ENVIRONMENTAL AUDIT REPORT

GOVT. SCIENCE COLLEGE, CHATRAPUR

2024-25

GOVT. SCIENCE COLLEGE CHATRAPUR,
Ganjam, Odisha, India

CERTIFICATE

This is to certify that an Environmental Audit of Govt. Science College, Chatrapur was conducted during the month of May 2025 for the academic session 2024–25. The audit covered the assessment of the institution's energy consumption, environmental practices, resource utilization, waste management, water conservation, and measures adopted for environmental sustainability. The audit also evaluated the existing practices and recommended appropriate measures for improvement of the overall environmental performance of the institution.

Members	Signature
1. Dr. B. Anjan Kumar Prusty, Professor, Berhampur University (External Member)	19/06/2025
2. Sri Deepak Kumar Sahoo, Regional Officer, Pollution control board, Berhampur (External Member)	19/06/2025
3. Dr Bishnu Prasad Kar, Faculty member in Chemistry (Co-ordinator)	19.06.2025
4. Dr. Pranati Nayak, Faculty member in Botany (Internal Member)	P. Nayak 19.06.25

CONTENT

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Government Science College, Chatrapur

About the institute: -

Government Science College, Chatrapur, established on 8th July 1969, is one of Odisha's oldest and most distinguished educational institutions. Founded through the efforts of local intellectuals, it initially functioned as a private college before being taken over by the Government of Odisha in 1982. The college began by offering Intermediate courses in Science and Arts and introduced degree programmes in 1970–71, including the B.A. course. In 1976, it launched Science courses with 32 seats in PCM and CBZ, later expanding both enrolment and academic programmes. Honours courses in various disciplines were introduced over time, beginning with Economics and Political Science in 1977–78. In 1980–81, Honours courses in Zoology and History, along with the B.Com. programme, were added, followed by English Honours in the next academic session. Over the years, the institution has grown into a leading center for undergraduate education in 11 subjects of Arts, Science, and Commerce streams, serving students from Chatrapur and neighbouring districts.

The undergraduate programmes of Government Science College, Chatrapur are affiliated with Berhampur University. Committed to academic excellence and the holistic development of students, the college expanded its academic offerings by introducing postgraduate programmes in Odia and History in 1993. In response to growing student demand, the Department of Higher Education introduced postgraduate courses in all remaining Arts, Science, and Commerce subjects during the 2023–24 academic session. Despite limited infrastructure and a compact 4.1-acre campus, the college successfully manages classes from Higher Secondary (+2) to postgraduate level. Functioning under the Departments of Higher Education and Higher Secondary Education, Government of Odisha, the college is located at Chatrapur, the headquarters of Ganjam district, adjacent to NH-16. The institution serves students from diverse social and economic backgrounds across Ganjam and neighbouring districts of southern and coastal Odisha, providing quality education in a supportive academic environment despite infrastructural constraints.

Table 1: Programmes Offered by the Institute

Streams	Subjects	Programmes Offered	Sanctioned Strength for admission
Arts	Economics	UG	64
		PG	32

	English	UG	16
		PG	32
	History	UG	64
		PG	32
	Odia	UG	48
		PG	32
	Political Science	UG	64
		PG	32
Commerce	Commerce	UG	128
		PG	32
Biological Science	Botany	UG	64
		PG	16
	Zoology	UG	64
		PG	16
Physical Science	Chemistry	UG	48
		PG	16
	Mathematics	UG	32
		PG	16
	Physics	UG	48
		PG	16

Buildings of the institute:

The classes of UG and PG courses are being carried out in four blocks, Administrative and Humanities block, Mathematics block, Science Block and Academic Block (New Building). The Administrative and Humanities block is a long building, which contains administrative offices and classrooms and department rooms for the subjects of arts and commerce streams. Mathematics and Science blocks are meant for the respective subjects. The rooms of academic block are meant for the classes of the intermediate and different examinations. Except that there is a Library Block, which consists of a library of books, journals and other paper materials, a reading room and a digital library. Also, there is a smaller block which contains rooms meant for NCC, NSS, sports, Boys Common Room, Language Lab etc.

Environmental Audit: -

Environmental Sustainability is one of the most pressing concerns confronting humanity today. Unsustainable actions have resulted in the deterioration of the environment. Knowledge in related to environment helps each person to act accordingly and it starts from the educational institutions. Higher Education Institutes (HEIs) also have various responsibilities as well as opportunities to

foster environmental sustainability. On the context, the National Assessment and Accreditation Council (NAAC) has introduced Environmental Audit for the HEIs from the year 2016-17 onwards and they have to submit an annual Environment Audit Report. Moreover, it is part of Social Responsibility of the HEIs to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

Methodology followed for Conducting Environment Audit: -

With the above concept, the GSCC starts its Environmental audit from this academic year i.e. 2024-25. In this regard a committee had been constituted with two internal members and two external members by the Principal of the institute to prepare the audit report for the AQAR 2024-25 (Appendix 1).

In this regard, at first, the internal members, on discussion with external members, prepared the Pre-Audit Questionnaires, and later, the related data were collected based on the questionnaires to prepare the report. The environmental audit report of the session thus prepared is described in the following points along with the questions of the pre-audit questionnaires and their answers.

The Pre-Audit Questionnaires and the Answers: -

A. General Questionnaire

Demography Data of the Institute

Q1. What is the area of the campus?

Ans. The campus is spread over 4.1 acres of land.

Q2. What is the total permanent population of the Institute?

Ans. The campus of the college contains buildings and other infrastructures only for curricular, co-curricular, extracurricular and administrative purpose. None of them is meant for residential and hostel purpose. Hence the population of the institute means the students, teaching staff, non-teaching staff and visitors come to the college in the working hours only. The detail of the population given in the following table.

Table 2: Population of the institute.

Sl No	Description	Population
1	Students (2024-25)	1829
2	Teaching Staff	49
3	Non-teaching staff	12
4	Approximate No. of visitors (per day)	~20

Climate and Topography of the Institute

What is the climate and topography details of the Institute?

Climate and Meteorology:

GSCC located in the coastal region of Odisha about 5 km away from the coast of Bay of Bengal, enjoys a salubrious and moderately equable humid tropical climate. The campus experiences three distinct seasons. The Monsoon season is from mid-June to October. Winter starts from November to February followed by hot and humid summer from March to mid-June.

Rainfall:

GSCC, as a part of the Chatrapur receives about 2800mm rainfall annually. About 75% of annual rainfall is received during South-west Monsoon (June to September). South-west Monsoon generally arrives over Chatrapur by second week of June and prevails up to second week of October. During this period, more than 45% days are rainy days. During the period October to December, not every year, the cyclonic storms hit the region, which also contributes to the total rainfall.

Wind:

As Chatrapur situated near the sea, almost every day strong wind (10 to 25 km/h) flows in the morning and evening time. The mid-day and the mid night time the wind speeds are not much. During rainy days, due to a lot humidity, no flow of wind is observed and the temperature of the city is felt high.

Temperature:

Hot weather prevails over campus during March to May. May is the hottest month with average maximum temperature around ~36°C. The average maximum temperature for months of April and May months shows marginal rising trend. Relatively winter is not that severe over Chatrapur as it is situated proximity to the sea. December and January are the coldest months with average minimum temperature of ~16 °C.

Topography:

Topographically the average height of the Chatrapur city is about 17 m above mean sea level. The coordinates of the city are 19.35°N 84.98°E. The institute is situated in one side of the NH16, and in the other side, the city Chatrapur is present.

Geology:

GSCC as part of Chatrapur, Ganjam is characterized by its flat, low laying alluvial plains. Its topography includes gentle slopes and sedimentary soils as it is present in a riverine deltaic plain.

Vegetation:

The GSCC campus vegetation is rich and diverse. It harbours many wild, ornamental and medicinal plant species. Ornamentals like *Hibiscus rosasinensis* (Mandara), *Bougainvillea spectabilis* (Kagaj Phulla), shade and avenue trees such as *Ficus benghalensis* (Bara), *Polyalthia longifolia* (Debadaru) provide greenery and shelter. Medicinally important species like *Azadirachta indica* (Neemba), *Aloe vera* (Gheekuanri), and *Andrographis paniculata* (Bhuin Neemba) highlight the ecological and cultural value of the campus flora. Besides these a number of wild plants cover its grounds.

Infrastructure of the Institute

Q3. Which of the following are available in the institute?

(a) Garden area, (b) Playground, (c) Kitchen, (d) Toilets, (e) Garbage or waste store yard, (f) Laboratory, (g) Canteen, (h) Hostels, (i) Staff quarters, (j) Dispensary, (k) Herbal Garden

Ans. The following table describes the availability of the above areas.

Table 3: Availability of facilities in the institute

Sl. No	Areas	Availability	Details
1	Garden	Yes	(i) Two Gardens near Science block (ii) One garden near Humanity block (iii)One medicinal plant garden near Library block
2	Playground	Yes	(i) Back side of Library is being used as temporary playground. (ii) One badminton court near Science building.
3	Toilets	Yes	12 toilets are available for staff and students.
4	Laboratory	Yes	(i) Physics Department (ii) Chemistry Department (iii)Botany Department (iv)Zoology Department (v) Computer Laboratory (vi)Language Laboratory
5	Canteen	No	

6	Hostels	No	
7	Staff quarters	No	
8	Dispensary	No	
9	Kitchen	No	

Q4. Does the Institute conduct a Green/Environment Audit of the campus?

Ans. Yes, the institute is conducting Green Audit from 2023-24 and for the first time, for the session 2024-25, the institute is conducting an Environmental Audit. Two committees have been formed to conduct the Green and Environmental audits respectively.

Q5. Which of the followings are found near the Institute?

(a) Municipal Dump Yard, (b) Garbage Heap, (c) Open drainage, (d) Public convenience, (e) Sewer line, (f) Stagnant water, (g) Industry, (h) Bus stops, (i) Railway station, (j) Public Halls

Ans. The details of the areas found near the institute are given in the below table.

Table 4: Presence of different areas near the institute.

Sl No	Area	Distance
1	NAC Dump Yard,	Yes, 10 meters away from the backside boundary of the institution.
2	Garbage Heap	No.
3	Open drainage	No.
4	Public convenience	Yes
5	Sewer line	No.
6	Stagnant water	Yes, right side of the entry gate, inside the campus.
7	Industry	No.
8	Bus stops	Yes, On the NH16, near the Institution.
9	Railway station	Yes, nearly 2.5 kms away from the institution
10	Public Halls	Yes, 300 meters away from the institution.

B. Questionnaire on Water storage, Consumption and Conservation

Q6. What are the sources of water in the Institute? Locate the point of entry and point of exit of water in the Institute.

Ans. The sources of water in the institute are the PHD supply water and three bore wells. All the buildings water outlets are connected to water sink, where the water is being soaked to the ground.

Q7. List the uses of water in the Institute.

Ans. Water is being utilized in the purpose of Drinking, Gardening, toilet, laboratory uses and cleaning.

Q8. How does the Institute store water?

Ans. Two underground sumps and 23numbers of tanks above different buildings.

Q9. Is there any water recycling system?

Ans. Currently, the institution does not have any water recycling system. As the campus of the institute is small and also accordingly the water consumption is also relatively less, hence there is no such facility has been installed in the institute.

Q10. Does the Institute harvest rain water?

Ans. Currently, the institute does not have any rain water harvesting units. However, the institute is planning for one unit in the near future.

Q11. What happens to the water used in labs? Whether it gets mixed with groundwater.

Ans. The water from the concerned laboratories like Chemistry is not allowed to mix with the groundwater directly. The water was first neutralized using the required chemicals before putting it into the sink.

Q12. List the number of water purifiers in the campus.

Ans. In institute, four numbers of water purifiers of 7 liters capacity are present for staff members and two numbers of 20 liters capacity water purifier for students.

Q13. List the number of bathrooms in administrative building, hostels etc.

Ans. There are 12 Numbers of toilet-cum-bathrooms are present in different buildings of the institute. However, water is not used for bathing purpose as it is a day institute and no staff quarters and hostels are present inside the institute.

Q14. Are there any water-saving techniques followed in the Institute? If yes, what are they?

Ans. (i) All the water purifiers are fitted with sensors to avoid the water loss.

(ii) Frequent checks of all the faucets, pipelines are being conducted to keep an eye on the leakage. Leakage taps are removed immediately.

(iii) All the students, staffs and faculty members are aware of the unnecessary use of water and its conservation.

C. Questionnaire on Solid waste generated and its management

Q15. List the sources and types of waste generated in the Institute.

Ans. Details of solid waste generated are given in the below table.

Table 5: Solid waste generated in the institute.

Sl. No	Types of Solid Waste	Description
1	Academic and administrative related wastes	Waste paper, pens, refills, glass wastes, food packets, used paper cups, plates, gunny bags etc.
2	Plastic wastes	Plastic wrappers, cans, Pens, Polythenes etc.
3	Horticulture wastes	Dead leaves, twigs, branches etc.
4	Chemical waste	From laboratories
5	E-waste	Outdated Desktops, printers, related power cables etc.

Q16. Is there any waste treatment system in the Institute?

Ans. Currently, we don't have a waste treatment plant in the Institute.

Q17. What is the approximate amount of waste generated per day? (in kg/month)

Ans. The solid wastes generated per day is up to 10 kg.

Q18. How is the waste generated in the institute managed?

Ans. Most of the wastes generated in the institute are solid wastes. These wastes were collected from all the buildings and kept in bigger dustbins by the sweeper of the institute, which are collected by waste collecting vehicles deputed by Chatrapur NAC on weekly basis. The bio-wastes (e.g. dead leaves, twigs, branches etc.) are collected and put inside big whole for the formation bio-manure.

Q19. Do you use reused paper in the institute?

Ans. One sided blank printed pages of discarded printed documents are reused internally for office works and notices. Other waste papers are sold to the venders following due procedures.

Q20. Do you recycle paper in the institute?

Ans. Currently, the institute does not have such facility.

Q21. How would you spread the message of recycling to others in the community? Specify the initiatives taken?

Ans. Cleanliness drives are organized in the campus for cleaning of campus as well as nearby places where the students, teachers and non-teaching staffs participate to clean each and every corners of the places.

Different student groups e.g. NCC and NSS, perform many cleanness drives and organize different programmes to spread the message of recycling to others in the community.

Q22. Can you achieve zero garbage in your institute?

Ans. In practice, yes, by reducing the waste generation, recycling of wastes and choosing the right way of disposal of different wastes based on expert's advices. As this is a relatively smaller institute, the waste generation is itself less and the wastes were removed from the campus by different means.

D. Questionnaire on Energy Consumption and Conservation

Q23. List few ways that you use energy in your institute (Electricity, LPG and Firewood).

Ans. Electricity is used for illumination; functioning of fans and air conditioners; running of the pump houses; working of PCs and other ICT tools; charging of electronic appliances; working of weighing balance, spectrophotometer, centrifuge machine and other instruments in laboratories.

LPG is also used in laboratories for the heating and testing purpose.

There is no use of firewood in the institution.

Q24. List the usage of energy in the Institute (Electricity, electric stove, LPG, Firewood, Petrol etc.)

Ans. The following pie chat, that have been collected from the Energy Audit report of the institute, provide the idea how the electrical energy being consumed by the different buildings of the institute.

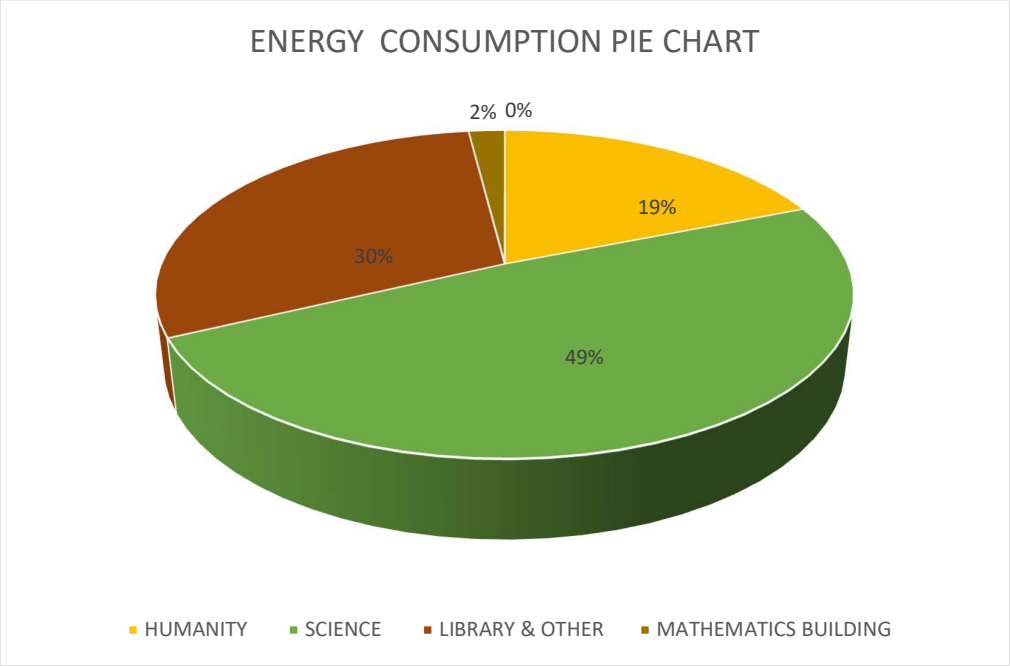

Figure 1: Energy consumption pie chart of the institute (Collected from Energy Audit of the institute).

Q25. Is there any energy saving method employed in your institute? If yes, please specify. If no, suggest some.

Ans. The Energy consumption of the Institute is strictly monitored by avoiding unnecessary and careless usage of the electricity e.g.

(i) Unnecessary illumination is avoided
(ii) Electronic equipment like desktop are put on power –saving mode
(iii) Students and faculty members are directed and made aware of switching off the lights, fans when not in use/ before leaving classrooms

Q26. How many CFL/LED bulbs, tube lights and fans has been installed in the institute?

Ans. A detailed account of fans, lights and other electronic appliances has been documented in the Energy Audit of the Institute. All most all the illumination is by CFL/LED bulbs/tubes. No conventional bulbs are used in practice.

Q27. How many air conditioners have been installed in the Institute?

Ans. 10 numbers of air conditioners have been installed in the Institute. Details are given in the Energy Audit of the Institute.

Q28. Is there any alternative energy source installed in your institute? Give the details of DG sets.

Ans. At present, there is no other alternative energy source installed in the institute. In past, there were a solar panel in the administrative block, which is not working now a days. In future, the institute is planning for new solar panels to reduce the electricity bill of the institute.

Q29. Do you run "switch off" drills at your institute?

Ans. No such drills have been done in the institute in this academic year. However, the teachers take the responsibility to switched off the electrical devices after their use. Also, after closing of the institute, the watchman ensures all the electrical devices switch off except the bulbs/tubes used to illuminate the institute in night time.

Q30. Are your computers and other devices put on power saving mode?

Yes. All the computers and other devices e.g. printers are put on power saving mode.

Q31. Does your machinery (TV, AC, Computer, Printers, etc.) run on standby modes most of the time?

Yes. Depending on the type and their requirements, the machineries are allowed to run on standby mode.

E. Questionnaire on Air quality of the Campus

32. Are the rooms inside campus well ventilated?

Ans. Yes.

33. What are the windows to floor ratio of rooms?

Ans. As it is a Government institute of Odisha, the buildings are made as per the Government guidelines by the R&B department of Odisha Govt. A physical measurement of the buildings has shown that the ratio varies from 0.14 to 0.31, i.e. from 14% to 31% depending on building type.

34. Provide details of institute owned motorized vehicles and staff owned vehicles in the campus.

Ans. The institute does not own any motorized vehicles. However, except a few, all staff members have two wheelers, which they use to come to the institute. Two faculty members use their car to come to the college every day.

35. Specify the types of fuel used by the vehicles.

Ans. Except one two-wheeler, which is an electric vehicle, all other motorized vehicles use petrol as fuel.

36. Do students suffer from respiratory ailments?

Ans. The institute does not maintain such a record as the institute does not have any hostel facility for students, and every day, the students makes to and fro journey to the college from their night rest place through different means.

37. What are the initiatives taken by the Institute for maintaining the Air quality of the campus?

Ans. The National Highway 16 goes near the institute and hence it is difficult to maintain the air quality of campus as a flush of air changes the air of the institute in every moment. However, the institute tries to maintain greenery to keep the air quality better.

On request, the ambient air quality of the institute was analyzed by the Regional Office, State Pollution Control Board, Berhampur, Odisha. For this purpose, the air sample was collected on 21.05.2026 and analyzed. And it is found that the values of SO_2, NO_2 and PM_{10} are under the NAAQ standards. The detailed report is given in the Appendix 2.

Figure 2: Ambient air collection at the institute for the quality measurement.

F. Questionnaire on Greenery of the campus

38. Number of trees plantation drives organized by college annually.

Ans. The college undertakes regular plantation programmes to improve campus green cover and conserve biodiversity. During the academic years 2024–25 Van Mahotsav Week (5–6 July 2024), the institution organized a plantation programme jointly by the Youth Red Cross, NCC and the Department of Botany, during which large-scale tree plantation and awareness activities were conducted to encourage conservation of campus biodiversity. Besides this, employees of

IDBI Bank, Berhampur also participated in the above plantation program. Also on the occasion of NCC day, 2024 and Independecne day, 2024 plantation programs were organized inside the campus.

Photos of Green Practices in this College campus in Academic session 2024-25	
	
Vanamahotshav By Botany Students	Van Mahotsav By IDBI Bank Berhampur in this Colleg Campus
	
Vanmahotsav by Youth Red Cross of this college	Van Mahotsav by NCC of this college
	
Plantation in side this college campus on NCC day 2024	Plantation on the eve of Independence Day-2024(HAR GHAR TRIRANGA)

Figure 2: Photos of Green Practices

39. Mention the involvement of students in maintenance of green cover.

Ans. Besides participation in the plantation drives, the students are also involved in regular watering and maintenance of the plants in the campus.

40. Does the college campus have any horticulture department?

Ans. No, the college doesn't have a horticultural department.

41. Is there any garden in the Institute?

Ans. Yes, the college has 5 different gardens in the campus. These are as follows:

GENERAL GARDEN

MEDICINAL PLANTS GARDEN

BOTANICAL GARDEN 1

BOTANICAL GARDEN 2

FLOWER GARDEN

Figure 3: Pictures of different gardens of the institute.

42. Do students spend time in the garden?

Ans. Yes students especially Botany students spend time in the garden for their practical, maintenance and watering of the plants.

43. Total number of plants in the institute: trees, shrubs, grass cover?

Ans. The campus hosts a rich variety of species across multiple families, reflecting both ornamental and medicinal importance. The diversity includes trees, shrubs, herbs, climbers, and grasses. A total of 127 plant species, which belongs to 121 genera and 46 families, have been found in the campus. The vegetation comprises ornamental, medicinal, avenue, shade, and naturally occurring species that collectively strengthen the ecological stability of the campus. The collection embraced around 45 herbs, 30 shrubs, 25 trees, 10 climbers, 6 grasses, 2 hydrophytes, 1 epiphye and 1 parasite. Among families, Euphorbiaceae, Amaranthaceae, Apocynaceae, Asteraceae and Rutaceae are the dominant families in dicotyledons, whereas in monocotyledons, Poaceae, Arecaceae, Araceae, Agavaceae and Liliaceae are the dominant families. This reflects a balanced composition of dicotyledonous and monocotyledonous flora.

44. What are the names of specific plants in the institute?

Ans. Family wise distribution of plants of the campus is presented as follows.

Table 6: Name of different plants present in the institute.

Sl.No.	**Name of the Plant**	**Local Name**	**Family to which it belong**
1	*Abutilon indicum*	Pedipedika	Malvaceae
2	*Acalypha indica*	Indramarisa	Euphorbiaceae
3	*Acacia auriculiformis*	Akasia	Fabaceae
4	*Achyranthes aspera*	Apamaranga	Amaranthaceae
5	*Adenium obesum*	Desert rose	Apocynaceae
6	*Aegle marmelos*	Bela	Rutaceae
7	*Agave americana*	Sudarsan Lahi	Agavaceae
8	*Aloe vera*	Gheekuanri	Liliaceae
9	*Alternanthera sessilis*	Madaranga	Amaranthaceae
10	*Amaranthus spinosus*	Kantamarisa	Amaranthaceae
11	*Amaranthus viridis*	Leutia	Amaranthaceae
12	*Andrographis echioides*	Bhuin neemba (Chireita)	Acanthaceae
13	*Andrographis paniculata*	Bhuin neemba (Chireita)	Acanthaceae
14	*Annona reticulata*	Neua (ata)	Annonaceae
15	*Antigonom leptopus*	Snehalata	Polygonaceae

16	*Argemone mexicana*	Agara	Papaveraceae
17	*Argyreia nervosa*	Budha Taraka	Convolvulaceae
18	*Averna lanata*	Paunsia	Amaranthaceae
19	*Azadiracta indica*	Neemba	Meliaceae
20	*Boerhaavia diffusa*	Puruni	Nyctaginaceae
21	*Bombax ceiba*	Shimuli	Bombacaceae
22	*Borassus fiabellifer*	Tala (Palm)	Arecaceae
23	*Bougainvillea spectabilis*	Kagaj Phulla	Nyctaginaceae
24	*Caesalpinia pulcherima*	Krushnachuda	Caesalpiniaceae
25	*Calotropis gigantean*	Kala Arakha	Asclepiadaceae
26	*Caloptopis procera*	Dhala Arakha	Asclepiadaceae
27	*Cardiospermum halicapabum*	Anala Prabha	Sapindaceae
28	*Cascabela thevesia*	Kaniara	Apocynaceae
29	*Cassia accidentalis*	Kalachakunda	Caesalpiniaceae
30	*Cassia fistula*	Sunari	Caesalpiniaceae
31	*Cassia siamea*	Bada Chakunda	Caesalpiniaceae
32	*Cassia tora*	Sana Chakunda	Caesalpiniaceae
33	*Casuarina equisetifolia*	Jhaun	Casuaninaceae
34	*Causonia trifolia*	Amal-bel	Vitaceae
35	*Cinnamomum tamala*	Teja Patra	Lauraceae
36	*Chrysanthemum coronarium*	Sebati	Asteraceae
37	*Chrysopogon aciculatus*	Guguchia	Poaceae
38	*Citrus medica*	Lembu	Rutaceae
39	*Cleome gynandra*	Arkashuli	Cleomaceae
40	*Cleome rutidosperma*		Cleomaceae
41	*Cleome viscosa*	anasorisha	Cleomaceae
42	*Clitoria ternatea*	Aparajita	Papilionaceae
43	*Cocculus hirsutus*	Dadaya	Menispermaceae
44	*Coleus scutellarioides*		Lamiaceae
45	*Colocasia esculenta*	Saru	Araceae
46	*Corchorus aestuans*	BAnakadali	Tiliaceae
47	*Crossandra infundibuliformis*	Itimala	Acanthaceae
48	*Croton sparsiflorus*	Banamaricha	Euphorbiaceae
49	*Cynodon dactylon*	Duba ghasa	Poaceae
50	*Cyperus rotundus*	Mutha Ghasa	Poaceae
51	*Dactyloctenium aegyptium*	Crow foot grass	Poaceae
52	*Datura fastuosa*	Dudura	Solanaceae
53	*Dillenia indica*	aou	Dilleniacea
54	*Draceana angustifolia*	Dracaena	Agavaceae

55	*Dypsis lutescens*	Areca Palm	Arecaceae
56	*Emblica officinalis*	Anla	Euphorbiaceae
57	*Eucalyptus globulus*	Neelagiri	Myrtaceae
58	*Euphorbia hirta*	Chitakuti	Euphorbiaceae
59	*Evolvulus alsinoides*	Bicchamalia	Convolvulaceae
60	*Ficus benghanensis*	Bara, Battabrushya	Moraceae
61	*Ficus glomerata*	Dimbiri	Moraceae
62	*Gardenia florida*	Sugandharaj	Rubiaceae
63	*Gerbera jamesonii*	Gerbera	Asteraceae
64	*Glycosmis pentaphylla*	Chauladhua	Rutaceae
65	*Gompherna celosioides*	Dhala godiphulla	Amaranthaceae
66	*Gompherna globosa*	Godiphulla	Amaranthaceae
67	*Gymnema sylvestris*	Gudamari	Apocynaceae
68	*Heliotropium indicum*	Hatisundha	Boraginaceae
69	*Hibiscus rosasinensis*	Mandara	Malvaceae
70	*Hibiscus vitifolius*	Java Mandara	Malvaceae
71	*Hygrophila auriculata*	Koilikhia	Acanthaceae
72	*Impatiens balsamina*	Haragaura	Balsaminaceae
73	*Ipomea carnea*	Amari	Convolvulaceae
74	*Ixora coccinea*	Rangani	Rubiaceae
75	*Jatropha gossypifolia*	Lankakala	Euphorbiacaea
76	*Koeleria macrantha*	Prairie June Grass	Poaceae
77	*Laportea interrupta*	Bichuati	Urticaceae
78	*Leucas aspera*	Gayasa	Lamiaceae
79	*Limonia acidissima*	Kaitha	Rutaceae
80	*Mimosa pudica*	Lajakuli	Mimosaceae
81	*Mimosops elengi*	Baula koli	Sapotaceae
82	*Mirabilis jalapa*	Sandhyamalati	Nyctaginacae
83	*Nerium oleander*	Karabira	Apocynaceae
84	*Ocimum basilicum*	Dhalatulasi	Lamiaceae
85	*Ocimum canum*	Banatulasi	Lamiaceae
86	*Ocimum sanctum*	Kalatulasi	Lamiaceae
87	*Opuntia dillenii*	Saptapheni	CActaceae
88	*Oxalis corniculata*	Ambiliti	Oxalidaceae
89	*Pandanus veitchii*	Golden pandanus	Pandanaceae
90	*Parthenium hysterophorus*	Congress grass	Asteraceae
91	*Passiflora foetida*	Gandha Prasarini	Passifloraceae
92	*Pergularia daernia*	Uturuli	Asclepiadaceae
93	*Philodendron rugosum*		Araceae
94	*Phoenix sylvestris*	Khajuri	Arecaceae
95	*Phyllanthus niruri*	Bhuin Anla	Euphorbiaceae
96	*Pistia stratiotes*	Boerjhanji	Araceae

97	*Polyanthes tuberose*	Rajanigandha	Amaryllidaceae
98	*Polyallthia longifolia*	Debadaru	Annonaceae
99	*Portulaca oleracea*	Table Golap	Portulacaceae
100	*Portulaca grandiflora*	Table Golap	Portulacaceae
101	*Quisqualis indica*	Madhumalati	Combretaceae
102	*Rauwolfia serpentine*	Patalagaruda	Apocyanaceae
103	*Rhyncostylis retusa*	Foxtail orchid	Orchidaceae
104	*Ricinus communis*	Jada	Euphorbiaceae
105	*Rosa indica*	Golap	Rosaceae
106	*Ruellia tuberosa*	Patpati phula	Acanthaceae
107	*Sensevieria roxburghiana*	Muruga	Agaraceae
108	*Sida acuta*	Sunakhadika	Malvaceae
109	*Sida cordifolia*	Bisiripi	Malvaceae
110	*Silanum nigrum*	Nununia	Solanaceae
111	*Streblus asper*	Sahaadaa	Moraceae
112	*Solanum sisymbriifolium*	Bhejibaigan	Solanaceae
113	*Syzygium anisatum*	Ringwood	Myrtaceae
114	*Syzygium smithii*	Common lilly pilly	Myrtaceae
115	*Tagetes patula*	Gendu	Asteraceae
116	*Tamarindus indica*	Tentuli	Fabaceae
117	*Tephrosia purpurea*	Kolathia	Fabaceae
118	*Tradescantia spathacea*	Boat Lily	Commelinaceae
119	*Tragia involucrate*	Bichuati	Euphorbiaceae
120	*Tribulus terrestris*	Gokhara	Zygophyllaceae
121	*Tridax procumbens*	Bisalyakarani	Asteraceae
122	*Terminalia arjuna*	Arjuna	Combretaceae
123	*Ternera ulmifolia*	Basanti	Turneraceae
124	*Vernonia cinerea*	Pokasunga	Asteraceae
125	*Vinca rosea*	Sadabihari	Apocynaceae
126	*Zinnia sp.*	Zinnia	Asteraceae
127	*Ziziphus jujube*	Barakoli	Rhamnaceae

Table 7: Family Representation

Family	**Number of Species**	**Examples**
Amaranthaceae	7	*Amaranthus spinosus, Alternanthera sessilis*
Apocynaceae	6	*Adenium obesum, Nerium oleander*
Euphorbiaceae	8	*Acalypha indica, Ricinus communis*

Fabaceae	4	*Acacia auriculiformis, Tamarindus indica*
Asteraceae	6	*Tagetes patula, Vernonia cinerea*
Rutaceae	4	*Aegle marmelos, Citrus medica*
Moraceae	3	*Ficus benghalensis, Streblus asper*
Malvaceae	4	*Abutilon indicum, Hibiscus rosa-sinensis*
Others (single/double species)	40+	*Aloe vera, Ziziphus jujube, Ixora coccinea*

Several ecologically significant tree species, including ***Azadirachta indica*** **(Neem),** ***Terminalia arjuna*** **(Arjuna),** ***Tamarindus indica*** **(Tamarind),** ***Ficus benghalensis*** **(Banyan),** ***Polyalthia longifolia*** **(Ashoka),** ***Casuarina equisetifolia*****,** ***Bombax ceiba*****,** and ***Aegle marmelos*** **(Bael)** contribute substantially to the campus green cover. Flowering shrubs and ornamental plants such as ***Bougainvillea spectabilis, Hibiscus rosa-sinensis, Ixora coccinea, Gerbera jamesonii, Tagetes patula*****,** and ***Rosa indica*** enhance the aesthetic appeal while supporting pollinating insects. The campus also conserves numerous medicinally important species, including ***Aloe vera, Andrographis paniculata, Azadirachta indica, Phyllanthus niruri, Rauwolfia serpentina, Ocimum sanctum*****,** and ***Gymnema sylvestre***, which have significant traditional and therapeutic value.

45. Are there any specific plants to attract butterflies and facilitate bird nesting?

Ans. several flowering and ornamental species are particularly attractive to butterflies because they provide nectar and act as host plants. These are *Hibiscus rosa-sinensis* (Mandara), *Ixora coccinea* (Rangani), *Tagetes patula* (Marigold/Gendu), *Bougainvillea spectabilis* (Kagaj Phulla), *Rosa indica* (Golap/Rose), *Gerbera jamesonii* (Gerbera), *Zinnia sp.* (Zinnia), *Quisqualis indica* (Madhumalati/Rangoon creeper), *Clitoria ternatea* (Aparajita/Butterfly pea), *Rhyncostylis retusa* (Foxtail orchid) and water lily.

Birds prefer trees and large shrubs that provide dense foliage, sturdy branches, and protective cover for nesting. Such trees and shrubs are *Azadirachta indica* (Neem), *Ficus benghalensis* (Banyan/Bara), *Polyalthia longifolia* (Debadaru/Ashoka), *Bombax ceiba* (Shimuli/Silk cotton tree), Caesalpinia pulcherrima (Radha Chuda), *Aegle marmelos* (Bael/Bela) and *Hibiscus rosa-sinensis.*

G. Questionnaire on Environment Legislative Compliance

46. Are the students and staffs aware of any environmental laws pertaining to different aspects of environment management?

Ans. Yes, our faculties and students are aware of the environmental laws. The UG students read the related topics in the Ethics and Values course. Also, the related fields were being taught in the Environmental studies course in UG First Semester.

47. Does water and waste water quality monitoring conducted by the Institute?

Ans. Drinking water quality is measured yearly and as per the need, the maintenance of the purifiers is being carried out. As it is a smaller institute, the consumption of water is less and hence the quality monitoring of the water from source and the used water are not being conducted.

48. Is any warning notice, letter issued by the government bodies?

Ans. No.

49. Does any hazardous waste generated by the institute?

Ans. No.

50. Does any bio medical waste generate by your institute? If yes explain its category.

Ans. No.

Suggestions and Recommendations: -

1. Install at least one Rainwater Harvesting System to recharge groundwater.
2. Establish a waste segregation system using colour-coded bins for biodegradable, recyclable, plastic, paper, laboratory and e-waste.
3. Reduce paper consumption through increased digital documentation.
4. Install a small composting/vermicomposting unit to convert horticultural waste into organic manure for campus gardens.
5. Reduce single-use plastics during college programmes and encourage reusable alternatives.
6. Install rooftop solar panels to reduce electricity consumption.
7. Organize regular "Switch Off" awareness campaigns involving students and staff.
8. Periodically monitor groundwater quality and treated laboratory wastewater.
9. Increase native and climate-resilient tree plantation every year.
10. Develop a butterfly garden and expand the medicinal plant garden.

11. Label all important plant species with scientific names, common names and QR codes for educational purposes.
12. Strengthen the green belt along the campus boundary facing NH-16 and the nearby municipal dump yard to reduce dust and noise pollution.
13. Encourage cycling, walking and electric vehicles among staff and students.
14. Conduct regular awareness programmes on Waste segregation, Water conservation, Energy conservation, Climate change, Plastic-free campus initiatives.
15. Observe important environmental days such as World Environment Day, Earth Day, Ozone Day and Energy Conservation Day through student participation.

Conclusion: -

The audit indicates that Government Science College, Chatrapur has established several good environmental practices, including extensive campus greenery, laboratory waste neutralization, water conservation awareness, composting of horticultural waste, and periodic environmental audits. However, important improvements are required in rainwater harvesting, renewable energy adoption, waste segregation, and systematic environmental monitoring. Implementing the above recommendations will strengthen the institution's environmental sustainability.

APPENDIX 1

OFFICE OF THE PRINCIPAL
Govt. Science College
CHATRAPUR (Ganjam), PIN:761020 (Odisha)
College e-Mail Address – principalgscc@gmail.com

Office Letter No.: 2062/ GSCC/ 2025 Date: 19/ 04/2025

NOTICE

A committee has been constituted with the following members to conduct environment audit of the college campus for the session 2024-25. They are requested to conduct the audit and submit the report at an earliest.

Members:

1. Dr. B. Anjan Kumar Prusty, Professor, Berhampur University (External Member)
2. Sri Deepak Kumar Sahoo, Regional Officer, Pollution control board, Berhampur (External Member)
3. Dr Bishnu Prasad Kar, Faculty member in Chemistry (Co-Ordinator)
4. Dr. Pranati Nayak, Faculty member in Botany (Internal Member)

19.4.25
Principal
PRINCIPAL
Govt. Science College,
Chatrapur (Gm.)

Memo no: 2063 /GSCC/2025 Dt: 19.04.2025

Copy to all concerned/establishment/IQAC Co-Ordinator/Accounts for information & necessary action.

19.4.25
Principal
PRINCIPAL
Govt. Science College,
Chatrapur (Gm.)

APPENDIX 2

E-mail:rospcb.berhampur@ospcboard.org
Website:www.ospcboard.org

ODISHA

REGIONAL OFFICE OF THE,
STATE POLLUTION CONTROL BOARD, ODISHA,
(DEPARTMENT OF FOREST , ENVIROMENT & CLIMATE CHANGE, GOVERNMENT OF ODISHA)
2nd Floor, New Division Office, IDCO, Berhampur Division,
Industrial Estate, Berhampur, Dist. Ganjam-760008, Odisha, India

Lab. Ref. No. AAQ/73(I) /2025-26 **Dt. 23.05.2025**

ANALYSIS REPORT OF AMBIENT AIR QUALITY MONITORING

Name & Address : M/s Chatrapur Science College
At/Po: Chatrapur, Dist.: Ganjam.

Date of Sample Collection : 21.05.2025

Date of Sample Submitted : 21.05.2025

Sample Submitted by : Miss. Punam Behara, AES

Sl.No.	Location of sampling Station	Parameters		
		SO_2	NO_2	PM_{10}
01.	Near Science Block	5.9	19.8	63
NAAQ Standards		80	80	100
All values (24 hourly Avg) are in $\mu g/m^3$				

S. Parija (JSA)
ANALYSED BY:

AES

REGIONAL OFFICER