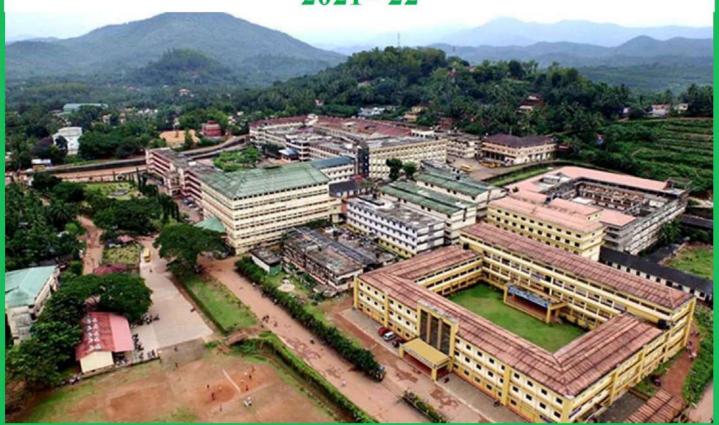
GREEN AUDIT REPORT

2021 - 22





NEHRU MEMORIAL COLLEGE KURUNJIBAG SULLIA D.K.



Green Audit Committee

Sl. No.	Name	Designation	
1.	Prof.Rudrakumar M M Principal, Nehru Memorial College Sullia	Chairman	
2.	Mrs.Rathnavathi D Student Welfare Officer	Member	
3.	Mrs.Mamatha K IQAC Co-ordinator	Member	
4.	Mr.Kuladeep P P Head, Department of Botany	Green Campus Audit Co-ordinator	
5.	Mr.Sathyaprakash D Head, Department of Physics	Energy Management Group In- Charge	
6.	Mrs.Usha M P Head, Department of Mathematics	Hygiene & Sanitation Management Group In- Charge	
7.	Mrs.Akshatha B Head, Department of Zoology	Greenary Management Group In- Charge	
8.	Mr.Venkataraja C S Head, Department of Computer Science	Waste Management Group In- Charge	
9.	Miss Praneetha B P Head, Department of Chemistry	Water Management Group In- Charge	
10.	Mr.Seetharama M D, PEd, Head, NAAC VII Criterion	Member	
11.	Mrs. Ananthalakshmi, NAAC/ IQAC Member-1	Member	
12.	Mrs.Bhavya P M NAAC/ IQAC Member-2	Member	
13.	Mr. Adesh K., Student, III B.Sc (PCM)	Student Member	
14.	Miss. Lavanya J.D, Student, III B.Sc (BZC)	Student Member	
15.	Mr.Shreedhara V, Lecturer in Commerce	Internal Auditor	
16.	Dr. Vinayaka K.S Assistant Professor and HOD in Botany SVS College Bantwal	External Member & Green Auditor	
17.	Dr.Supreeth Kadakol Assistant Professor and HOD in Zoology SVS College Bantwal	External Member	

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EXECUTIVE SUMMARY

Eco-friendly campus is a concept implemented in many educational institutions all over the world to make them sustainable because of their mass resource utilization and waste discharge into environment. Waste minimization plans for the educational institutions are now mandatory to maintain the cleanliness of the campus. To find out the environmental performance of the educational institutions and to analyse the possible solutions for converting the educational campus as eco-campus the conduction of green auditing of institution is essential.

With increasing levels of pollutions, it has become of vital importance for all the stakeholders in the society to start thinking about our environment and its preservation for the future generations. Educational institutions have a crucial role to play to instil in the minds of youth the importance of a clean and healthy environment and the necessity for them to conserve the resources for the future. There is a dire need for the educational institutions to sensitize the students with regard to the present and possible future environmental and ecological problemsthat we could encounter if we don't learn from our mistakes. Smart use of the available resources and minimizing levels of waste is the need of the hour.

The first step towards this goal is recognising the need for conducting an environmental and green audit that helps in assessing the environmental performance of our Institution so that we know where we stand and where we need to go and how to get there. The green auditing process has been a part of this effort to understand how to achieve a sustainable development with limited resources. The audit mainly tries to focus on certain parameters like water consumption, energy consumption, waste management, green campus initiatives, and soil and water quality in the campus. It is imperative for the college to assess our own contributions towards a sustainable eco system. Survey was conducted for the above mentioned parameters and data collected was analysed and tabulated. Report was prepared with appropriate observations and recommendations directed towards management, staff and students so that issues related to the environment can be addressed in a timely and appropriate way.

INTRODUCTION

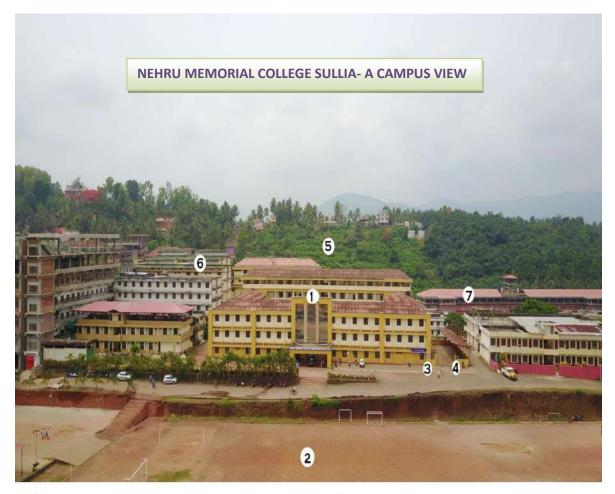
History and Origin:

Sullia is a Reserved Constituency. The metamorphosis of Sullia into a Global Educational Center within a span of 45 years is directly connected with the farsightedness, dedication and philanthropy of Dr.Kurunji Venkataramana Gowda. The social change he envisioned was realized through education. As a result, the Academy of Liberal Education established 1976 was in the year under the able Presidentship Dr.KurunjiVenkatramanaGowda. The Academy started the Nehru Memorial College in the same year which, by itself, was a remarkable event in this educationally barren, backward Malnad region. The Nehru Memorial College filled the vacuum and provided the local students with an opportunity to pursue higher education. The social transformation of Sullia is directly connected with the Nehru Memorial College. Every Youngster in this town and neighboring villages is a graduate. Dr. K.V Chidananda, President, AOLE (R), Sullia has added a futuristic touch to the Institutions. Under his leadership, Nehru Memorial College has been transformed into a modern educational center with state of the art facilities. The Management has succeeded in providing urban amenities in a rural area. It is a co-educational institution and offers undergraduate courses in Arts, Commerce, Science, Social Work, Business Management, Post-Graduation in Social Work (MSW) and Post Graduation in Commerce (MCom). The College is permanently affiliated to Mangalore University and the rules and regulations of the University are strictly followed. The College is recognized by the UGC and is included under Section 2(f) and 12(B) of the UGC Act of 1956.

Location:

Nehru Memorial College Sullia is located at Kurunjibagh, SulliaTalluk, D K., A renowned institutionplaced at the center of KVG campus, which is adjesent to the SulliaTaluk Office. Which is 100 km away from the district head quatress and 2 km away from Mangalore -Mysore state Highway that lie across the Sullia town.

Campus MAP



1. COLLEGE BUILDING 2. PLAY GROUND 3. BANK 4. PARKING AREA 5. BOTANICAL GARDEN 6. GIRLS HOSTEL 7. BOYS HOSTEL

VISION:

- The vision of our college is to develop a center of excellence in higher education for the backward people of this 'Malnad' Region.
- ❖ This vision leads us to strive for the enrichment of culture, to develop research-oriented activities, to promote scientific outlook, to honor secularism and to uphold democratic values.
- ❖ Further, the aim is to promote the youth of this region to find opportunities of carrier advancement that brings about a sustained and all-round development for the growth of a healthy, human and enlightened society.

MISSION:

- Providing admission to all eligible candidates of the region to acquire higher education.
- Providing training to the students in the drama, folk and performing arts.
- Connecting the curricular activities with the local socio-economic, cultural and educational conditions.
- ❖ To take extracurricular programmes to the level of local social structure, Environment and literature.
- ❖ Bringing about awareness of one's rights and duties
- * Establishing college-community connections.

Programmes offered by the college: (Table No. 2.1)

Sl. No.	Programmes	
1.	B.A.	
2.	B.Com	
3.	B.Sc	
4.	B.S.W	
5.	B.B.A	
6.	M.Com	
7.	M.S.W	

Total strength of students, teachers and Non-Teaching staff: (Table No. 2.2)

Sl. No.	Category	Number
1.	No. of Students	614
2.	No. of Teachers	53
3.	No. of Non-Teaching staff	20
4.	Total	687

Physical Structure (area): (Table No. 2.3)

- College campus 12 Acres
- Built up area 3.8 Acres

Staff Rooms	18
Class Rooms	35
Office rooms	01
Laboratories	07
Seminar Hall	04
Academy Hall	01
Open Air Auditorium	01
Libraries	02

OBJECTIVES

The main objectives of this audit are to assess the quality of our college environment and strategies being implemented towards improving it. Following are the specific objectives:

- 1. To promote the environment management and conservation in the college campus.
- 2. To monitor the water consumption levels and water wastage if any in the campus.
- 3. To track and record the energy consumption patterns of the campus.
- 4. To examine and quantify the waste generation and waste management practices in the campus.
- 5. To examine the carbon footprint of the college.
- 6. To identify the areas where awareness programmes and the likes are needed in terms of waste management.
- 7. To provide a base for future plans and policy initiatives for creating a sustainable ecosystem.

AREAS EARMARKED FOR GREEN AUDITING

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of an Institution. It is an important part of resource management and when carried out at regular interval can trigger high levels of changes and improvement in an institution. Eco- campus is one whose focus is on judicious use of water and energy, minimisation of waste generation and prudent disposal of the same and reduction of pollution levels.

All the above parameters are assessed in this process of green auditing. The target areas earmarked for the green auditing are water, waste, energy, green campus and carbon footprint.

Auditing for Water and Air Management

Water is a source of life for all the organisms. Drinking water is freely available in some places while it is difficult to get potable water in some places. Depletion of the water table and contamination of ground water is rampant in urban areas which is very alarming, hence the necessity to examine the storage, distribution and usage of water in the college.

Auditing for Carbon Footprint

Humans are not the only cause of carbon dioxide. Fossil fuels also emit greenhouse gases like carbon dioxide, methane, nitrous oxide etc. Use of vehicles in the campus leads to emission of carbon dioxide and this audit tries to assess the modes of transport used by the students and staff to commute to and from the college.

Auditing for Energy management

Conservation of energy is an important component of sustainability. Energy audit tries to track and record the levels of energy consumption. It also tries to explore the possibility of using an alternative source of energy which is environment friendly.

Auditing for Waste Management

In everyday life humans create lots of waste – solid or liquid, degradable or Non-Degradable, wet or dry. Handling, collecting and disposing of this waste without causing harm to the environment is a big challenge before mankind, for this waste can cause pollution becoming health hazards. Categorizing solid waste into bio-degradable, non-biodegradable and hazardous waste is a must. Bio-degradable waste like food waste, canteen waste etc can be converted into manure while non-biodegradable wastes like plastic; glass etc needs more careful disposal. Hazardous waste like chemicals, acid etc are most dangerous to the environment if not disposed scientifically. Special care needs to be taken while disposing such waste in the college. Auditing of waste management tries to quantify the levels of waste in the college and tries to identify the waste disposal system.

Auditing for Green Campus Management

Plants and trees are an essential part of an ecological system and urbanisation has led to trees being cut at an alarming rate. Trees can absorb large amounts of carbon dioxide and emit oxygen into the environment. Trees are good in a campus because of the large number of students that gather in the campus leading to huge quantities of carbon dioxide being released into the environment. Green audit is also an effort to identify and label the trees in the campus.



METHODOLOGY

The following methods were used for data collection and analysis:

Expert Consultation:

Green oudit of Nehru Memorial College Sullia was done by the team of external experts, Dr.Vinayaka K.S, Assistant Professor and HOD in Botany and Dr. Supreeth Kodikal, Assistant Professor and HOD in Zoology from SVS College Bantwal, D.K.

Focus groups:

Green Audit Committee formulated five focus groups – one each for Water management, Waste Management, Energy Management, Hygiene & sanitation Management and Greenary Management committees- for collecting the information. The following students and staff were a part of the focus groups.

Green Campus Audit Committee Coordinator: Mr. Kuladeep P. P.

Head, Department of Botany

Energy Management Focus Group: (Table No. 5.1)

Sl.No.	Name	Designation
1.	Mr.Sathyaprakash D Head, Department of Physics	Coordinator
2.	Mrs.Kripa Lecturer, Department of Social Work	Member
3.	Mrs.Ashwini Lecturer, Department of Physics	Member
4.	Mrs.Sowmya Attender, Department of Physics	Member
5.	Mr. Chashwith A.C. III B.Sc	Student volunteer
6.	Miss Keerthana C.G. II B.Sc	Student volunteer

Waste Management Focus Group: (Table No. 5.2)

Sl.No.	Name	Designation
1.	Mr. Venkataraja C.S	Coordinator
	Head, Department of Computer Science	
2.	Mrs. Ashwini	Member
	Lecturer, PG Department of Commerce	
3.	Mrs.Deeksha M D	Member
	Lecturer, Department of Computer Science	
4.	Mr. Shivananda	Member
	Attender, Departmentof Computer Science	
5.	Miss Gopika K.	Student volunteer
	III B.Sc	
6.	Mr. Keerthan K.V.	Student volunteer
	III B.Sc	

Water and Air Management Focus Group: (Table No. 5.3)

Sl.No.	Name	Designation
1.	Miss Praneetha B P	Coordinator
	Head, Department of Chemistry	
2.	Miss Priya C	Member
	Lecturer, Department of Chemistry	
3.	Mr.Ajithkumar S B	Member
	Lecturer, Department of Botany	
4.	Mrs.Geetha	Member
	Attender, Department of Chemistry	
5.	Mr. Raghavendra M	Student volunteer
	III B.Sc	
6.	Miss Rashmi	Student volunteer
	III B.Sc	

Green Campus Focus Group: (Table No. 5.4)

Sl.No.	Name	Designation
1.	Mrs. Akshatha B	Coordinator
	Head, Department of Zoology	
2.	Mrs. Shobha A	Member
	Lecturer, Department of Social Work	
3.	Mrs. Krithika K.J.	Member
	Lecturer, Department of Botany	
4.	Mr. Jayantha	Member
	Attender, Department of Botany	
5.	Miss Ashitha A K	Student volunteer
	III B.Sc	
6.	Mr.Jagadeesha M	Student volunteer
	III B.Sc	

Hygiene & Sanitation Management Focus Group: (Table No. 5.5)

Sl.No.	Name	Designation
1.	Mrs.Usha M P	Coordinator
	Head, Department of Mathematics	
2.	Mrs.GeethaShenoy	Member
	Lecturer, Department of Commerce	
3.	Miss. Divyashree	Member
	Lecturer, Department of Mathematics	
4.	Mr.Pavan	Member
	Attender, Department of Mathematics	
5.	Mr. Abhijith K.J.	Student volunteer
	III B.Sc	
6.	Miss Charishma P.D.	Student volunteer
	III B.Sc	

Onsite Observation and Data collection through Survey:

Each focus group armed with the concerned areas visited the relevant departments and other places in the campus for collecting data relating to the categorised parameters. Student volunteers were taken on in assisting wherever possible. Once the data was gathered, it was turned over to the committee for analysis and tabulation purposes. The data gathered was verified and authenticated by the external auditor of the green audit committee.

The external auditor did a detailed study of the green audit report and physically verified certain tangible components in the report. The suggestions and recommendations offered by them have been incorporated at the end of the report and will form the basis for future policies and planning for initiatives for sustainable ecosystem in the campus.

Various activities of the college have an effect on the environment. A range of remedies and preventive measures are adopted by the college to reduce the environmental impact. The total population of the campus is 5979 with 182 numbers of working days in the academic year 2021-22. The number of operational days on the campus was less because of mandatory lockdown due to the COVID-19 pandemic.

Population of campus in academic year 2021-22 (Table No. 6.1)

Sl. No.	Year	Month	Number of populations
1		June	32
2		July	182
3		August	191
4	2021	September	174
5		October	86
6		November	890
7		December	910
8		January	872

9		February		
	2022			914
10		March		
				921
11		April		
				424
12		May		
				383
			Total	5979



Consultation with external auditor Dr. Vinanayaka K.S





Identification of Flora and Founa of the Campus



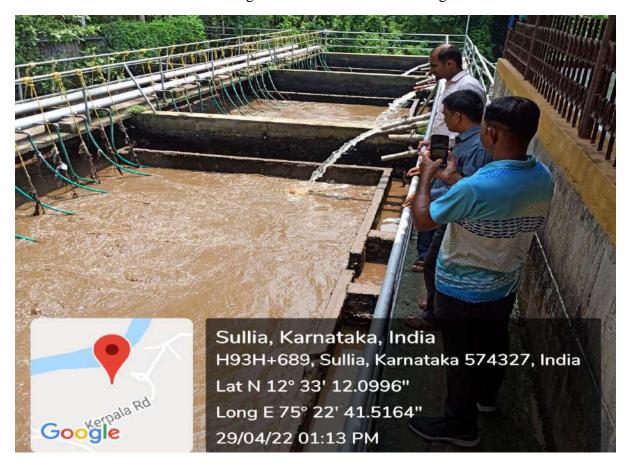


Practical consultation with external





Visit to solid waste management and waste water management units



ENERGY MANAGEMENT

Conservation of energy is an important component of sustainability. Energy audit tries to track and record the levels of energy consumption. Comprehensive energy audit is conducted to review and identify the scope of reducing energy consumption.

The purpose of conducting energy audit is to ensure that the organization is involving energy savings and consumptions towards the roadmap of the national development economy by assessing the electric current usage through energy audit.

Objectives of Energy Audit

- To determine the ways to reduce energy consumption.
- To have standard energy management plan.
- To develop and use alternative energy sources.

Table No. 6.1: Energy Consumption and cost analysis

Location	Numbers
Staff Rooms	18
Class Rooms:	
a) With LCD facilities(portable)	05
b) With wi.Fi/LAN facilities	30
Seminar Hall with ICT facilities	01
Laboratories	07
Library	01
Audio Visual Room with ICT facilities	01
Auditorium	01
Units room	04
Gym	01

Table No. 6.2: Details of energy consumption in the campus

Sl.	Electrical	Total	Power	Total	Operation	No.of	Total
No.	Appliances/	No.	(W)	Power	hour per	days in a	consumpti
	instruments			(kW)	day	month	on (kW)
1	CCTV Camera	127	3	0.369	24	30	265.68
2	Amplifier	1	2	0.002	0.1	15	0.003
3	Speaker	66	8	0.528	0.1	15	0.792
4	Tube light	150	36	5.4	2	25	270
		41	36	1.476	6	25	221.4
5	Tube light LED	10	20	0.2	6	25	30
6	Ceiling Fan	200	60	12.0	1.5	25	450
		155	60	9.3	2	25	465
7	Table Fan	4	40	0.16	0.1	5	0.08
8	LED bulb	90	9	0.81	0.25	25	5.0625
		7	5	0.035	3	25	2.625
9	Filament bulb	34	60	2.04	0.25	12	6.12
10	CFL bulb	30	12	0.36	0.25	25	2.25
		40	9	0.36	0.25	25	2.25
11	Roof light	39	9	0.351	0.25	5	0.4387
12	0 watt bulb	5	15	0.075	0.5	20	0.75
13	Exhaust fan	5	32	0.16	3	25	12
14	Mercury	1	160	0.16	1	10	1.6
	vapour lamp						
15	Sodium vapour	2	35	0.07	1	10	0.7
	lamp						
16	Fridge	3	60	0.18	6	25	27
		1	160	0.16	6	25	24
17	A/C	3	3000	9.0	1	10	90
18	Water purifier	3	40	0.12	6	25	18
19	Computers	112	80	8.96	0.5	25	112
20	Laptops	9	50	0.45	0.5	25	5.625
21	Projector	6	280	1.6	1	20	33.6

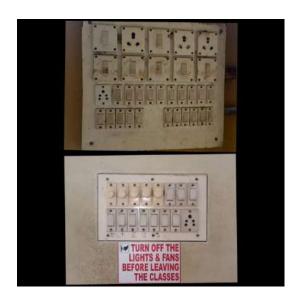
22	Photocopy	2	650	1.3	2	25	65
	machine						
23	Printer	5	60	0.3	0.25	25	1.875
24	LED TV	1	35	0.35	6	25	52.5
	TOTAL						2166.3512

Photo Gallary:





Bulbs Fans





Switch boards Laboratories







AC Water purifier Refrigeratos

Recommendations

- To use energy efficient appliances.
- To increase the use of renewable energy.
- To conduct awareness programs on energy conservation.

WATER AND AIR MANAGEMENT

Water isanimportant natural resource required for the survival ofall living organisms. It is widely available through various sources based on the climate and topographic features of a region. Earth is the only planet to have liquid water on its surface. About 71% of the earth's surface is water-covered and the oceans hold about 96% of all earth's water. Only 2.5% of the water can be used for our essential needs. The human body must require the nearest 3-litre water every day. But this precious resource is increasingly in demand and under threat.. Water pollution and wastage plays a vital role in water crisis. Water contaminations are taking place at an alarming rate. Drinking or using contaminated water leads to many diseases or death. That is why it is important to ensure that drinking water is safe, clean and free from bacteria and disease. It is also important to conserve protect and manage the water resources availability and usage so that it is sustainably used. Our college examines the quality and usage of water in the college campus

Sl. No.	Parameters	Response
1	Source of Water	River water, borewel water
2	Sump	03
3	No. of pumps used	01
4	Number of water tanks	02
5	Capacity of tank	5000 litres
6	Quantity of water consumed every day(approx.)	8310Litres/day
7	Water usage for gardening	2500 litres/day
8	Whether any green chemistry method practiced in labs?	 Purchase of distilled water is avoided in Chemistry laboratorysince it is equipped with distillation plant. Chemicals are reused whenever possible
9	No. of drinking water purifiers	03
10	Any water management plan used?	Yes, Recycling of Waste Water
11	Any water saving techniques followed?	Yes, Rain water harvesting, Drip irrigation

(**Table No. 7.1**)

Quantity of water used in different sections of the college (Approximate):

Department/Block/Building	Consumption (Per Day) in litres
Department	90
Office	100
Laboratories	300
Library	30
Reading room	NIL
Examination hall	30
Classrooms	30
Washrooms	5000
Cleaning	60
Drinking water	200
Gardening	2500

(**Table No. 7.2**)

Water harvesting and conservation methods

The quadrangle of the college has rain water harvesting unit through which rain water is conserved and used in the college. Also the college garden has drip irrigation facility.





The Campus has waste water recycling unit which helps in conserving water by recycling 10 lakh litres of waste water per day. The recycling unit consists of 3 aeration tanks, 2 settling tanks, 3 filter feeds and 6 filter tanks.





Carbon Footprint

- 1. No. of persons using public transportation 331
- 2. Total number of vehicles used by the stakeholders of the college (per day) -148
 - a. No. of cars used 06
- b. No. of two wheelers used 142
- c. No. of three wheelers used NIL
- d. No. of Bicycles used NIL
- e. No. of Electric Vehicles used NIL
- f. No. of stakeholders who walk to the college 192
- 3. Number of LPG cylinders used in lab 01
- 4. Use of any other fossil fuels in the college- NIL
- 5. Any suggestion to reduce the use of fuel:
- (i) Raising awareness among staff and students to use public transport.
- (ii) Encouraging the use of electric vehicles
- (iii) Staff and students who reside close by shall resort to walking.
- (iv) Encouraging students residing nearby college area to come to collegeby bicycle.

Carbon Footprint analysis: (Table No. 7.3)

Sl.No	Mode of Transport used	Number of	Percentage (%)
		Stakeholders	
1.	Public Transportation (Bus, Auto)	341	49.85
2.	Four wheelers	6	0.87
3.	Two Wheelers	144	21.05
4.	Three Wheelers	NIL	0
5.	Walking	193	28.21
6.	Electric Vehicles – Two Wheelers	NIL	0
		Total	100

WASTE MANAGEMENT

Waste disposal are the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.

The waste from all around the campus is separated daily as wet and dry waste in different bags which are disposed separately. Dry waste includes paper, cardboard, glass tin cans etc. on the other hand;

Wet waste refers to organic waste such as vegetable peds, left-over food etc. Separation of waste is essential as the amount of waste being generated today causes immense problem. The material was composted and evaluated as a fertilizing material. Disposal of these waste results in the production of good quality organic manure that can be used as soil amendments and source of plant nutrients.





Pic. (A) Waste Collection and Separation Centre



Pic. (B) Organic Compost Preparation Centre Campus





Pic (C): Waste Water Treatment Centre

Solid Waste Management

Solid waste generated from campus includes mainly paper waste, wet (food/organic) waste and E-waste.

Blue and Green covered/ pedal-pushed dustbins are placed in the premises. Waste bins are provided on each floor, in staff rooms, laboratories, washrooms, and kitchen and in campus area. Being a College with non- residential facility, the quantity of wet (food/ organic) waste generated in the premises is minimum. Biodegradable wet waste is mostly generated from the canteen. In other areas like classrooms, mostly paper waste and plastic wrappers are generated. Segregation of wet and dry waste is practiced within the campus.

Paper Waste Management

Being an academic institution, waste paper is one of the main solid wastes generated in the premises. College has taken steps to minimize and avoid paper usage. The college encourages students to use eco-friendly material and recycle old papers/ scrap for decoration purposes.

E- Waste Management

E- waste is broadly comprised of discarded computer monitors, motherboards, mobile phones and chargers, compact discs, headphones, Printed Circuit Boards (PCB), televisions etc. **E- Waste** is collected & stored in college campus and sent to authorize vendor for recycling/ disposal under buy-back policy.

Plastic Waste Management

College strictly follows the guidelines regarding plastic usage and has prohibited the use of single use plastic e.g. carry-bags, glasses, spoons etc., in the campus.

Water waste Management

Waste water generated from our campus is directly sent to waste water recycle center of our campus. Purified water used to agriculture purpose.



BIOMEDICAL WASTE AND GENERAL WASTE MANAGEMENT

PLACE: NE	HRU MEMORIAL	COLLEGE, SULLIA.D	.k year:	Jan-2021-60 Dece-2021
DATE	DRY WASTE BAG	WET WASTE BAG	TOTAL WASTE BAG	GRAND TOTAL
01/1/21.	32	6	3.8	38
07/1/21.		. 2	39	77
15/1/21		1	<u>a</u> 5	102
21/1/21		4	27	129
02/2/22		. 3	. B4	163
8/2121	37	3	. 39	202
13/2/21	31	1	32	234
20/2/21.		. 3	3.3	237
29/2/21	31	. ã	33 35	270
4/3/21	34		35	305
11/3/21.	30	. <u>â</u>	3 2	. 337
16/3/21.	37	$\overline{l_f}$	35	372
4/4/21	31	. ફ	33	405
9/4/31.	33	7	34	. нз9
17/4/21	30	a	. 33	471
22/4/21	31	Î		503
28/4/21.		ζ.	3.8	. 541
4/5/21		\overline{I}	. 33	573
1315121	3.8	2	.35	668
2015/21.	31	1	32	6 40
29/5/21	28		2.9	669
716/21	29	3	33	701
1916121.	30	1	31	732
2416121	27	1	5.8	760
217121	56	ż	. 8.8	788
1017/21.	25	2 3	2.8	816
19 17121	26	1	. 2.7	843
25 17/21		i	29	878
02/2131	26	2	29	901
09/2121		3	28	929
17/8/20		ĭ	2.8	957
831218		3	ર સે પ	984

HSE OFFICER

KVG MEDICAL COLLEGE & HOSPITAL

Kurunjibhag - 574327, Sullia, D.K.

HEALTH AND THEFT OFFICER

HEALTH INSPECTOR
HEALTH INSPECTOR
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28



BIOMEDICAL WASTE AND GENERAL WASTE MANAGEMENT

PLACE: NEHRU MEMORIAL COLLEGE, SULLIA.D.K

DATE	DRY WASTE BAG	WET WASTE BAG	TOTAL WASTE BAG	GRAND TOTAL
01/9/	21 26	1	27	1011
8/9/		2	29	1040
161913	7. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19	i	26	1066
23/71		. 2	. <u>a</u> 9	1095
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HSE OFFICER

KVG MEDICAL COLLEGE & HOSPITAL Kurunjibhag - 574327, Sullia, D.K.

Karnataka

HEALTH AND SAFETY OFFICER

HENETH THE SPECTOR

MAINTANANCE OFFICER



BIOMEDICAL WASTE AND GENERAL WASTE MANAGEMENT

PLACE: NEHRU MEMORIAL COLLEGE, SULLIA.D.K YELD: Jan 2022. To A

DATE	DRY WASTE BAG	WET WASTE BAG	TOTAL WASTE BAG	GRAND TOTAL
360 C C C C C C C C C C C C C C C C C C C	· ·	a	To	70
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19/3/20		ï	26	264
32/ 3/2		ર	13	277
26/3/23		i	19	296
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22/4/27		1	5.2	408
30/4/2			18	486
03/5/22	14	.3	16	448
11/5/22	. 21	1	33	464
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KVG MEDICAL COLLEGE & NOSPITAL Kurunjibhag - 574327, Sullia, D.K. Karnataka

HEALTH AND SAFETY OFFICER

HIER MINTENANCE OFFICER

COLLEGE & HOSPITAL

MAINTANANCE OFFICER

MAINTA

GREEN CAMPUS MANAGEMENT

Plants are very important components of all the ecosystems as they provide maximum amount of ecological service by providing fresh air, by cooling the environment, by providing food and so on. Planting trees in a campus of educational institutes in a sub urban region uplifts the quality as well as beauty of the surroundings.

It is very important to maintain gaseous balance in the environment. During the process of photosynthesis plant takes up CO_2 and gives back the most essential O_2 for the animals. If there are no enough number of trees, it in turn will increase the amount of CO_2 and will decrease the air quality.

Along with this, plants also deflect and shade the sunlight which reduces heat intensity. The reduction of CO₂ level also significantly reduces the heating effect as it is one of the green house gases.

In addition, they have many more ecological benefits like moderating rain, wind speed, shield from rain, providing shelter to various living organisms.

The campus has native trees, shrubs and herbs with their own ecological benefits. As these plants are adapted to local environmental condition, it is easy to maintain them with less attention. A special attempt has been taken up to plant and maintain a herbal garden with various medicinally important plants. It has a dual purpose of conserving the medicinal plants and for educating the students about economic importance of these plants for their medicinal properties.

Maintenance of greenery supports a rich faunal diversity in the campus. Various insects, amphibians, reptiles, birds and mammals take shelter and beautify the surroundings.

Flora of the campus	(Table No. 9.1)
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Sl.No	Common name	Scientific name	Family	Habitat
1.	Kadamba	Anthocephalouschinensis	Rubiaceae	Tree
2.	Devadaru	Enterolobiumsaman	Mmimosaceae	Tree
3.	Akeshia	Acasiaauriculiformis	Mimosaceae	Tree
4.	Mango	Mangiferaindica	Anacardiaceae	Tree
5.	Indian wild badam	Terminaliacatappa	Combretaceae	Tree
6.	May flower tree	Delonixregia	Caesalpiniaceae	Tree
7.	Seethaphala	Annonasquamosa	Annonaceae	Tree
8.	Gliricidia	Gliricidiasepium	Papilionaceae	Shrub

9.	Uttharani	Achyranthes aspera	Amaranthaceae	Herb
10.	Candle stick plant	Cassia alata	Caesalpiniaceae	Tree
11.	Ixora	Ixora coccinia	Rubiaceae	Shrub
12.	Hybiscus	Hybiscus rosasinensis	Malvaceae	Shrub
13.	Periwinkle	Vincarosea	Apocynaceae	Shrub
14.	Acalypha	Acalyphawilkesiana	Euphorbiaceae	Shrub
15.	Garden croton	Croton sp.	Euphorbiaceae	Shrub
16.	Gerbera	Gerbera sp.	Asteraceae	Shrub
17.	Communist plant	Eupatorium oloratum	Astreraceae	Shrub
18.	Chrysanthemum	Chrysanthemumindicum	Asteraceae	Shrub
19.	Mari gold	Tageteserecta	Asteraceae	Herb
20.	Zennia	Zennia sp.	Asteraceae	Herb
21.	Ageratum	Ageratum conizoides	Asteraceae	Herb
22.	Thunder lilly	Zephyranthesgrandflora	Lilliaceae	Herb
23.	Spider plant	Chlorophytumcomosum	Asparagaceae	Herb
24.	Snake plant	Dracaena trifasciata	Asparagaceae	Herb
25.	Lemon grass	Cymbopogoncitratus	Poaceae	Herb
26.	Rheo	Tradescantiaspathacea	Commelinaceae	Herb
27.	Uppalige	Macarangapeltata	Euphorbiaceae	Tree
28.	Cycas	Cycas sp.	Cycadaceae	Tree
29.	Nagarjuna	Euphorbia hirta	Euphorbiaceae	Herb
30.	Ti plant	Cordylinefruticosa	Asperagaceae	Shrub
31.	Tulsi	Ossimum sanctum	Lamiaceae	Shrub
32.	Thumbe	Lucas aspera	Lamiaceae	Herb
33.	Adusoge	Adhatodazeylanica	Acanthaceae	Shrub
34.	Crotolaria	Crotolariagigantia	Fabaceae	Shrub
35.	Yekka	Calotrophisgigantia	Ascelpediaceae	Shrub
36.	Wild rose	Lantana camara	Verbenaceae	Shrub
37.	Shankhapushpa	Clitoriaternatea	Papilionaceae	Climber
38.	Peacock flower plant	Caesalpiniapulcherim	Caesalpeniaceae	Shrub
39.	Papaya	Carica papaya	Caricaceae	Tree
40.	Brahmi/Ondelaga	Centellaasiatica	Apiaceae	Herb
41.	Bhringaraja	Eclipta alba	Asteraceae	Herb

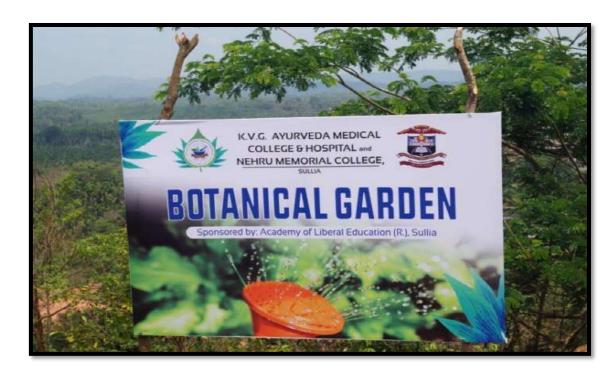
42.	Karnakundala	Impatience balsamina	Balsaminaceae	Herb
43.	Lawn grass	Cynodondactylon	Poaceae	Herb
44.	Wedelia	Sphagneticola trilobata	Asteraceae	Herb
45.	Tridax	Tridaxprocumbense	Asteraceae	Herb
46.	Borreria	Borreriahispida	Rubiaceae	Herb
47.	Fern	Pteris sp.	Pteridophyte	Herb
48.	Fern	Adeantum sp.	Pteridophyte	Herb
49.	Fern	Selaginella sp.	Pteridophyte	Herb
50.	Moss	Funaria sp.	Bryophyte	Thalloide
51.	Liverwort	Marchantia sp.	Bryophyte	Thalloide
52.	Algae	Oedogonium sp.	Algae	Filamentous
53.	Algae	Spirogyra sp.	Algae	Filamentous
54.	Algae	Occilatoria	Algae	Filamentous

Fauna of the campus (Table No. 9.2)

GL NI.	GN	C. A. C. N.	DL 1
Sl. No	Common Name	Scientific Name	Phylum
1	Indian house cat	Felisdomestica	Chordata
2	Indian Dog	Canisfamiliaris	Chordata
3	Cow	Bosindicus	Chordata
4	Indian Grey Mangoose	Herpestesedwardsii	Chordata
5	Indian Peafowl	Pavacristatus	Chordata
6	House sparrow	Passer domesticus	Chordata
7	Red-wattled lapwing	Vanellusindicus	Chordata
8	Indian crow	Corvussplendens	Chordata
9	Kingfisher	Alcedoatthis	Chordata
10	Indian Garden Lizard	Calotesversicolor	Chordata
11	South Indian Flying Lizard	Draco dussumieri	Chordata
12	Asian House Gecko	Hemidactylusfrenatus	Chordata
13	Bark Gecko	Hemidactylusleschenaultti	Chordata
14	Indian rat snake	Ptyas mucosa	Chordata
15	Common krait	Bungaruscaeruleus	Chordata
16	Common Indian Toad	Duttaphrynusmelanostictus	Chordata

17	Indian Bull Frog	Hoplobatrachustigrinus	Chordata
18	Karaavali Skittering Frog	Euphlyctiskaraavali	Chordata
19	Southern Birdwing	Troidesminos	Arthropoda
20	Common Blue Bottle	Graphiumteredon	Arthropoda
21	Common Jay	Graphiumdoson	Arthropoda
22	Tailed Jay	Graphiumagamrmmon	Arthropoda
23	Malabar banded peacock	Papilio Buddha	Arthropoda
24	Common Rose	Pachlioptaaristolocchiae	Arthropoda
25	Crimson Rose	Pachliopta hector	Arthropoda
26	Chocolate pansy	Junoniaiphita	Arthropoda
27	Common Hooktail	Paragomphuslineatus	Arthropoda
28	Indian common clubtail	Ictinogomphusrapax	Arthropoda
29	Jumping Spider	Hyllussemicupreus	Arthropoda
30	Jumping Spider	Teemoniadimidiata	Arthropoda
31	Wall spider	Oecobiusnavus	Arthropoda
32	Jumping spider	Plexippuspaykulli	Arthropoda
33	Black Ant	Formicidaesps	Arthropoda
34	Weaver Ant	Oecophyllasmargdina	Arthropoda
35	Harvester Ant	Monomoriumcriniceps	Arthropoda
36	Bicolour Ant	Formicidaesps	Arthropoda
37	Millipede	Trigoniulus corallinus	Arthropoda
38	House Fly	Musca domestica	Arthropoda
39	Honey bee	Apis indica	Arthropoda
40	Earthworm	Pontoscolex corethrurus	Annelida
41	Snail	Macrochlamysindica	Mollusca

Botanical Garden:

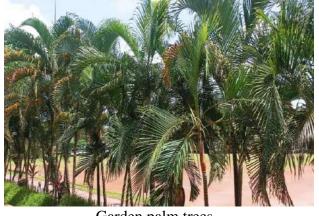






Photos of flora and fauna

FLORA





Garden palm trees

Neem plant





Devadaru trees

May flower tree





Wild badam tree

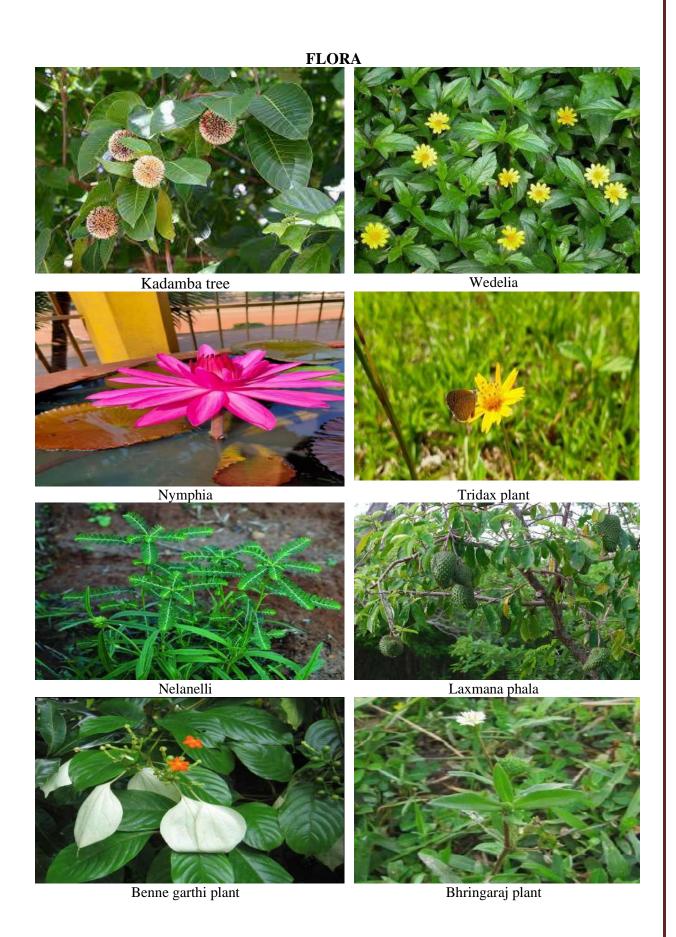
Champa tree

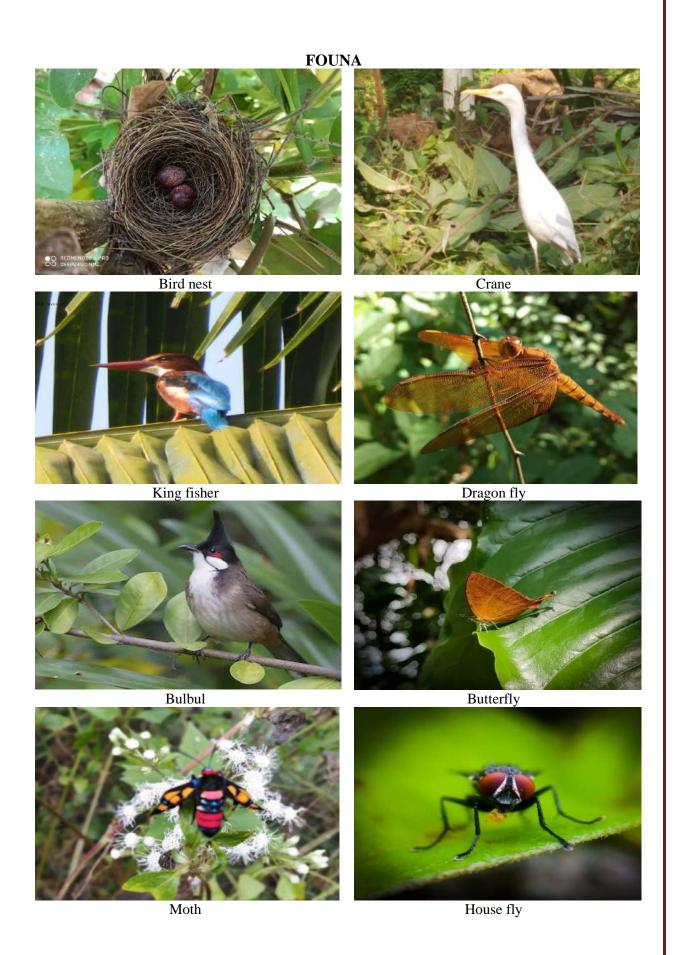




Mango tree

Jack fruit tree





NSS activities:



World Envronment Day and World Earth Day Programmes



Nature Club activities:

Total number of students enrolled: 75

Nature Club activities Report and Photos:

Field visit to Agriculture sites



Nature Club conducted one day Agriculture field study programme on 26th October 2021 about mixed types of Agriculture Practices at Kuriyaje farms, Balila; Apiculture at Sheni, Chokkadi and Ubaradka Mithoor; Dairy forming at Koikuli, Dugaladka.





Dairy farming at Koikuli, Dugaladka, Sullia



Honey bee cultivation at Sheni-Chokkady and Ubaradka, Sullia



Visit to Baddekallu water falls



Students of BSc CBZ visited Baddekallu Falls- Ubaradka, Sullia on 26th October 2021 for studying aquatic biodiversity, forest ecosystem and collected few algal specimens.



Inauguration of Nature Club activities 2021-22



The Nature Club activities for the academic year 2021-22 was inaugurated on **23rd November 2021** by Dr. Chandrashekhar Damle, Retired Professor in Sociology,
Nehru Memorial College Sullia at the College Auditorium.



Guest lecture on 'Nature and our life'



Nature Club in association with Dept. of Life sciences conducted special lecture session on "Nature and our life' by Dr. Chandrashekhar Damle, Retired Professor in Sociology, Nehru Memorial College Sullia at the College Auditorium on 23/11/2021.



Yetthina Bhuja- Devara Mane betta trekking



One day trekking program was organized by Nature club on **28th December 2021**. A team of students, lecturers of Botany, Zoology and Chemistry departments trekked to the Yetthinabhuja- Devara Mane betta hills enthusiastically.



Guest talk and workshop on 'Mushroom Cultivation'



Dept. of Life sciences in association with Nature Club conducted guest talk and workshop on 'Mushroom Cultivation' by Mr. Radhakrishna I, Enterpreneur, Nitya Food Products, Narimogaru, Mukke, Puttur at the College Auditorium on 18/01/2022.



Visit to Microbiology lab and museum



A field visit was carried out to Microbiology lab and museum of KVG medical College and Hospital, Nesara water purifying unit, Adkar; Soap factory Oldgate and BMS milk collecting centre, Menala on 2nd March 2022









Competitions – Life science events



Various competitions such as Boquette preparation from wild flowers, best out of waste, grain art, poem writing etc. were conducted among the members of nature club.



GREEN PRACTICES IN THE CAMPUS:

The college organises several programmes every year so as to create awareness among the students as well as staff on various environmental issues. It is imperative for every stakeholder of the college to be aware of the importance of environment to the society as well as the individual and the importance of conservation of the environment and sustainable use of environmental resources. Every individual can contribute in a small way towards preserving the environmental resources for the future generations. The first step towards this is creating awareness. The departments and different associations of the college try to fulfil this objective through seminars with an objective to create awareness and activities which give hands-on experience in the areas of waste management, water conservation and maintaining green campus. The following are some of the programmes conducted by the departments and different associations of the college (**Table No. 9.3**):

Sl.	Title of the Programme	Organizing Dept. / Assocn. /
No.		Club / Cell
1	Campus Garden Visit	Botany
2	Waste management unit visit	Botany
3	Vermicomposting Practical work	Zoology
4	Class on Vermitechnology	Zoology
5	Campus Garden Cleaning	Nature Club
6	Plantation programme-VanaMahotsava	NCC, NSS, Youth Red Cross & Nature Club
7	Flora and Fauna of College Campus	Nature Club
8		Youth Red Cross aand Nature
	Paddy cultivation training	Club
9	Campus Cleaning Programme	NSS and NCC

HYGIENE AND SANITATION MANAGEMENT

Good hygiene is essential for preventing the spread of infectious diseases and helping students lead long, healthy lives. It also prevents them from missing classes and routine practices, resulting in better learning outcomes. Good hygiene means avoiding illness and spending less on health care.

College buildings and campus facilities are subject to daily wear and tear. These institutions are places where staff and students spend much of their time outside their home. No stone can be left unturned when it comes to creating a safe and healthy learning environment. Hundreds of students, faculty and visitors pour through college campus every day. Hence keeping the buildings, floors and facilities at Administrative rooms, Restrooms, dormitories, classrooms, Gym, Library, Reading room, Laboratories etc in campusclean is essential for health and the positive image of our institution.

Essential daily and weekly campus cleaning includes:

- Sweeping and mopping all hard surface flooring.
- Administrative rooms, Restrooms, dormitories, classrooms, Gym, Library, Reading room, Laboratories etc in campus are sanitized at regular intervals.
- Vacuuming floors and carpets in administrative, staffrooms and dormitory room, sports room, library, laboratories etc.
- Cleaning the walls, windows and other surfaces of rooms throughout the institution.
- Maintaining hand soaps and toiletries.
- Proper storage of cleaning equipment and supplies to prevent rodents and pests.
- Use of effective and safe cleaning products in restrooms,.
- Playground and lawns are regularly pruned in order to avoid propagation of fungal disease.
- The habit of wearing masks is encouraged
- Appropriate disposal of garbage, zero tolerance for littering, maintaining proper hygiene standards is encouraged.
- Provided safe water for drinking and personal hygiene is given importance.
- Creation of cleaning schedules that are checked and maintained by cleaning staff to assure that every room is attended on a regular basis.

Educational institutions are designed for teaching and learning. Clean, nice-looking facilities are a key component to a learning environment. Campus cleanliness is very important hence maintained in-house cleaning staffs for cleaning.



Pruning the College Lawn





Sweeping and Mopping





Maintaining Cleaniness





Sanitization





Drinking Water



Dustbins

ENCLOSURES

Suggestions and Recommendations:

The External Experts of Green Audit Committee, Dr.Vinayaka K. S. and Dr.Supreeth Kodikal made a detailed study of the data and its analysis presented by the Green Audit Committee. They visited the campus and physically verified certain tangible components in the report like the trees and shrubs in the campus, the waste management practices etc. They made some suggestions and recommendations implementable with long-term and short- term consequences. The following are their recommendations:

For Short –Term implementation:

- Making a QR code provision for the plants and trees in the college garden which gives brief information regarding the name of the plant, its botanical name, its benefits etc.
- 2. Better landscaping to improve the green belt and maintain a better botanical garden.
- 3. Maintaining an attractive entrance to the garden.
- 4. Maintaining signage for the Water tanks with relevant information like capacity etc
- 5. Beautification of the college entrance by planting hedging plants
- 6. Provision of more bins for waste collection in a proper segregated manner
- 7. Assigning staff and students to adopt and take care of plants.
- 8. Encourage staff and students to write research-based articles on environmental issues.
- 9. Conducting of competitions among students which would increase their awareness towards environmental issues.

For Long –Term implementation:

- 1. Making provisions for cultivation of Vermiculture.
- 2. Planning for developing a butterfly park.
- 3. Planting a greater number of fruits yielding plants and trees.
- 4. Planning for alternative energy sources like solar system.
- 5. Considering government funded projects to lessen the financial burden on the management.
- 6. Strengthening of the waste management policies and practices.

CONCLUSION

In conclusion, the overall quality of the college environment was found to be satisfactorily good by the green audit committee. The audit helped in identifying the levels of waste generation and the waste management practices in the college. This step goes a long way in future planning for reducing the waste and recycling wherever possible. The audit has also thrown light on the energy consumption levels of the college which will assist in planning for energy saving devices in the future.

Even though the college has organised good number of awareness programmes, the need to create social responsibility among the stakeholders in particular and the community in general towards preservation of the environment has been identified as the call of the hour. It is the earnest hope of the green audit committee that this green audit will provide a basis for future plans and policy initiatives for creating a sustainable ecosystem.



"Giridhama", Kalamanji, Linganamakki (P), Sagar (Tq.), Shimoga (Dist.) - 577 421. e-mail: pranasmg243@gmail.com

CERTIFICATE OF GREEN AND ENVIRONMENT AUDIT

This is to certify that Nehru Memorial College, Kurunjibagh, Sullia574239. Dakshina Kannada, Karnataka has successfully undergone.
Environmental audit, Green audit and Energy audit of their campus on 29-04-2022
and has submitted necessary data and credentials for scrutiny. The activities and measures carried out by the college and green audit team have been verified based on the report submitted and was found to be satisfactory. To assess the Eco-friendly initiatives planning carried out in the campus to maintain a sustainable environment to the stakeholders was found satisfactory. The effort taken by the faculty and student towards environment and sustainability are highly appreciated and commendable.

Dr. Vinayaka K.S. Certified Lead auditor

QUALITY MANAGEMENT SYSTEM

Certificate of Registration

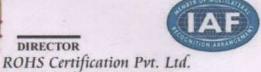


This is to Certify That The Quality Management System of

has been assessed and found to conform to the requirements of

ISO 9001:2015

for the following scope:





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Certificate of Training

TNV hereby certifies that

Dr. Vinayaka K.S

has successfully completed the 5 days

Auditor / Lead Auditor Training Course which meets the training requirements of the Exemplar Global and has been declared as competent in the following competency units

- EM: Environmental Management System
 - AU: Management Systems Auditing
- TL: Leading Management Systems Audit Teams

ISO 14001:2015

Issue Date: 21st Jun. 2021 Training Date: 05th to 09th Jun. 2021 Certificate Number: 2106210721010109

> **Authorised Signatory** (Pragyesh Singh)

This course is certified by Exemplar Global vide registration number

systems Note: The course conforms to the principles and practice for compliance with standards. This certificate remains to certificate is recognized by Exemplar Global For verificate write to Mail: info@isoindia.org



NATURE SCIENCE FOUNDATION

(An ISO 9001:2015 Certified Organization)
LIG-II, 2669, Gandhi Managar, Peelamedu,
Coimbatore – 641 004, Tamil Nadu, India.
Email: directornsf@gmail.com, Phone: 0422 2510006,
Mobile: 91 95667 77255, 95667 77258,
Website: www.nsfonline.org.in.







This is to certify that Dr. VINAYAKA K. S., Assistant Professor & Head, Department of Botany, Sri Venkataramana Swamy College Vidyagiri, Bantwal – 574211, Dakshina Kannada, Karnataka is appointed as a 'Lead Auditor of Environment Management Audits' of the Nature Science Foundation, Coimbatore, Tamil Nadu, India. The service extended by the Lead Auditor to the noble cause of environmental protection and nature conservation is extremely solicited.

It is valid upto 31st December 2026

Motto of NSF

'Save the Nature to Save the Future' & 'Go Green to Save the Planet'

Chairman

Joint Director

B. Hattali Certified Auditor IGBC AP

Certified BEE Auditor

Bureau of Energy Efficiency

Nature Science Foundation

Certified Lead Eco Auditor

Indian Green Building Council