



**GOKUL
GLOBAL
UNIVERSITY**

GREEN AUDIT REPORT

2018-2023

Gokul Global University

State Highway-41, Sidhpur – 384151, Gujarat, India

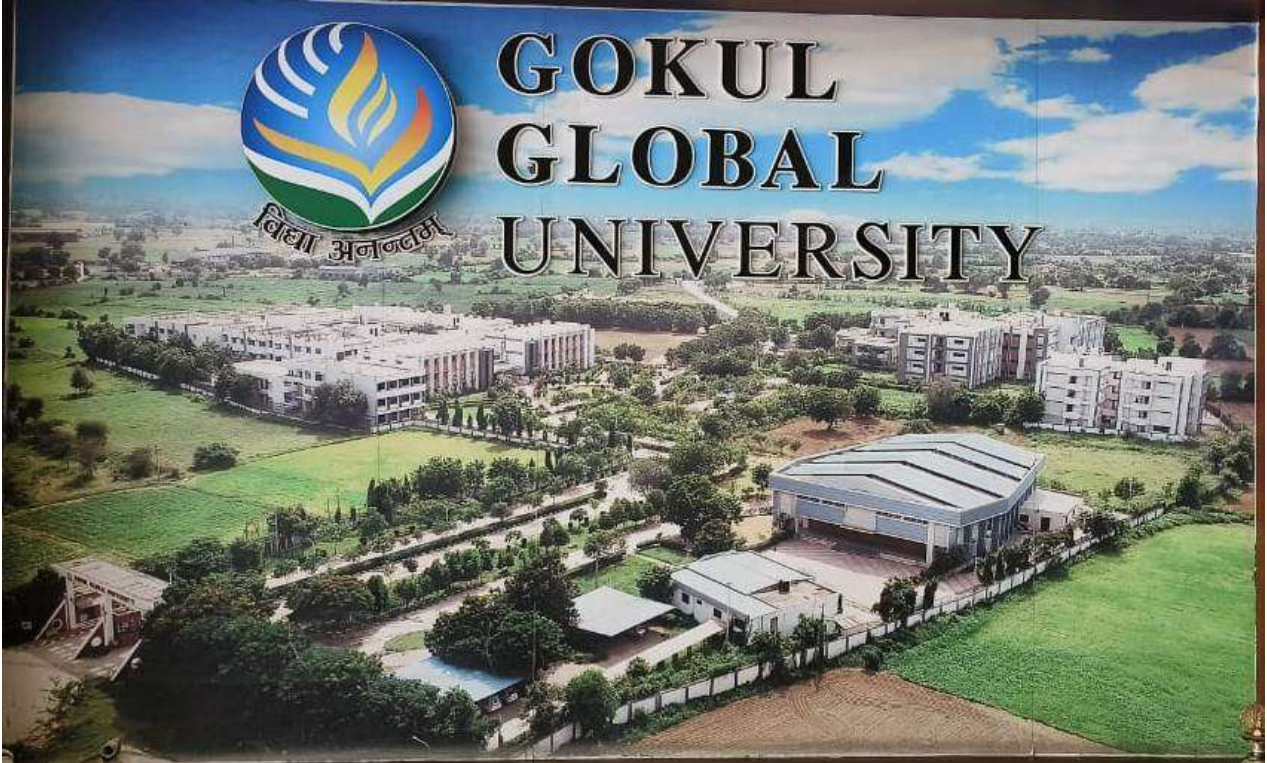
Submitted By

Green Audit Team

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ACKNOWLEDGEMENT



Green Audit Assessment Team thanks to the Dean, Gokul Global University, Sidhpur for assigning the task of Green Audit of the university campus to us. We appreciate the cooperation that we got from all the faculties and students during the entire process. Our special thanks to Prof. (Dr.) Sunil Joshi, Provost & Dr. Himmatsinh Rajput, Registrar of the university for their warm support and encouragement from the very beginning till the end of the process.

The entire team is very grateful to the management of Gokul Global University for their continuous support and motivation to take various innovative and challenging assignments.

Prof. Kartik Patel

Team Leader
Green Audit Team
Gokul Global University, Sidhpur.

DISCLAIMER

Green Audit Team Has prepare this report on the basis of primary data collected from the different areas of the university. All reasonable care has been taken in its preparation: details contained in this report have been compiled in good faith based on information gathered.

Date: 25/03/2023

Prepared by:
Green Audit Team

1. BRIEF ABOUT GOKUL GLOBAL UNIVERSITY

World-class university where learning is nurtured at every corner!

Gokul Foundation Trust was established on 17 August, 2009 with a pious spirit of service-only to the society at large in view of career development of aspirants. Professionally, keeping pace with global standards for higher education and industry of next century with an aim that education-only can play the most significant roles in realizing these dreams, are core motives of Shri. Balwantsinh C. Rajput.

The traditional to professional fields of studies in disciplines of Engineering & Technology, Nursing, Paramedical, Commerce & Management, Science, Law, Arts, Humanities and Social Sciences, Computer Science & Applications, Skill & Vocational Development, Training and AYUSH (Ayurveda) Studies are crystal clear aims of the knowledge creator and nurture center named as Gokul Foundation Trust. This charitable trust bears its key responsibilities to impart, facilitate and manage educational institutions for raising the standards of living. it is popularly governing various faculties for research, post graduate, graduate and diploma courses and programs, and certification approved by professional councils, recognized by UGC and MHRD, the Government of India under the aegis of Gokul Foundation Trust.

2. VISION & MISSION OF GOKUL GLOBAL UNIVERSITY

2.1 VISION OF THE UNIVERSITY

Consummate growth of the Society through excellence in education, research and extension with building generations of highly employable, entrepreneurial and socially responsible global citizens.

2.2 MISSION OF THE UNIVERSITY

To emphasize on all round development of the students aiming at producing not only capable and competent professionals, but also good individuals with inculcation of human values, sense of belonging and sense of responsibility.

3. GREEN AUDIT

Modernization and industrialization are the two important outputs of the twentieth century that have made human life more luxurious and comfortable. They are responsible for voracious use of natural resources, exploitation of forests and wildlife, producing massive solid waste, polluting the scarce and sacred water resources, and finally making our mother Earth ugly and inhospitable. The time has come to wake up, unite and combat together for a sustainable environment.

The intention of organizing Green Audit is to upgrade the environment condition in and around the institutes, universities, companies and other organizations. It is carried out with the aid of performing tasks like waste management, energy saving and others to turn into a better environmental friendly university.

3.1 GOALS OF GREEN AUDIT

- The objective of carrying out Green Audit is securing the environment and cut down the threats posed to human health.
- To make sure that rules and regulations are taken care of to save environment.
- To avoid the interruptions in environment that are more difficult to handle and whose correction requires higher cost.
- The long-term goal of the environmental audit program is to collect baseline data of environmental parameters and resolve environmental issues.

3.2 BENEFITS OF GREEN AUDIT

- It would help to protect the environment in and around the campus.
- Recognize the cost saving methods through waste minimization and management.
- Point out the prevailing and fourth coming impacts on environment.
- Recognize the cost-saving methods through waste minimizing and managing.
- Empower the organizations to frame a better environmental performance.
- Developing an environmental ethic and value systems in youngsters.
- It portrays a good image of an institution which helps building better relationships with the group of interested parties.
- Green auditing should become a valuable tool in the management and monitoring of environmental and sustainable development programs of the University.

4. ENVIRONMENTAL POLICY OF THE UNIVERSITY

Gokul Global University, Sidhpur always believes in maintaining its own standard in matter of environment and quality consciousness. It has taken number of initiatives to protect its own environment with a pollution free campus.

To create a green cover, Eco-friendly atmosphere, pure oxygen at the university campus, a plantation program is organized every year with active participation from the university community and visitors. Green Audit Team owns responsibility to preserve the work carried out on the campus related to the environment.

This also helps in ensuring that the Environmental Policy is enacted, enforced, and reviewed using various environmental awareness programs.

ENVIRONMENTAL POLICY

Both the teaching and Non-teaching staff of Gokul Global University Sidhpur are committed for carryingout its activity for sustainable development. This we will achieve through the following :-

- i. To educate students and staff on how to appropriately utilize water effectively.
- ii. To make the most of the solar energy generated by the solar panels on the roofs of educational buildings.
- iii. To use ICT as much as possible while using paper as little as possible. It will contribute to the "Paperless Office" initiative.
- iv. To lessen the campus' noise pollution.
- v. To protect and nurture the Flora and Fauna on the campus
- vi. To maintain green campus.

5. CONSTITUTION FOR GREEN AUDIT

The Green Audit is carried out as per the environmental policy of the green audit checklist. The aim of the audit is to check the existing practices and provide advice for the development of environmental policy and practice in the areas of:

- ✓ Management water conservation and management
- ✓ Tree plantations
- ✓ Bio-diversity and threatened/ endangered species
- ✓ Preservations Energy use and conservations
- ✓ Eco-friendly campus
- ✓ Green environment and clean campus

MEMBERS OF GREEN AUDIT TEAMS

Sr. No.	Name of Auditor	Designation	Signature
1	Prof. Kartik Patel	Team Leader	K.A. Patel.
2	Prof. Hasanabbas Suthar	Member	H.Suthar.
3	Dr. Narendra Kumar Maurya	Member	N.K. Maurya
4	Prof. Girish Parmar	Member	G.Parmar
5	Prof. Pratik Shata	Member	P.Shata
6	Prof. Anjali Rami	Member	A.Rami
7	Prof. Harsh Patel	Member	H.Patel

6. OBJECTIVES OF THE STUDY

The green audit's primary goal is to support environmental management and conservation on college campuses. According to the relevant laws, rules, and standards, the audit's goal is to identify, measure, explain, and priorities the framework for environmental sustainability. The following are the primary goals of doing a green audit:

- ✓ To secure the environment and cut down the threats posed to human health by analyzing the pattern and extent of resource use on the campus.
- ✓ To establish a baseline data to assess future sustainability by avoiding the interruptions in environment that are more difficult to handle and their corrections requires high cost.
- ✓ To bring out a status report on environmental compliance

7. METHODOLOGY

In order to perform green audit, the methodology included different tools such as preparation of questionnaire, physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following areas to summaries the present status of environment management in the campus

➤ **Water management**

- ✓ Raw Water
- ✓ Drinking Water
- ✓ Waste Water

➤ **Energy Conservation**

- ✓ Diesel
- ✓ Electricity
- ✓ Solar Energy

➤ **Waste management**

- ✓ Domestic waste management

8. FOCUS AREA OF AUDIT

To match with the objective of the green audit, following areas are kept under the scope of the audit.

1. Water management
2. Air Pollution Management
3. Noise Pollution Management
4. Green belt area & Bio-diversity

8.1 WATER MANAGEMENT

Water is a valuable natural resource for all living organisms. It is freely available depending on the climate and topographic features of a region. Water is a precious natural national resource available with a fixed quantum. The availability of water is decreasing due to the increasing population of the nation; as per capita availability of utilized water is going down.

Even though it is naturally present, drinking water that is portable is not easily available for human consumption. Just 3% of the water on our planet, which covers 70% of its surface, is fresh water. The world's 1.1 billion inhabitants are experiencing a water crisis. Water issue is greatly impacted by water pollution and waste. An alarming amount of water is being contaminated. Water contamination can cause a variety of illnesses or even death. Because of this, it's crucial to make sure that drinking water is sterile, clean, and free of germs and illnesses. Also, it's crucial to manage, protect, and conserve water resources so that they may be used sustainably. The use and quality of water on the university campus are being studied by our institution. Water auditing is done to assess raw water intake facilities and identify facilities for water treatment and reuse. The concerned auditor looks at the appropriate approach that may be used to balance the supply and demand for water.

USES AND MANAGEMENT

SOURCE OF WATER

Sr. No.	Resource	Quantity
1	GWI (Dharoi Head Work Water)	0.9 Lac. L
2	No of Open Well	--
3	No of Bore-well	01
4	Water reserve - Underground Tank	7.6 Lac. L

WATER USERS IN CAMPUS

Sr. No.	Person in different section	Strength (No. of person – Approx.)
1	Staff	300
2	Hostel Boarders	450
3	Visitors	1000
4	Construction Labour	90

The visitors of the college vary with respect to different activities conducted in the college campus. During admission and different competitive exam conducted in the college campus. The total number of visitors of the university increases up to 1000 on such day.

WATER CONSUMPTION IN DIFFERENT ACTIVITY IN COLLEGE CAMPUS

Activity	Water used per activity (in Litter)	No. of times Activity performed in a day	Average water used Person/Day	No. of people using water	Total water consumption per Day
Hand and face wash	4-6 L	4	16-24L	1000	20000
Drinking Water	0.2-0.4L	6	1.2-2.4L	1000	1800
Toilet Flush	8-10L	4	32-40L	1000	36000
Bath	30-40 L	1	30-40 L	1000	35000
Cooking Hostel	10-15L	4	40-60L	500	25000
Total					117800 L

WATER QUALITY ASSESSMENT REPORT

ANALYSIS REPORT: DRINKING WATER											
Test Report No./Ref. No.: SCI-51								Date: 12/03/2023			
Name of Customer		Gokul Global University, Sidhpur									
Address of Customer		State Highway -41, Sidhpur, Patan, Gujarat. 384151									
Environmental Condition		Ambient									
Date of Sample Collection		6/3/2023									
Nature of Sample		Colour Less									
Sample Quality		100 ml									
Packing Type		Plastic Bottle									
Type of Sampling		Grab									
Sample Collected By		Mr. Hasanabbas Suthar									
Date of Analysis Start		8/3/2023									
Analysis Conclude on		12/3/2023									
Sr. No.	Parameters	Units	Test Method	Permissible Limit	Main Building	Nursing College	Homeo College	Boys Hostel	Girls Hostel	School Building	Canteen Building
1	pH		APHA 23 rd Edition 4500 H+B	6.5-8.5	7.49	7.31	7.51	7.66	7.42	7.82	7.98
2	TDS	mg/l	APHA 23 rd Edition Titration Method 2540-C	2000	86.6	87.2	82.6	89.6	81.6	96.6	91.6
3	Turbidity	NTU	APHA 23 rd Edition 2130-B	5	0.51	0.61	0.49	0.55	0.40	0.60	0.65
4	Conductivity	µs/cm	APHA 23 rd Edition Titration Method 2510-B	800	215.6	220.8	230.1	233.6	240.8	236.6	239.8
5	Chloride	mg/l	APHA 23 rd Edition 4500 Cl- B	1000	49	43	45	50	55	65	69
6	Total Hardness	mg/l	APHA 23 rd Edition Titration Method 2340-C	600	70	80	68	85	64	86	89
7	Floride	mg/l	APHA 23 rd Edition 4500 F-B	1.5	0.5	0.9	0.6	0.9	0.5	1	1
<p>*Note:</p> <ol style="list-style-type: none"> The results refer only two the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied BDL:Below Detection Limit, MDL:Minimum Detection Limit. Sample will be destroyed after 10 days from the date of test report unless otherwise specified. This report is not to be reproduced wholly or in part or used in any advertising media without permission of the laboratory in writing. This office is not responsible for the authenticity for the samples not collected by over officials. Total liability of over laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat jurisdiction only. Permissible limit: as per schedule VI of EPA Rules 1986. <p>*ND: Not detected, BDL: Below Detection Limit, NA: Not Applicable.</p>											

Testing In-charge

Quality Manager

OBSERVATIONS IN REGARD OF WATER USAGES AND CONSERVATION PLAN

1. Waste water is used for flushing through dual plumbing system installed in all the buildings.
2. The garden is watered using sprinklers and drip irrigation system installed throughout the campus.
3. Drinking water quality is being tested regularly as per plan.

8.2 AIR POLLUTION MANAGEMENT

The university has consistently run programmes to raise staff, student, and societal awareness of the need to preserve and conserve the environment. Moreover, programmes and rallies on different environmental and health-related topics are organised in order to raise awareness. Students and professors at the university participate in NSS/NCC-related events, however the audit team was unable to locate any display boards promoting environmental conservation on the campus grounds.

A) MASS TRANSPORTATION FACILITY

As such campus is not generating any air pollution by its own activity except it has its own transportation department. Faculties and students of the university are motivated to use mass transportation system. Faculties are given some advantages for use of the bus facility provided by the university.

AIR QUALITY ASSESSMENT REPORT

ANALYSIS REPORT: AMBIENT AIR					
Name of Customer		Gokul Global University, Sidhpur			
Address of Customer		State Highway-41, Sidhpur, Patan, Gujarat. 384151			
Environmental Condition		Satisfactory			
Date of Sample Collection		29/7/2022			
Nature of Sample		Colour Less			
Sample Collected By		Mr.Hasanabbas Suthar			
Sample Tested By		Mr.Hasanabbas Suthar			
Date of Analysis Start		29/7/2022			
Analysis Conclude on		30/7/2022			
Sr. No.	Parameters	Units	Test Method	Permissible Limit	Main Building
1	PM ₁₀	µg/m ³	IS 5182 (Part 23) (1999, Reaffirmed 2010)	100	56.45
2	PM _{2.5}	µg/m ³	NAAQMS/36/2012-13	60	18.50
3	SO ₂	µg/m ³	IS 5182 (Part-2)	80	1.30
4	NO _x	µg/m ³	IS 5182 (Part-6)	80	1.89
<p>*Note:</p> <ol style="list-style-type: none"> 1. The results refer only two the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied BDL=Below Detection Limit, MDL=Minimum Detection Limit. 2. Sample will be destroyed after 10 days from the date of test report unless otherwise specified. 3. This report is not to be reproduced wholly or in part or used in any advertising media without permission of the laboratory in writing. 4. This office is not responsible for the authenticity for the samples not collected by over officials. 5. Total liability of over laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat jurisdiction only. 6. Permissible limit: as per schedule VI of EPA Rules 1986. <p>*ND: Not detected, BDL: Below Detection Limit, NA: Not Applicable.</p>					

Testing In-charge

Team Leader

STACK EMISSION ASSESSMENT REPORT

ANALYSIS REPORT: STACK: DG SET					
Name of Customer		Gokul Global University, Sidhpur			
Address of Customer		State Highway-41, Sidhpur, Patan, Gujarat. 384151			
Temperature		31 Degree Celsius			
Weather Condition		Satisfactory			
Date of Sample Collection		29/7/2022			
Nature of Sample		Colour Less			
Sample Collected By		Mr.Hasanabbas Suthar			
Sample Tested By		Mr.Hasanabbas Suthar			
Date of Analysis Start		29/7/2022			
Analysis Conclude on		30/7/2022			
Sr. No.	Parameters	Units	Test Method	Permissible Limit	DG Set
Stack Height in Meter					11
1	PM	mg/Nm ³	IS 11255 (Part-1)	150	37.90
3	SO₂	PPM	IS 11255 (Part-2)	100	17.90
4	NO_x	PPM	IS 11255 (Part-7)	50	27.10
*Note:					
1. The results refer only two the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied BDL=Below Detection Limit, MDL=Minimum Detection Limit.					
2. Sample will be destroyed after 10 days from the date of test report unless otherwise specified.					
3. This report is not to be reproduced wholly or in part or used in any advertising media without permission of the laboratory in writing.					
4. This office is not responsible for the authenticity for the samples not collected by over officials.					
5. Total liability of over laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat jurisdiction only.					
6. Permissible limit: as per schedule VI of EPA Rules 1986.					
*ND: Not detected, BDL: Below Detection Limit, NA: Not Applicable.					

Testing In-charge

Quality Manager

8.3 NOISE POLLUTION MANAGEMENT

A) SILENCE ZONES IN THE UNIVERSITY

For awareness of the need to preserve silence at the institution, several display boards have been put up in the library and other locations.

B) NOISE CONTROL IN THE UNIVERSITY

The institution has enacted a no honking policy that forbids the use of any noise on campus, including honking.

On college campuses, noise pollution is maintained to a minimum and designated quiet zones are established in places like the library and classrooms.

NOISE LEVEL ASSESSMENT REPORT

ANALYSIS REPORT: NOISE			
Name of Customer		Gokul Global University, Sidhpur	
Address of Customer		State Highway-41, Sidhpur, Patan, Gujarat. 384151	
Environmental Condition		Satisfactory	
Date of Sample Collection		1/12/2022	
Sr. No.	Location	Permissible Limit	Day (dB-A)
1	Main Gate	65	63
2	Main Building		52
3	Canteen Area		55
4	Boys Hostel Area		51
5	Homeopathy College		48
6	Girls Hostel Area		52
<p>*Note:</p> <ol style="list-style-type: none"> 1. The results refer only two the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied BDL: Below Detection Limit, MDL: Minimum Detection Limit. 2. Sample will be destroyed after 10 days from the date of test report unless otherwise specified. 3. This report is not to be reproduced wholly or in part or used in any advertising media without permission of the laboratory in writing. 4. This office is not responsible for the authenticity for the samples not collected by over officials. 5. Total liability of over laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat jurisdiction only. 6. Permissible limit: as per schedule VI of EPA Rules 1986. <p>*ND: Not detected, BDL: Below Detection Limit, NA: Not Applicable.</p>			

Testing In-charge

Team Leader

8.4 GREEN BELT AREA & BIO-DIVERSITY

The Green Belt Area is intended to preserve the environment and enhance the visual value of the college grounds. To guarantee that the structures adhere to green standards, the college's green area consists of the campus's vegetation, greenery, and sustainability. Also, by implementing various environmental awareness programmes, this aids in ensuring that the Environmental Policy is adopted, implemented, and evaluated.

OBSERVATIONS

The campus is close to over 40 different types (species) of flora and animals. Via the NSS unit, several tree planting initiatives are held during the months of July and August on college campuses and in the nearby communities. This initiative aids in promoting an eco-friendly atmosphere that gives the institute pure oxygen and raises awareness among the communities. The planting initiative comprises a variety of native decorative and therapeutic plants. The occurrence of similar species planted, such as "NEEM," is noted rather than sustaining biodiversity. Neem, Indian Blackberry Tree, Flame Tree, Mango Tree, Jack Fruit Tree, Teak, and Spanish Cherry Plant are the predominant species in the green belt.







8.5 ENERGY MANAGEMENT

- **Installation of Solar Power Plant/ Panels at Campus**

Gokul Global University, Sidhpur has installed a solar power plant on Main building terrace. Total 357 panels, each of 315 w rating are installed. Total 3 inverters are employed in this plant; two inverters are 55 KVA & one is 10 KVA rating. All generated energy has been transferred to UGVCL. Highest power generated in month was 12000 units. Presently average 12000 + units per month electricity is produced using this power plant.



9. EXECUTIVE SUMMARY & RECOMMENDATIONS


The university has created a green environmental policy and is working to promote sustainable growth on the campus. The university has created a team of academics and students that works to preserve biodiversity on the campus and contributes to efforts to reduce pollution in society. The university intends to add environmental management and protection to its curriculum. The university has given faculty and students workshops and trainings on environmental awareness.


RECOMMENDATIONS


1. Composting of bio degradable waste to be scientifically done
2. Water usage reduction techniques to be used
3. Tree plantation shall be done to maintain biodiversity as well as artificial nesting shall be installed.
4. D. G. stack monitoring/Exhaust gas analysis shall be done.
5. The Biodiversity is to be maintained while considering the plantation in future
6. The selection of trees species to be based on environmental conservation and carbon sequestration value

ANNEXURE I: DETAILS OF PLANTS SPOTTED IN GOKUL GLOBAL UNIVERSITY


A floristic survey was carried out to find plant diversity in the campus of Gokul Global University. The survey was focused on the diversity of plants on the basis of their classification and economic importance.


Habit	Tree	
Botanical Name	<i>Bauhinia purpurea</i> L.	
Common Name	Purple Orchid Tree	
Family	Fabaceae (Caesalpiniaceae)	
Local Names	Gujarati: Kanchnar	
	Sanskrit : Devakanchan	


Habit	Tree	
Botanical Name	<i>Vitex negundo</i> L.	
Common Name	Chaste Tree	
Family	Verbenaceae	
Local Names	Gujarati: Nagod	
	Sanskrit : Sinduvara, Indrani	


Habit	Tree	
Botanical Name	<i>Terminalia catappa</i> L.	
Common Name	Indian Almond	
Family	Combretaceae	
Local Names	Gujarati: Deshi Badam	
	Sanskrit : Inguda	


Habit	Tree	
Botanical Name	<i>Terminalia arjuna</i> (Roxb.) Wight & Arn.	
Common Name	Arjun Tree	
Family	Combretaceae	
Local Names	Gujarati: Arjun, Arjun Sadad	
	Sanskrit : Dhananjaya	


Habit	Shrub	
Botanical Name	<i>Tecoma stans</i> (L.) Juss. ex Kunth	
Common Name	Yellow Bells	
Family	Bignoniaceae	
Local Names	Gujarati: Tilotama	
	Sanskrit :Sidhakya	


Habit	Tree	
Botanical Name	<i>Tamarindus indica</i> Linn.	
Common Name	Tamarind	
Family	Caesalpiaceae (Fabaceae)	
Local Names	Gujarati: Khati Amli	
	Sanskrit : Amlika, Chinchaa	


Habit	Shrub	
Botanical Name	<i>Tabernamontana divericata</i> R.Br. ex Roem. & Schult.	
Common Name	Crape jasmine	
Family	Apocynaceae	
Local Names	Gujarati: Tagar, Tagadi	
	Sanskrit : Nandivriksha	


Habit	Tree	
Botanical Name	<i>Strychnos nux-vomica</i> L.	
Common Name	Strychnine tree, Poison Nut Tree	
Family	Loganiaceae	
Local Names	Gujarati: Zeri Kochalu	
	Sanskrit : Kupilu, Rasyaphala	


Habit	Tree	
Botanical Name	<i>Spathodea campanulata</i> P. Beauv.	
Common Name	African Tulip Tree	
Family	Bignoniaceae	
Local Names	Gujarati: Pichkari	
	Sanskrit : Rugtoora	


Habit	Tree	
Botanical Name	<i>Putranjiva roxburghi</i> Wall.	
Common Name	Lucky Bean Tree	
Family	Euphorbiaceae	
Local Names	Gujarati: Putranjiv	
	Sanskrit : Putranjiv	


Habit	Tree	
Botanical Name	<i>Punica granatum</i> L.	
Common Name	Pomegranate	
Family	Punicaceae	
Local Names	Gujarati: Daadam	
	Sanskrit : Dadima	


Habit	Tree	
Botanical Name	<i>Psidium guajava</i> Linn.	
Common Name	Guava	
Family	Myrtaceae	
Local Names	Gujarati: Jamfal	
	Sanskrit : Amrutphala, Amarudha	


Habit	Tree	
Botanical Name	<i>Prosopis cineraria</i> (L.) Druce	
Common Name	Indian mesquite	
Family	Mimosaceae	
Local Names	Gujarati: Khijdo	
	Sanskrit : Shami Vriksha	


Habit	Tree	
Botanical Name	<i>Polyalthia longifolia</i> Thw.	
Common Name	False Ashoka, Cemetery Tree	
Family	Annonaceae	
Local Names	Gujarati: Asopalav	
	Sanskrit : Devadari	


Habit	Tree	
Botanical Name	<i>Plumeria obtusa</i> L.	
Common Name	Frangipani	
Family	Apocynaceae	
Local Names	Gujarati: Safed Champo	
	Sanskrit : Champey, Hempushpa	


Habit	Tree	
Botanical Name	<i>Plumeria pudica</i> Jacq.	
Common Name	Gilded Spoon	
Family	Apocynaceae	
Local Names	Gujarati: Nagchampa	
	Sanskrit : Gopur Champa	


Habit	Tree	
Botanical Name	<i>Phyllanthus emblica</i> L.	
Common Name	Indian Gooseberry	
Family	Euphorbiaceae	
Local Names	Gujarati: Amla	
	Sanskrit : Amalaki	


Habit	Tree	
Botanical Name	<i>Polyalthia longifolia</i> var. <i>pendula</i> Benthall	
Common Name	False Ashoka	
Family	Annonaceae	
Local Names	Gujarati: Pendula	
	Sanskrit : Asopalava	


Habit	Tree	
Botanical Name	<i>Peltophorum pterocarpum</i> (DC.) K.Heyne	
Common Name	Copperpod Tree	
Family	Caesalpiniaceae (Fabaceae)	
Local Names	Gujarati: Tamrasingi	
	Hindi/Sanskrit : Pila Gulmahor	


Habit	Tree	
Botanical Name	<i>Nyctanthes arbor-tristis</i> L.	
Common Name	Night-blooming Jasmine	
Family	Oleaceae	
Local Names	Gujarati: Parijat	
	Sanskrit : Parijata	


Habit	Small Tree	
Botanical Name	<i>Nerium indicum</i> Mill.	
Common Name	Oleander	
Family	Apocynaceae	
Local Names	Gujarati: Lal Karen	
	Sanskrit : Raktapushpa, Karavirah	


Habit	Tree	
Botanical Name	<i>Morus alba</i> L.	
Common Name	Mulberry	
Family	Moraceae	
Local Names	Gujarati: Shetur	
	Sanskrit : Tula	


Habit	Tree	
Botanical Name	<i>Mimusops elengi</i> Linn.	
Common Name	Bullet wood Tree	
Family	Sapotaceae	
Local Names	Gujarati: Borsalli	
	Sanskrit : Bakula, Madhugandha	


Habit	Tree	
Botanical Name	<i>Manilkara hexandra</i> (Roxb.) Dubard	
Common Name	The Ceylon Iron Wood	
Family	Sapotaceae	
Local Names	Gujarati: Rayan	
	Sanskrit : Kshirini	


Habit	Tree	
Botanical Name	<i>Madhuca longifolia</i> (J.Konig) J.F.Macbr.	
Common Name	Butter tree	
Family	Sapotaceae	
Local Names	Gujarati: Mahudo	
	Sanskrit : Mahuwa	


Habit	Herb	
Botanical Name	<i>Hymenocallis littoralis</i> (Jacq.) Salisb.	
Common Name	Spider Lily	
Family	Amaryllidaceae	
Local Names	Gujarati: Lili	
	Sanskrit : Nagadamni	


Habit	Tree	
Botanical Name	<i>Gmelina arborea</i> Roxb.	
Common Name	Candhar Tree	
Family	Verbenaceae	
Local Names	Gujarati: Sevan	
	Sanskrit : Gambhari	


Habit	Tree	
Botanical Name	<i>Ficus virens</i> W. T. Aiton	
Common Name	White Fig	
Family	Moraceae	
Local Names	Gujarati: Pipli	
	Sanskrit : Plaksa	


Habit	Tree	
Botanical Name	<i>Ficus glomerata</i> Roxb.	
Common Name	Cluster Fig	
Family	Moraceae	
Local Names	Gujarati: Umro, Umardo	
	Sanskrit : Udumbara, Sadaphala	


Habit	Tree	
Botanical Name	<i>Ficus benghalensis</i> L.	
Common Name	Banyan tree	
Family	Moraceae	
Local Names	Gujarati: Vad	
	Sanskrit : Nyagrodha, Vata	


Habit	Shrub	
Botanical Name	<i>Duranta rapens</i> L.	
Common Name	Golden Dew Drops, Sky Flower	
Family	Verbenaceae	
Local Names	Gujarati: Kata Mehandi	
	Sanskrit : Damyanti	


Habit	Tree	
Botanical Name	<i>Derris indica</i> (Lam.) Bennet	
Common Name	Indian beech	
Family	Papilionaceae (Fabaceae)	
Local Names	Gujarati: Karanj	
	Sanskrit : Karanja	


Habit	Tree	
Botanical Name	<i>Dendrocalamus strictus</i> (Roxb.) Nees	
Common Name	Bamboo	
Family	Poaceae	
Local Names	Gujarati: Vaans	
	Sanskrit : Vaansa	

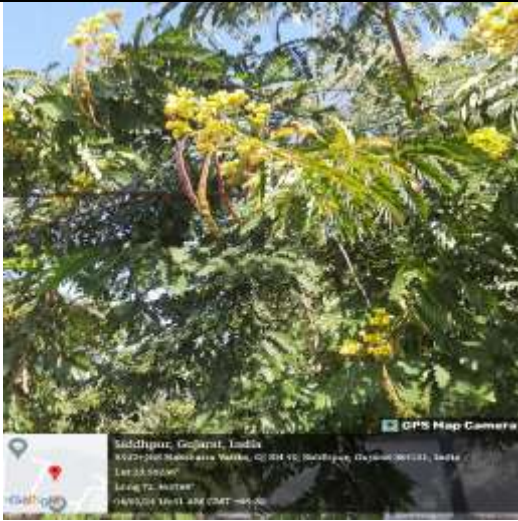
Habit	Tree	
Botanical Name	<i>Cordia sebestina</i> L.	
Common Name	Scarlet cordial	
Family	Cordiaceae, Boraginaceae	
Local Names	Gujarati: Sebesta	
	Sanskrit : Bohari	

Habit	Shrub	
Botanical Name	<i>Citrus medica</i> L.	
Common Name	Citron	
Family	Rutaceae	
Local Names	Gujarati: Bijoru	
	Sanskrit : Bijpurna	


Habit	Shrub	
Botanical Name	<i>Citrus limon</i> (L.) Osbeck	
Common Name	Lemon	
Family	Rutaceae	
Local Names	Gujarati: Limbu	
	Sanskrit : Nimbuka, Jambira	


Habit	Herb	
Botanical Name	<i>Catharanthus roseus</i> (L.) G.Don	
Common Name	Madagascar Periwinkle	
Family	Apocynaceae	
Local Names	Gujarati: Barmasi	
	Sanskrit : Nithya Pushpa	


Habit	Tree	
Botanical Name	<i>Casuarina equisetifolia</i> L.	
Common Name	Whistling Pine	
Family	Casuarinaceae	
Local Names	Gujarati: Sharu	
	Sanskrit : Sharu	


Habit	Tree	
Botanical Name	<i>Senna siamea</i> (Lam.) Irwin et Barneby	
Common Name	Kassod Tree	
Family	Caesalpiaceae (Fabaceae)	
Local Names	Gujarati: Kashid	
	Sanskrit : Swarn Patri	


Habit	Tree	
Botanical Name	<i>Caryota urens</i> L.	
Common Name	Elephant Palm, Fish tail palm	
Family	Arecaceae	
Local Names	Gujarati: Shivjata	
	Sanskrit : Shritalah	


Habit	Herb	
Botanical Name	<i>Canna indica</i> L.	
Common Name	Indian Shot, Indian Bread Shot	
Family	Cannaceae	
Local Names	Gujarati: Bajjarbatu	
	Sanskrit : Sarvajaya, Krishnatamara, Devakeli	

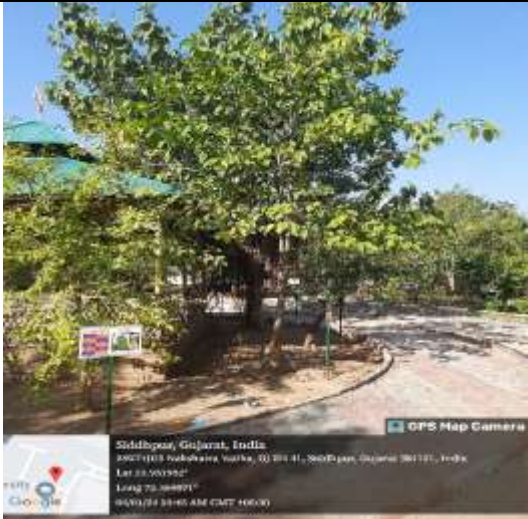
Habit	Shrub	
Botanical Name	<i>Calotropis procera</i> (Ait.) Ait. F.	
Common Name	Dead Sea Apple	
Family	Asclepiadaceae	
Local Names	Gujarati: Aakdo	
	Sanskrit : Arka, Shwetarka	


Habit	Tree	
Botanical Name	<i>Butea monosperma</i> (Lam.) Taub.	
Common Name	Flame of the forest	
Family	Papilionaceae (Fabaceae)	
Local Names	Gujarati: Kesudo, Khakhro	
	Sanskrit : Palash Vriksh	

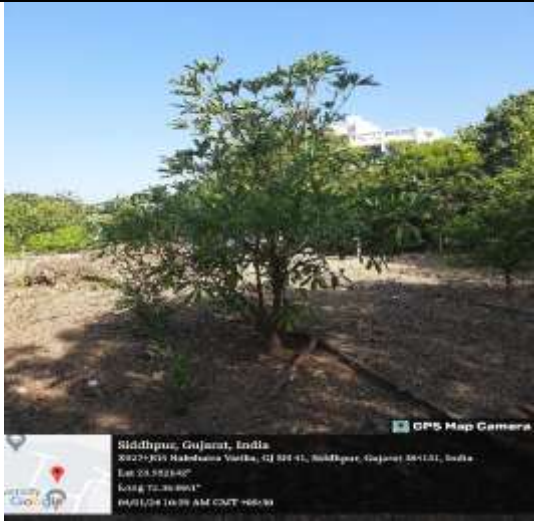
Habit	Shrub	
Botanical Name	<i>Bougainvillea spectabilis</i> Willd.	
Common Name	Great bougainvillea	
Family	Nyctaginaceae	
Local Names	Gujarati: Boganvel	
	Sanskrit : Not available	


Habit	Tree	
Botanical Name	<i>Bombax ceiba</i> L.	
Common Name	Silk cotton tree	
Family	Bombacaceae	
Local Names	Gujarati: Shimlo	
	Sanskrit : Shaalmali	


Habit	Tree	
Botanical Name	<i>Azadirachta indica</i> A. Juss.	
Common Name	Neem	
Family	Meliaceae	
Local Names	Gujarati: Kadvo Limdo	
	Sanskrit : Arista	

Habit	Tree	
Botanical Name	<i>Neolamarckia cadamba</i> (Roxb.) Bosser	
Common Name	Common burflower	
Family	Rubiaceae	
Local Names	Gujarati: Kadamb	
	Sanskrit : Kadamba	

Habit	Herb	
Botanical Name	<i>Amaranthus viridis</i> L.	
Common Name	Pigweed	
Family	Amaranthaceae	
Local Names	Gujarati: Jangali Tandaljo	
	Sanskrit : Tanduliya	

Species Type	Tree	
Botanical Name	<i>Alstonia scholaris</i> (L.) R. Br.	
Common Name	Devil Tree	
Family	Apocynaceae	
Local Names	Gujarati: Saptaparni	
	Sanskrit : Saptaparna	

Habit	Tree	
Botanical Name	<i>Aegle marmelos</i> (L.) Corrêa	
Common Name	Golden apple, Stone apple, Wood apple	
Family	Rutaceae	
Local Names	Gujarati: Bilipatra	
	Sanskrit : Bilva or Sripthal or Shivadruma	

Species Type	Tree	
Botanical Name	<i>Adenium obesum</i> (Forssk.) Roem. & Schult.	
Common Name	Desert Rose	
Family	Apocynaceae	
Local Names	Gujarati: Lal Champo	
	Sanskrit : Not available	

ANNEXURE-II : LIST OF BIRDS SPOTTED IN & AROUND GGU

A survey was carried out to find the animal diversity in the campus of Gokul Global University Sidhpur. The survey focused on the diversity of birds, butterfly, Amphibia.



Common name: Squirrel

Scientific name: *Sciurus vulgaris*



Common name: Heron

Scientific name: *Ardea cinerea*



Common name: Domestic Pigeon

Scientific name: *Columba livia domestica*



Common name: Indian Parakeet
Scientific name: *Psittacula krameri*



Common name: Black ibies
Scientific name: *Pseudibis papillosa*



Common name: Common babbler
Scientific name: *Turdoides caudetus*



Common name: Black Drongo

Scientific name: *Dicrurus macrocercus*

ANNEXURE-III : LIST OF RAPTIRES SPOTTED IN & AROUND GGU



Common Name: House Rat

Scientific name: *Rattus rattus*



Common Name: Indian Garden Lizard

Scientific name: *Calotes versicolor*



(In the picture: A student of B. Tech Computer Engineering (Sem. 8)

Mr. Akshar Chanpura - a professional snake catcher.)

Scientific name: *Naja naja*

Common Name: Indian Cobra



Common name: Indian Sand Boa

Scientific name: *Eryx johnii*



(In the picture: A student of B. Tech Computer Engineering (Sem. 8)

Mr. Akshar Chanpura - a professional snake catcher.)

Common name: Common rat snake

Scientific name: *Ptyas mucosus*



Common name: Varanus

Scientific name: *Varanus varius*