. Training and Placement Policy.

<u>Resolution:-</u> The APC after due deliberations resolved to approve the aforesaid policies.

(Action:DoAA, DoRD, CoF, FO, All the Deans of Schools & HoDs)

The Meeting ended with vote of thanks to the Chair.

Satish Kumar
Deputy Registrar
Academic Affairs &
Secretary, APC

संचालक (अनु. एवं विकास)
Director (R & D)
डॉ. हरीसिंह गौर केन्द्रीय विश्वविद्यालय, सागर
Dr.H.S.Gour Central University,Sagar

Context: In a quest of living high quality life, man is becoming irresponsible, careless and odd with nature. In the name of development, forest area is decreasing day by day and at the same time carbon emission has tremendously increased. In near past, we have witnessed many man-made environmental issues. The species extinct in last 100 years is many times more than the species extinct in past 1000 years. Global warming is knocking, drinking water quality as well as micronutrients in soil is depleting, air and sound pollutions have become unbearable in many cities of India and many more issues have created just because of our ignorance and unclear policies to protect our environment.

Dr. Harisingh Gour Vishwavidyalaya is a naturally blessed place, with green campus, clean air, good sunlight, quality rainfall etc. It is therefore, becoming duty of all the stakeholders to preserve and protect, and wherever possible to enhance its natural climate. The green policy is a beginning.

Scope and purpose: Dr. Harisingh Gour Vishwavidyalaya covers an area of 1312.89 acres over patharia hills connected to the Vindhya Range and surrounded by the forest area (around 100 acres) that contribute to preserve ecosystem and biodiversity in the campus. It is occupied with around 8000 students, faculties, staffs (and their family members). The available facilities provided by the University and by their own have tremendously increased footprint of mankind, due to which, situation is becoming odd day-by-day. It is therefore, in a quest of making clean, green and energy efficient system inside Dr. Harisingh Gour Vishwavidyalaya, multiple initiatives are needed to be taken. The purpose is, but not limited to create a natural ecosystem, which is equally owned by various components of biosphere and to provide sustainable solutions to various problems associated with environment, society and energy. We are looking to create 8000 trained green warriors every year to serve our mother nature and to create sustainable environment for present and future generation.

संचालक (अनु. एवं विकास)
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Dr.H.S.Gour Central University,Sagar

Clean, Green and Energy Efficient Campus for the Sustainable Ecosystem

(Policy and initiatives)

Dr. Harisingh Gour Vishwavidyalaya
(A Central University), Sagar
Madhya Pradesh, Pin: 470003

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Objectives: This policy is an official document, which is a binding to all its stakeholders for making a responsible move towards clean, green and energy efficient system, which is needed to be incorporated into the institutional planning and budgeting processes. Every individual will have to impart their contribution to make this University beautiful and environment friendly. Different objectives that this policy will cover are:

- To increase cleanliness, greenery and energy efficiency in the campus.
- To impart responsibility in each and every student to protect the environment for sustainable development.
- To comply the applicable laws and regulations associated with environmental management and to exceed them wherever needed.
- To integrate environmental concern to all the development and policies of the University.
- To encourage start-ups for sustainable development.
- To run awareness campaign for the best practices by the University to the local communities and to increase collaboration with them.
- To make efficient water and waste management.
- To generate the resources by managing the wastes
- To reduce environmental pollution and to increase the energy efficiency
- To improve efficient uses of resources and to minimize the produced wastes.
- To conduct green and energy audits time to time.
- To integrate green policy in all the initiatives/ development processes of the University.
- To enhance education and to foster research on energy and environmental development

Green Campus: For the sustainability a minimum of 33% are should have planted tree. Dr. Harisingh Gour University had a sufficient green space, but with increased development the land area for these plats is decreasing day-by-day which is needed to be preserved by efficient policy making. We suggest,

- Counting and providing number to all the trees for the proper conservation and maintenance.
- Every new and old department (and part of the University) must have to insure at least 33% of land area for tree/plantation.
- All the initiatives for making campus green like initiatives from waste materials should be encouraged with proper awards and certificates.
- To run awareness campaign time to time.

- **Clean Campus/ Waste Management**: Due to large number of waste types (chemical, biological, electronic, degradable, non-degradable etc.), waste management in any University is a challenging task and Dr. Harisingh Gour Vishwavidyalaya, Sagar is not an exception. It is therefore needed to identify and classify the waste, which are further to be segregated in recyclable and reusable materials. By definition, wastes are those materials that are not needed by the owner, producer and processor. Sometime, a usable material becomes waste, because of unavailability and lengthy process of repair. To reduce the waste University must need a workshop of skilled workers that may contain furniture repairing/ preparing section, Glass blowing section, e-repairing centre etc. University will make a self sustained waste management process and till the time University has not started its own process Dr. Harisingh Gour University is suggested to sign a third party agreement for collection and treatment of solid wastes. The unusable materials will be transported to Sagar municipal solid waste management for their further treatments.

Before treatment of the waste all the repairable and reusable materials should be removed. Now different types of waste will be treated differently that we are discussing one by one. The following policies will be adopted for the treatment of the wastes:

- **Non-biodegradable wastes**: We suggest making the University single use plastic free campus. Taking single use plastic to University campus should be a punishable act. The transparent bottles may be used or designed to be used in beautification and enhancing greenery in the campus. Glass apparatus have become waste; because of unavailability of a glass blowing section in the University sophisticated instrumentation Centre. All remaining non-biodegradable waste can be send to the plastic/ glass industry that has the capacity to recycle them.
- **4.2. Dry but degradable wastes**: There are many wastes which are dry and degradable in nature, like paper, wooden furniture, cartoons, jut ropes etc. Extents of some of such wastes are that much that it is always beneficial to repair/ recycle and reuse them. For example, paper that may come out as waste in our University is large enough that their recycling and reusability will be a better and cheaper source than purchasing paper rims for University academic divisions or answer scripts for examination. It's better to recycle such wastes either by making University own plant or by sending them to the industry which is involved in recycling of such wastes. The wooden furnitures can be easily repaired and reused.
- **4.3. Electronic/ e-wastes**: Electronic wastes should be minimized before starting of their treatment. Many such wastes are repairable and reusable. We recommend putting list of such waste on IUMS to see whether somebody may repair or reuse them. University may also open a centre for repairing of electronic items like for computers, printers, photocopier on outsource and on payment basis. Finally, the

electronic material that remain unutilized and that cannot be recycled or reused by University officials may be sent or sold to the industries which recycles these wastes.

- **4.4. Biodegradable (wet) wastes**: Food wastes, cow dung etc. or any biodegradable items are coming in this category. All these collected and transported wastes can be used to make biogases and the wastes generated after that should be used to make good quality compost. Though, the cost for generation and transportation of biogas must meet with the amount of generated output. Also, a good thing of our University is its natural beauty and greenery. Because of this a large number of leaf wastes are generated which can be used in making leaf compost.
- **4.5. Chemical wastes**: Chemical wastes are defined as any waste that is generated by any reagent grade chemicals or product/ side product generated (unused or side product) from educational and experimental processes, chemicals inside batteries, household chemicals (like, oil, pesticides, finally divided powders, paint, dyes and resins, LEDs etc.) or anything contaminated by the chemicals. We are therefore suggesting here the general protocols that should be followed for treatment of such wastes.
- Chemical waste can be divided into two parts: hazardous and non-hazardous and both can be further subdivided into solid, liquid and gas wastes. In all the laboratories there should be a regular practice to ensure the nature of chemicals by reading the Material Safety Data Sheet (MSDS), which is easily available on web portals. We should ensure maximum utilization of chemicals and apparatus. All the stores and laboratories should provide list of chemicals/ equipments, which are not in use or possibilities of their uses are minimum. They should be shared across the departments and the University should ensure their maximum usability.

- The chemical waste generation depends on the amount and type of input chemicals we use. All the chemicals cannot be recycled or reused. So, there should be a practice to use minimum possible number and amount of chemicals. All the organic solvent should be tried to be reused after distillation (either in chemical reactions or in cleaning of the apparatus). If laboratory is not able to reuse those chemicals, they should be stored in a sealed high quality LDPE container. User should try not to mix many chemicals in a single container (and level the chemicals stored in the container). Most of the liquid chemicals used in our lab are compatible or non-reactive with LDPE container except carbon disulphide, nitrobenzene and thionyl chloride. The container should have 53B or 83B screw cap. Before disposal the chemicals in soil, to the possibility of maximum extent the chemicals should be converted to less toxic or non-hazardous. For examples cyanide is a potential poison, we can neither allow them to mix in soil or in water. But, by reacting them with Fe^{3+}, they can be converted into non-toxic ferriferrocyanide complex. Some of the liquid wastes like organic solvents can be recycled by fraction distillation and the chemicals that are non-recyclable should be disposed off in soil after packing them in a triple layered LDPE container to avoid any type of leaking. Nature of these types of jobs is cyclic and need trend staffs. This again indicate requirement of an independent department of waste management.
- **4.6. Biological wastes**: Biological wastes coming out from University Health Centre, Department of Zoology, and Department of microbiology are sent to the Sagar Medical College daily and are finally incinerated.

Water Conservation, Purification and waste management:

Clean Air initiatives:

To increase energy efficiency and search for the renewable energy sources: