## **CHANDIDAS MAHAVIDYALAYA**

<u>A Govt. Aided Degree College Affiliated to the University of Burdwan</u> UGC Accredited under section 2(f) & 12(B) [1979] \* NAAC Accredited in 2016 KHUJUTIPARA, BIRBHUM, WEST BENGAL, INDIA- 731215 www.chandidasmahavidyalaya.ac.in

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# Policy Documents of Environment and Energy usage

## **Environmental Policy Documents**

#### Introduction:

The concept of green campus is an integration concept in the Education, Research and Community Service System in environmental management. A Green Campus is a place where environmental friendly practices and education coexist to promote sustainable and ecofriendly environment in the arena of education. The green campus concept offers an institution the opportunity to take the lead of environmental culture and thereby create sustainable solutions to environmental, social and economic needs of the mankind. It also offers the institution an opportunity to take the lead to instil environmental ethics among the students and staff.

The increasing human foot print on earth poses great environmental challenges that continue to grow over time. So there must have counter effort to mitigate the adverse effects created by human activities on the ecosystem. Also there should have knowledge of the way to interact with the earth among the people living on it and inclusion of all problem solving approaches from every part of the society is necessary to effect a meaningful change.

#### Aims and Objectives:

- To develop the campus with sustainable effort in the areas of power, water, waste management and cleanliness
- > To promote eco-friendly culture with the collective contribution of faculty, staff, students and the nearby community
- Awareness generation on environmental degradation and climate change among faculty, staff and students
- > To adapt effective measures to reduce emissions to the environment
- > To enable institution as innovative living-laboratory with due initiatives
- > To stimulate students and staff though awareness to raise voice against the man induced environmental hazardous
- > To plan for restoration of land, water and forest
- > To conserve biodiversity

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To effectively manage of various wastes of the Campus through proper segregation system in collection, accumulation and disposal

#### Vision

To create awareness among young students, faculties and public about various environmental problems and conserve natural resources with actions and thereby to protect nature.

#### Mission

- To aware the students about the human-caused environmental hazards
- To make understand the students the individual's responsibility to save earth
- To encourage the students for a small step to protect the environment

#### **Composition of the Committee:**

- 1. Principal of the College, Chairperson
- 2. IQAC Coordinator- Secretary
- 3. Dr. Subhajit Mondal- Convenor
- 4. Dr. Sayantan Banerjee, Department of Zoology- Member
- 5. Dr. Kaustuv Mukherjee, Department of Geography- Member
- 6. NSS Programme Officer(s)- Member
- 7. Mr. Sinchan Banerjee, Electrician- Member
- 8. Representative NSS Volunteer- Member
- 9. Representative Eco-Club- Member

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#### **Role of the Green Committee**

A Green Team comprising various members of different sections of the college work together and with local community to make their campus more sustainable. It provides students with the opportunity to learn more about their surroundings, participate in environmental activities at college and in the community. In view of this all learned members strive with commitment and undertake many initiatives.

Thus, the committee l plans to execute to:

1. Set forth a Green Campus Mission and a Statement of Principles

2. Seek views of all the Stakeholders to make the 'Go Green Campus' initiative functional throughout the year

3. Conduct the Campus's environmental impacts to identify the targets for improvements

4. Establish a Green Campus Environmental Ethic Awareness campaigns

5. Link Green-Campus activities to Academic activities in the Institute

6. Chart out a yearly planner for the Institute, local community and Stakeholders

7. Organize Awareness Programs for the students, faculty and society

8. Develop a strategic plan and create student-teams to carry out specific tasks of the strategic plan

9. Phase out the CFL and conventional light source such as bulbs and tube lights, halogen and mercury street/campus lights and get them replace by the LEDs

10. Conduct Annual Green, Environment and Energy Audi.

11. Purchase only Energy Efficient Computers, fans, air-conditioner, refrigerators etc. or any other equivalent

12. Establish public/private partnerships

13. Evaluate daily operations to prevent pollution, waste stream management, and energy efficiency reducing, reusing, recycling, and repairing wherever possible.

14. To commit to implement the recommendations as cited in the auditor's report

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In pursuing our program of improved environmental performance, we thrive upon following major areas:

Clean and Energy Green Management Management Environment Policy Waste Water Management Management Principal CHANDIDAS MAHAVIDYALAX P.O.-Khujutipara Dist.-Birbhum The Green Committee Chandidas Mahavidyalaya Khujutipara, Birbhum

#### Initiatives Taken to Implement the Environment Policy

The Institution is committed to manage its campus in accordance with its Clean and Green Campus Policy by establishing the following infrastructure and carrying out the following activities:

#### A. <u>CLEAN AND GREEN MANAGEMENT:</u>

#### **Policy:**

The Green Campus Policy of the college envisions for environmental friendly practices and education to promote sustainable and eco- friendly atmosphere in the campus and outside the campus .The green campus concept offers an institution the opportunity to take the lead in redefining its environmental culture and developing new paradigms by creating sustainable solutions to environmental, social and economic needs of mankind. The Policy taken for the institution are follows-

- Environmental-friendly practices and education combine to promote sustainable and eco-friendly practices in the campus.
- To adopt targets for improving environmental performance. To manage its operations in ways that are environmentally sustainable, economically feasible and socially responsible.
- Organizing annual tree plantation drives to encourage students, societies to hold tree planting events.

Greening the campus is all about sweeping away wasteful inefficiencies and using conventional sources of energies for its daily power needs, correct disposal handling, purchase of environment friendly supplies and effective recycling program. Institute has to work out the time bound strategies to implement green campus initiatives. These strategies need to be incorporated into the institutional planning and budgeting processes with the aim of developing a clean and green campus.

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#### **Campus greenery:**

Inside the college-campus there is a well-maintained **landscape garden** (about 10,000 square feet) comprising numerous small trees, shrubs and several ornamental and decorative plants.

College has also nurtured two (02) pockets of Herbal/MedicinalGarden with various regional as well as non-regional medicinal plants.

The college also maintains Vegetable Garden without using any pesticides & chemical fertilizer but only with organic manure.

A Rose Garden is also maintained accommodating more than hundred rose plants with enormous varieties.

A Dessert rose (*Adenium sp*) garden is also there beside the normal rose garden. It has been planted on roof top of a big water-reservoir of nearly 800 sft. area.

In this garden-zone birds of various species are often spotted.

Green committee of the college separately maintained a fruit garden at one of the corners of the garden.

#### Maintenance of the garden:

College's NSS volunteers along with volunteers of Eco club maintain the garden. They actively and timely water and prune whenever required.

#### **Conduction of Green Audit:**

College committed to create "an environment of educational excellence" adopts the 'Green Campus' system for environmental conservation and sustainability. The College conducts Green Audit every year to identify, quantify, describe and priorities a framework of **Environment Sustainability** in compliance with the applicable regulations, policies and standards with help of **University's Green Audit team**.

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#### **Cleaning the college campus:**

NSS volunteers of the college clean the college campus at a certain interval as a part of their Regular activities with the help of college's deployed one hired worker.

College celebrates a compulsory "Campus Cleaning Day", on the day before the celebration of "World Environment Day".

**Drainage system:** The College maintained clean and well-connected concrete drainage system inside the college premises and it is well connected with the outer drain. It is well maintained to ensure no water stagnation.

Inter-departmental cleaning contest: An inter-departmental cleaning context is organised by the college on the day before Mahatma Gandhi's Birth Day and observed as "The Gandhi Purnaha". All members of the college including all the Teachers, Staffs and Students participate in the programme. After the programme, the best "cleaned department award" is conferred by the College.

#### **Paperless Operating Procedure:**

Our institution is striving towards a paperless office. The use of papers has significantly been minimised. This is done by converting documents and other papers into digital form, a process known as digitization. We believe that "going paperless" can save money, boost productivity, save space, make documentation and information sharing easier, keep personal information more secure, and help the environment.

Several initiatives are taken to minimize the usage of paper. Wherever possible automation and digitization are introduced which helped in minimization of usage of paper. Digital storage of documents is one such measure. Institutional data to a great extent is stored digitally. Technology is used to a greater extent for communication among the staff and the students rather than paper communication. What's app - class wise groups, Department wise groups, Committee wise group facilitate E-communication, College-app and use of public address systems reduces usage of paper in notices and circulars.

In addition to going paperless in the classroom, the college has also introduced "Learning Management System" wherein references, notes, syllabus question banks, study material is stored and shared on the e-platform, avoiding massive usage of paper. The teachers have also

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experimented with alternatives of paper -based testing with e- assignments and other skill based tests like presentations, group discussions etc.,

#### B. WATER MANAGEMENT:

#### **Policy:**

The college is enacting to ensure sustainable water management. Economic and efficient use of water is always encouraged. Water reuse is vitalized through gardening, cultivation and cleaning purposes. The college has a rain water harvesting project to collect and store rainwater. The reservoir tank has a capacity of 1.5 Lac litter (= 39625.8079Gallon). Policy taken by the institution are as follows-

- To make efficient and environmentally responsible use of water, including identifying opportunities for water reuse.
- Water leaks, dripping faucets and fixtures that do not shut off should be reported.
- To implementRain-water harvesting.
- Water flow restrictors on bathroom faucets and showers, low water flow toilets and automated urinal flushers should be used to cut down campus water use.
- The Institute will take all necessary measures to implement waste water management /rain water harvesting.

#### Rain water harvesting and water recharging:

The college ensures rain-water conservation through rainwater harvesting. The rain water from the roof top outlets is carried through the well-connected pipelines to the wells or is collected in the large water harvesting tanks and the overflowing rain-water from these tanks is discharged in the soak-pits for ground water recharge.

Rainwater from the different college buildings is taken to the wells for ground-water recharge. A proper care is also taken to keep the Rooftops cleaned so that unnecessary

The Green Committee Chandidas Mahavidyalaya garbage does not mix with the rainwater leading towards the well. The inlets of these tanks are controlled by the ball-valves to avoid water overflows.

College maintains a Rain water harvesting management with a proper concrete drain to the agricultural field via a community's water body. Also, there is water recharging unit with a bored well of nearly 190 ft. and water is reached to 1<sup>st</sup> aquifer.

A big water reservoir is also there for the purpose of rain water storing and subsequently for harvesting in watering in the garden and overflowed water is released via concrete drain connected to the community's pond.

#### C. <u>WASTE MANAGEMENT:</u>

#### **Policy:**

Chandidas Mahavidyalaya strives to have a minimal impact on the environment and is dedicated to reduce and manage the waste generated by the college campus. The following specific procedures are undertaken to ensure our Institution contribution in protecting the environment.

- The college pays dedicated focus to see that minimal waste generated in the campus. Solid waste is segregated as bio degradable and non-degradable and handed over to Panchayat
- Segregation of waste into dry and wet waste from the separately allotted dustbins is done in strategic locations, thus maintaining the Campus clean
- To increase the rate of recycling of all appropriate materials, based on life-cycle principles
- To implement sustainable resource management practices, based on reduce, reuse and recycle principles.
- The college is committed to zero waste through the 5R's- Refuse, Reduce, Reuse, repurpose and recycle.





#### **Creating plastic free campus:**

The college is plastic free campus. The college canteen has strictly been instructed to use only bio-degradable cups and plates and to use separate bins with a view to dump biodegradable and non-bio-degradable wastes separately.

The members of the Green Committee and Eco-club volunteers regularly sensitize the staffs, students and others of the college not to use of plastic.

In various part of the campus there are many display board citing "It is Plastic Free Campus"

#### Smoking and chewing free campus:

The college is also smoking free campus. It has banned to use of all types of tobacco items in the college premises. There are many display-board warning the message "It is Smoking Free Campus".

#### **E-waste management:**

**Collection and disposal:** The E-waste materials are centrally collected from all of the departments, class rooms, and offices and kept all of these in the appropriate designated room to sell them to ALAM ENTERPRISE, Nutanhat, Mongalkote, East Burdwan, a local agency, for its proper management in accordance with the agreement with them.

#### Paper waste management:

The college collects waste papers from all of the departments, classrooms, library, office etc. and finally sell the accumulated waste papers to the local vendors for its reuse and recycling.

#### Solid waste management:

Other than E. waste and Paper waste other solid garbage like building debris, unused building materials and non-bio-degradable waste usually removed from the college campus by Local Panchayet in pursuing a *MOU* with them.

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#### Hazardous liquid waste management:

College has **built soak pits** to drain hazardous liquid waste into the soil. Also, there is isolated **concrete and covered pocket** to channelize chemical waste of Chemistry lab. through pipeline. There is firm effort to ultimately to be treated with charcoal and lime to destroy its reactivity.

#### **Bio-Medical Waste management:**

Bio-medical waste properly collected from Zoology Laboratory and removed by **Khujutipara Primary Health Centre** in pursuing a *MOU* with them and it's dumped to Bio-Medical Waste Pit of the Primary health Centre.

#### Conversion management of organic waste into bio-compost:

The college has bio-composting unit where all organic waste including canteen wastes are dumped and subsequently treated with lime to convert it into manure.

#### Vermicomposting:

Recently the college has taken initiatives on vermicomposting unit with appropriate infrastructure.

#### **Mushroom cultivation:**

College's Green Committee also started mushroom cultivation in a proper way.

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#### D. <u>ENERGY MANAGEMENT</u>

#### **Policy:**

Energy management is the translation of conservation ideas into realities, by lending technically feasible solutions with economic and other organizational considerations within a specified time frame.

- To provide a "bench-mark" (Reference point) for managing energy in the campus and also provides the basis for planning a more effective use of energy throughout the premises
- To reduce the amount of energy input into the system without negatively affecting the output
- To identify potential energy efficiency improvement measures and are applied independently.
- To minimise energy costs / waste without affecting daily activities.
- To minimise environmental effects.

The college is committed to use energy in an efficient way. Solar energy is used in the campus. Solar panels has been installed to get solar power. LED bulbs are used in the classrooms and offices to ensure low consumption of energy. Power management features are activated when electronic devices (printers, computer, monitors etc.) are not in use to avoid energy consumption.

# Arrangement of cross ventilation to ensure sufficient natural light and to minimize use of electricity:

All classrooms are well fitted with 04 to 08 large windows and there by ensure crossventilation to make these rooms airy and sunny and resultants of which to minimisation of electricity consumption.

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#### Using LED lamps:

In compliance with the advice of the Green Committee and University Audit panel all the florescent bulbs and CFL bulbs have been replaced with LEDs since 2018-2019.

#### Use of energy efficient fans, air-conditioner, refrigerators etc.

In accordance with the resolution adopted in the **Green Committee** all electrical appliances of the college are of energy efficient.

#### Installation of solar panels:

The college has installed **Solar panel** on 09.08.2017 (the date of handover of the project) with the patronage of the Government on the rooftop of the main building to minimize consumption of normal electricity and less dependence on colloquial electric system.

#### Short-circuit & Water linkage Management:

According to the suggestion of Green Committee of the college and Audit panelof the University, all electric and plumbing lines are regularly maintained and monitored to avoid any type of mishap caused by short circuit or like this. The Convener of the green Committee keep vigils to avoid unnecessary use of electricity, water leakage and water dropping in anywhere of the college campus.

#### Sensitisation of the students and other stuff of the college:

Various sensitisation programme on energy conservation, water conservation, environment pollution, solid hazards management, environmental degradation etc. are organised in collaboration with the Green Committee and NSS Units of the college. Sometimes outside resource persons are also invited for.

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#### Awareness on misuse of electricity:

All stakeholders comprising students, NTS, teachers etc. are made aware to advising them to switch-off of all electrical appliances when not in use. In this respect advice-message stating in board "Pl. switch off fans and light when not in use" are displayed in various corner of the campus. In almost all rooms master switch connection point well set.

#### **Conducting Energy Audit:**

Energy audit of consumption of electricity in the college is conducted every academic year with the help of **University's Audit team**. The objective of this audit is to identify the extent of energy consumption and find appropriate strategies of conservation.

#### **Noise Pollution Management:**

A) Silence zones in the college: Various display boards have been placed in the library and other places for awareness to maintain silence in the college.

B) Noise control in the college: The security guard of the college ensure smooth entry and exit of students without any noise.

C) No pressure horns for vehicle: Our staff members and students are asked to refrain from pressure horn.

### Observance of World Environment Day, Earth Day, Non-vehicle day, Plantation Day etc:

Every year Green Committee and NSS Units of the college collectively celebrate World Environment Day, Earth Day, Plantation Day, Non-Vehicle Day etc.. The NCC Unit of the College also celebrate plantation Day as a part of observance of Independence Day.

The Eco-club and NSS volunteers mainly play a pivotal role in plantation throughout the year inside as well as outside of the college campus.

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As per the resolution of the Green Committee the College observe ' **No Motor Vehicle Day**' on 25<sup>th</sup> days of every month for greater cause of our Environment. In this context all teachers, non-teaching staffs and students are requested to attend the college avoiding any type of personal/sharing motor vehicles.

#### **Community Services**

*Chandidas Mahavidyalaya* provides community services to the local inhabitants to link the community with the college for mutual benefit. The community is benefited with the focused contribution of the college for the village/local development. The college finds an opportunity to develop social sensibility among students/teachers/staffs and thereby it's emerged as a socially responsible institution.

College's students and along with some faculties try to extend some services in terms of in teaching-learning for the privileged students in the community as a community services. For community services conducted specially in annual meet is recognised by the local people as well as Panchyat.

The sustainable community services activities to support local area organizations and build a sense of community. Recurring activities that include significant volunteer service from employees including the following:

#### **Implementation of Community Services**

- As a part of our institutional guideline a community service in the name of 'Selling Dreams' –where the children of the neighbourhood schools are encouraged to visit the campus to inculcate the dreams of higher education as well as to create the exposure and enrich their personal skills by guiding them to see smart classes, college library, Botany, Zoology, Chemistry, Geography, Physics laboratories etc.
- An adequate amount of water released from Rainwater harvesting Project via concrete fresh drain connected to a pond for the use of local inhabitant.
- Storage water (from Jal dhoro-Jal voro Project) release at the exceeding of the reservoir for agricultural field of local inhabitant.

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- In the adopted village, Basapara, an adjacent area was surveyed by the NSS units(I&II) of the college and it was addressed by many awareness drive on vector born, water born, air born disease. Apart from these were cancer awareness and many other social awareness.
- More than fifteen (15) large dustbins installed outside the college campus around/near local area like *local market*, *haat*, *food/tea stall*, *Hospital*, *Panchayet* office, cooperative bank, Library, Primary school for clean environment.
- A garden planted and maintained/nurtured by green committee and NSS team outside the college campus-at local Primary Health Centre

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