

# **GREEN AUDIT REPORT 2023-24**



GOVERNMENT COLLEGE THEOG
District SHIMLA-171201
HIMACHAL PRADESH
Affiliated to Himachal Pradesh University Shimla-6

Website: https:// gctheog.edu.in Email ID: gctheog123@gmail.com Phone -01783-237530 Mr. Lakhbeer Singh Assistant Professor of Environment Sciences Centre of Excellence Govt. College Sanjauli District Shimla, HP.

# To Whom It May Concern

Dated: 12 August 2024

It is hereby certified that I have worked as the External Member of the Green Audit Report of Govt.

College Theog for the academic session 2023-24. I further certify that I have visited the college and guided the internal committee members to prepare the report and in the actual conduct of the green audit. I have gone through the contents of the Green Audit Report prepared by the college and verified the contents of the document to the best of my knowledge and ability.

I wish the college all the very best in all its future endeavours.

Mr. Lakhbeer Singh

Lakebeer Sings

Centre of Excellence Govt. College, Sanjauli, Shimla - 6

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#### 1. ABOUT GREEN AUDIT

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. It aims to analyze environmental practices within and outside of the college campus of Government Degree College Theog, which will have an impact on the eco-friendly ambience. Educational institutions have broad impacts on the world around them, both negative and positive. The activities pursued by campus can create a variety of adverse environmental impacts. But they are also in a unique position as educational institutions to be leaders in pursuing environmentally sustainable solutions. Many initiatives were taken by Government Degree College Theog and expressed its commitment to sustainability while forming a committee to conduct the green audit of the campus by the appropriate government agency. The College has taken a number of positive steps to reduce its environmental impact. But many areas remain in which substantial improvements can be made. This report serves to highlight some accomplishments of and to make recommendations for improving the campus Green and environmental sustainability.

We have focused on certain indicators, covering an extremely wide range of environmental impacts. For each indicator, we establish a benchmark to evaluate College's overall performance. We examine the performance of College on each of these indicators, and offer recommendations about how the campus can reduce its environmental impact within each indicator.

We hope that the time to time Green Audit will provide an accurate snapshot of College's environmental impact at this point in time, and that it will aid the campus in prioritizing positive steps it can take to improve overall sustainability.

#### 2. OVERVIEW OF THE COLLEGE

The college was established in 1998, vide Notification No EDN-A-Chha (15)-13/97 dt 11-12-97 of the Government of Himachal Pradesh, as a co-educational institution. The first academic session commenced in the year 1999 with admissions to the first year of the three-year degree course. Teaching commenced with a modest strength of about 100 students. The Science and

Commerce Faculty were introduced in the session 2002-03. Today, the college has 1084 students on its rolls. The college has been a great boon for the girls living in Theog and its surrounding areas. Earlier parents were reluctant to send their daughters to the far off colleges at Shimla. Theog College has been a boon to them and has really improved female literacy in this region. The fledgling college started functioning in the building of a former primary school. The college has been assessed and accredited by NAAC with Grade 'B'. The imposing facade of the present complex and related infrastructure came up in 2006. The college has adequate number of classrooms, (14 smart class rooms), one common room for girls, Science laboratories, one language laboratory, one conference hall and two computer laboratories having internet facilities. The campus is Wi-Fi enabled. The college library is very well-stocked and includes a large reading-room with computer facility. It has always worked towards the all-round development of its students and lays special emphasis on sports and extra-curricular activities. Some add-on/self-financing/skill courses are also planned, as soon as Government approval is received.

Government College Theog has now completed two decades of existence. The institution takes pride in shaping the raw and energetic youth into educated and responsible citizens. The steadfast objective of this institution of higher learning is to impart quality education, with the constant efforts of its dedicated faculty.

At present the college caters to the academic requirements of more than 1086 students of Theog and its surroundings. Presently as many as 25 teaching and 15 non-teaching members are providing their services in the campus.

#### 3. Vision & Mission:

#### Vision:

The vision of the college is "To transform society through knowledge, capabilities, ethics, truth, inclusiveness, creativity and excellence by providing quality higher education". The college is committed to the holistic development of its students by making them academically excellent, professionally skilled, mentally strong and socially responsible citizens so that they become contributors to society as well as lead a better and capable life.

#### Mission:

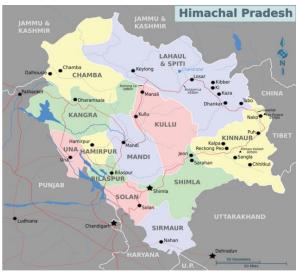
The mission of the college is to prepare students as sensitive, objective, value-oriented, productive human being who can contribute to the society. To develop a state of art by making the college a centre of excellence that brings out student's total personality emphasizing ethical values and growing challenges of the diverse social needs of the state as well as of the nation. The mission of the college is to help the students to acquire comprehensive competitive skills, develop ethical values and concerns for environment. The college aims to achieve its vision through the following mission statements:

- Strengthen the Teaching-learning Environment: The college aims to strengthen teaching-learning environment through ICT, subject societies, faculty development programs, alumni association, collaborations and on-line/off-line feedback system.
- Extension and Upgradation of Infrastructure Facilities: Extension and up gradation of infrastructural facilities like; smart class rooms, library, playground and laboratories to strengthen the teaching learning environment are being executed from time to time.
- Inculcate the Spirit of Social Service and Nationalism: The spirit of social service and nationalism is being inculcated through NSS, NCC, Red Ribbon Club, Rovers and Ranger.
- Healthy Competition, Mutual Cooperation and Social Responsibility: The students
  are motivated to participate in different academic, sports, cultural and co-curricular
  activities.
- Multidisciplinary Platform of Education: Through implementation of Choice Based Credit System (CBCS) in B.A., B.Sc. and B. Com. the multidisciplinary platform is being created as per the direction of the GoHP.
- Extension Activities: The extension activities are being executed through NSS, NCC, Rovers & Rangers and primary data-based research work undertaken by departments by involving students aims to address the societal problems academically. The college also contribute by extending its capabilities to various government departments in extension of different social programmes.

• **Social Responsibility:** To develop a culture of sensitivity to gender issues and identities; to challenges faced by differently abled people and economically-weaker sections; and to experiences of people from marginalised communities.

#### 4. LOCATION OF THE INSTITUTION







#### **5. Objectives of the Report:**

The main objectives of Environmental Audit in Academic Institution are:

> To provide environmental education through systematic environmental management approach

- > To understand the awareness of employees and learners towards environmental conservation.
- > To recognize the initiative taken by organization towards environmental conservation.
- > To understand and recognize the effects of an organization on the environment and vice versa
- > To ensure that the natural resources are utilized properly as per national policy of environment.sustainable use of natural resource in the campus
- To develop an environmental ethic and value systems in young people
- > To study waste minimization and safe disposal of waste particularly hazardous wastes.
- ➤ Initiatives for water and energy conservation.
- > To contribution and participation by various stakeholders in the environmental conservation and management.
- > To diagnose and find out solutions for the environmental problems
- To facilitate the stakeholders with different aspects of disaster management

#### 6. AUDIT PARTICIPANTS:

#### On behalf of State Pollution Control Board

Sr. No.	Name	Designation
1		Member Secretary, HP Pollution
		Control Board

#### On behalf of College

Sr. No.	Name	Designatiom
1.	Dr. LalitaChandan	Principal
2.	Dr. Neeraj Sharma	IQAC Co-ordinater
3.	Dr Nidhi Dhatwalia	IQAC Member
4.	Dr rajender Prakash	Convener
5.	Dr Rashika Sharma	Member
6.	Dr Rajesh Kumar	Member
7	Dr Vikas Nathan	Member
8	Prof Anamika Ramchaik	Memeber

#### 7. Floral Diversity in the Campus:

The campus of Government College Theog, nestled in the scenic hills of Himachal Pradesh, is a haven for floral diversity. The region's unique geography, with its temperate climate and varying altitudes, provides an ideal environment for a wide range of plant species. Common species include rhododendrons, which bloom in shades of red and pink during spring, and various species of ferns and grasses that thrive in the shaded areas. The temperate climate also supports several species of oak and pine, deodar, which, in turn, create a microenvironment for mosses, lichens, and ground-covering plants. The biodiversity of the campus not only enhances the visual beauty but also contributes to environmental health by supporting pollinators such as bees, butterflies, and birds. This rich floral variety makes Government College Theog an ideal location for botany enthusiasts and researchers interested in Himalayan flora.

Beside wild floral diversity, botanical glass house at Government College Theog is a significant addition to the campus, fostering the cultivation of a wide range of medicinal, ornamental, and pollution-baiting plants. The medicinal and aromatic plants, such as, Aloe vera, Bergenia, Tulsi (holy basil) Viola, Rosemary, Lemon grass, Chrysanthumum, scented geranium are cultivated to aware the students about their health benefits and potential use in traditional remedies. These plants not only serve educational purposes for students but also help preserve the region's rich heritage of herbal medicine.

In addition to medicinal species, the glass house is home to a variety of ornamental plants like Fuchsia, Geranium, Paper flower, Palm, Crassula that enhance the beauty of the campus and contribute to biodiversity. Moreover, the glass house promotes the growth of pollution-baiting plants such as spider plants, snake plants, and peace lilies, Rubber plant, which is known for their air-purifying qualities, making the campus environment healthier and cleaner. This initiative reflects the college's commitment to environmental sustainability and education, providing students with hands-on experience in plant cultivation, conservation, and the study of species that contribute to ecological well-being.









Plant Diversity surrounding Campus



#### **Ornamental Plants Section**



**Medicinal Plants Section** 



**Ornamental Plants and Pollution Abating Plants** 

**Ornamental shrubs and herbs** 

#### 8. GREEN PRACTICES

Waste management is one of the burning problems not only in India but also in the world. Hence it is necessary to use the things properly and manage them cautiously. The main purpose behind this audit is to analyze the best practices of solid, liquid waste management. Similarly, to make aware about their hazardous effects and to create awareness among the students, teachers about minimum use, reuse and recycle of the waste. Solid waste generation and its management is a burning issue in current days. The rate of generation of solid waste is very high and yet we do not have adequate technology to manage the generated waste.

Unscientific handling of solid waste can create threats to public health and environmental safety issues. Thus, it is necessary to manage the solid waste properly to reduce the load on waste management system. The purpose of this audit is to find out the current management practice of solid waste generation in the campus. This report will help for further solid waste management and to go for green campus development.

#### 8.1 Solid waste management

Both biodegradable as well as non-biodegradable wastes are generated from various departments/sections of the college. The principal waste includes paper, electronic wastes, canteen waste and other solid wastes.

- i. **Biodegradable:** There are two kinds of dustbins (Blue and Green) placed at different places/department/sections to collect the waste separately (Green for biodegradable and blue for non-biodegradable). Biodegradable waste produced from various departments, sports ground or other areas is put into compost pits for making compost to use in manuring botanical glass house plants and other potted plants.
- ii. **Non-Biodegradable:** There is very low quantity of non-degradable waste in the campus as the College does not have staff quarters at present in the college premises, therefore, no household domestic waste is generated. However, rest of the non-degradable waste generated from places/department/sections of the college is placed in blue dustbin and is collected by Nagar Nigam Theog forthe proper disposal.

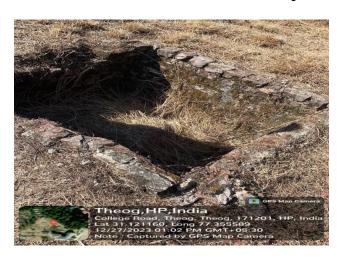


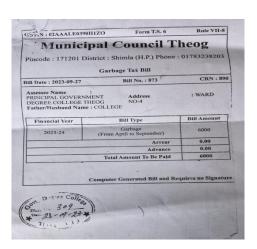
Separate Dust beans for dry and wet waste





Dust beans for waste placed at different locations





**Biodegradable Pit** 

Garbage Bill

#### 8.2 Liquid waste management

The institution does not produce any effluents, emissions which violates the environmental ethics. Our institution provides best academic environment which sensitizes everyone associated regarding the need to maintain a healthy ecological balance in respective regions. Runoff rainwater is properly managed through under-ground soak-pits.

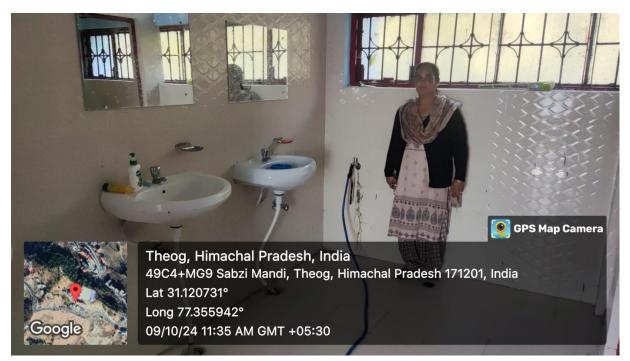
#### 8.3 Rainwater harvesting and its uses for gardening and cleanliness:

Water conservation facilities are available in the Institution. Roof top rain water is collected in water harvested tank. The stored water is **utilised in the toilets and also for irrigation of plants in botanical glass house**. We have medicinal herbs and various ornamental herbs and shrubs in botanical glass house; this rain water harvesting tank caters the need of these plants especially in the days of water scarcity in the summer. This tank not only caters our water needs but saves our valuable soil from erosion.



Rainwater harvesting Tank and its connectivity to Botanical glass house and Toilet





**Outlet of Rainwater harvesting System** 

#### 8.4 Hazardous waste management/Plastic Free Campus

Plastic bags have already been banned in the state by the Government of Himachal Pradesh and the ban is properly enforced within the college premises. The staff and the students are not encouraged to use one time use plastic, plastic bags and disposable plastic things throughout the campus. To ensure the plastic free campus clubs like the Eco club, NSS, and NCC organize plays, rallies, and competitions with themes such as "Say No to Plastic". Plastic waste if anyis

collected in the dustbins and disposed separately through the Municipal authorities. The College is trying to minimize the use of hazardous and toxic chemicals. The college is encouraging the use of safer alternatives. Dilute solutions are being used in quantitative analysis, which again minimizes the use of chemicals. In Science laboratories, experiments are carried out with all precautions. Biological waste from life sciences laboratories is made harmless through autoclaving and then disposed. All glassware and microbial cultures used are first sterilized by autoclaving and then the cultures are discarded properly.



Plastic waste collection by NSS Unit





#### Plastic waste collection by NSS Unit

#### **8.5** E-Waste management:

Reuse is the most eco-friendly and cost-effective method for e-waste disposal. The College maintains all its computer peripherals, all old systems are stored in safe place within the campus and are sold to the recycling agencies after fulfilling all official formalities. Defective systems are upgraded by replacing their parts.

#### 8.6 Energy Conservation/ use of Solar Energy:

The college has undertaken several steps for energy conservation. In order to conserve the energy fluorescent tube lamps and **LED lamps are used all the class rooms**, **labs** and in **administrative office**. Students are educated to check the timely switch on and off the switches to reduce unnecessary power consumption. Apart from that "Switch off drills" are practiced in the rooms by both staff and students. College buildings are designed in such a way that maximum use of day light is made possible in all the class rooms and departments. **Five Solar powered Lights** were installed in the campus at various places. Further we have a plan to purchase and install Solar Panel from next due instalment of RUSA as decided in 4<sup>th</sup> quarterly meeting of IQAC held on 15<sup>th</sup> may 2024.

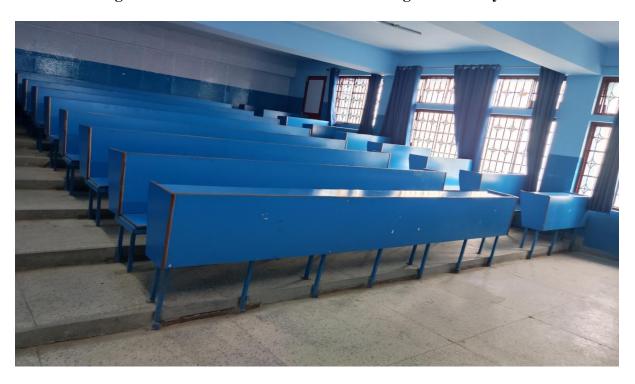


# **LED Light in Seminar Hall**



**LED Light in Seminar Hall** 

**LED Light in Library** 



Class room with Natural day light



**Solar Light in Campus( College Ground)** 



**Solar Light in Campus (in College Ground)** 





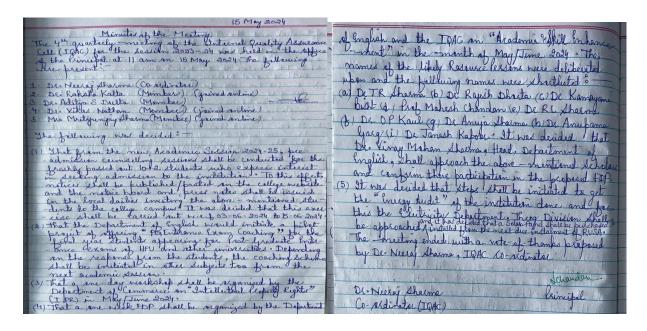
**Solar Light (in front of Administrative Block)** 







**Solar Light (in Basketball Court)** 



Minutes of IQAC meeting Regarding purchase and installation of Solar Panel

#### 9. Environmental awareness initiative:

The Government College Theog, through its Eco Club, NSS, and NCC units, organized a comprehensive environmental awareness initiative aimed at fostering a sustainable and eco-friendly campus. As part of this initiative, a plastic waste collection and cleanliness drive was conducted under the Swachh Bharat Abhiyan to promote cleanliness and responsible waste disposal. Students and volunteers actively participated in the collection of plastic waste around the campus and neighboring areas, raising awareness about the detrimental impact of plastic on the environment.

A tree plantation drive was also organized, focusing on increasing the green cover of the campus, contributing to biodiversity conservation, and combating climate change. In addition to planting trees, students engaged in a campus beautification drive, ensuring that the college premises remain aesthetically pleasing and environmentally sustainable.

To deepen their understanding of local biodiversity, a field visit was arranged for students to identify the wealth of local plant species. This hands-on learning experience encouraged students to connect with nature and appreciate the importance of conserving indigenous plant species. These activities reflect the college's commitment to environmental stewardship and sustainable development, aligning with national campaigns like Swachh Bharat Abhiyan.

Through active participation and community engagement, the initiative not only enhanced the physical environment of the campus but also instill a sense of environmental responsibility in the students, empowering them to be proactive in addressing environmental challenges.

Campus Cleanliness Drive conducted by NSS Volunteers of the College Theog (13<sup>th</sup> September, 2023)









# स्वयंसेवियों ने संवारा ठियोग कॉलेज परिसर

संवाद न्यूज एजेंसी

ठियोग (रामपुर बुशहर)। को स्वच्छता के बारे में जागरूक राजकीय उत्कृष्ट महाविद्यालय किया गया। इसके बाद स्वयंसेवियों ठियोग में बुधवार को राष्ट्रीय सेवा योजना इकाई ने स्वच्छता अभियान चलाया।

डॉ. अनिता राठौर के निर्देशों में यह

अभियान चलाया गया। इस दौरान राष्ट्रीय सेवा योजना के स्वयंसेवियों ने महाविद्यालय परिसर और मुख्य रास्तों की साफ-सफाई की। अभियान में स्वयंसेवियों ने एकल एकत्रित करके उसका उचित

निस्तारण किया। कार्यक्रम के माध्यम से स्वयंसेवियों ने अन्य छात्रों को भी स्वच्छता बनाए रखने का संदेश दिया। अभियान में करीब 68 स्वयंसेवियों ने भाग लिया। कार्यक्रम के आयोजन में राष्ट्रीय सेवा योजना अधिकारी डॉ. कल्पना महाविद्यालय की उप प्रधानाचार्या प्रयोग प्लास्टिक और अन्य कचरा शर्मा और डॉ. राजेश कुमार ने अहम भूमिका निभाई।



# स्वयंसेवियों ने दियोग कालेज परिसर संवारा, कुमारसैन में एस.एस.बी. जवानों ने निकाली स्वच्छता जागरूकता रैली

ठियोग, 27 सितम्बर (स.ह): राजकीय महाविद्यालय ठियोग की राष्ट्रीय सेवा योजना इकाई द्वारा 15 सितम्बर से 2 अक्तूबर तक चलने वाले स्वच्छता ही सेवा अभियान में भाग लिया गया, जिसमें सर्वप्रथम महाविद्यालय प्राचार्या डा. लिलता चंदन ने सभी स्वयंसेवियों को स्वच्छता ही सेवा अभियान के अंतर्गत सभी एन.एस.एस. स्वयंसेवियों को स्वच्छता की शपथ दिलाई।

उन्होंने कहा कि स्वच्छता हमारे जीवन का एक महत्वपूर्ण हिस्सा है तथा इसे हमें अपने जीवन में अपनाना है। तत्पश्चात सभी स्वयंसेवियों ने अलग-अलग समूह में महाविद्यालय के परिसर व मुख्य रास्ते की साफ-सफाई की और महाविद्यालय के छात्र-छात्राओं को भी साफ-सफाई रखने के लिए प्रेरित किया।



(स.ह.)

वियोग : स्वच्छता ही सेवा अभियान के दौरान स्वयंसेवी।

**Cleanliness Drive by NSS Unit** 

# Swachhata Hi Sewa Campaign on 23<sup>rd</sup> Oct.2023

(Garbage &Plastic Waste Collection Campaign)





Garbage &Plastic Waste Collection Campaign by NSS unit

#### Tree plantation drive Date: 10.08.2023





Tree Plantation Drive by Eco Club

### Campus beautification driveDate:03.08.2023





# A Field Visit to Nearby Areas 26th October 2023







Field Visit by Eco Club to identify the Flora around College

#### 10. Conclusion:

The Green Audit conducted at Govt. College Theog concluded with several important insights and recommendations aimed at enhancing the institution's sustainability efforts. This audit involves considerable team discussions and meetings with key staff members on a variety of environmental-related topics. The audit revealed that the college has made notable strides in promoting environmental consciousness, including waste management practices, water conservation initiatives, and energy-efficient measures. However, the audit also highlighted areas requiring improvement, such as the need for increased awareness among students and staff, better waste segregation systems, and more efficient use of natural resources. It is cleared from the green audit of the institution that the campus is lush green with sufficient floral diversity. Apart

from this, the level of noise is also medium. The report emphasized the importance of ongoing environmental education and community involvement in fostering a greener campus. Overall, the Green Audit provided a comprehensive framework for the college to minimize its environmental footprint and contribute positively to local sustainability goals. The administration expressed a commitment to implementing the recommendations for a more eco-friendly future.

#### 11. Overall recommendations

The objective of organizing Green Audit is to upgrade the environmental condition in and around the college campus. It is carried out with the aid of performing tasks like waste management, energy saving and others to turn into a better environment friendly institution. The base line data prepared for the college will be a useful tool for campus greening, resource management, planning future projects and a document for implementation of sustainable development of the college. Although a number of steps have been taken to improve the quality of environment in the college campus, more steps shall be adopted in future as detailed below:

- i. Establishment of solar panel set ups so that the energy requirement of the college can be fulfilled in an eco-friendly manner.
- ii. Environmental parameters should be included in purchase policy to achieve a cradle to grave approach for sustainability.
- iii. Seminars/symposia shall be organized amongst students and staff relating to environmental pollution, different pollution acts and waste management.
- iv. The use of single use plastic should be discouraged.
- v. More Plantation program inside the college campus, around theplayground shall be taken up by the members of Eco club at regular intervals.
- vi. Green building guidelines for future expansion projects of the campus.
- vii. Awareness about carbon footprint generation among staff and students so that there must be a decrease in it.
- viii. More involvement of students and staff in environmental awareness campaigns to spread awareness in society.
- ix. The use of five-star appliances and more LEDs should be increased as it will reduce electricity bills and help in energy conservation.

# 12. Annexure i: list of Plants spotted in & around Theog college:

Sr.	Botanical Name	Local Name
No.	Ailanthus altissima	Dali
2	Ajugabracteosa	Nilkanthi
3	Alnusnitida	Kunish
4	Artemisia roxburghiana	Chhamber
5	Bergeniaciliata	Dhakochru
6	Bidenspilosa	Kumber
7	Berberis sp.	Kashmal
8	Bistortaamplexicaulis	-
9	Cedrusdeodara	Kelti
10	Celtisaustralis	Kharki
11	Cirisiumwallichi	Bhuan
12	Clematis montana	Lawi
13	Erigeron annus	-
14	Erigeron canadensis	-
15	Eulaliopsisbinata	Munji
16	Galinsogaparviflora	Peeplu
17	Gerardianaheterophylla	Dandibhaber
18	Greviaoptiva	Beol
19	Hederanepalensis	-
20	Imperatacyclindrica	Kusha, drab
21	Pinuswallichiana	Kail
22	Plantagoerosa	-
23	Populussps.	
24	Prensepiautilis	Bhekhal
25	Prunuscerasoides	Pajaa
26	Queicusleucotrichophora	Ban
27	Quercussemicarpifolia	Kharshu
28	Rododendronarboreum	Brass
29	Rosa bruniona	Kajhene
30	Rubusellipticus	Hinsar
31	Rubusniveus	Kale hinsar
32	Rumexhastatus	Majhoda
33	Rumexnepalensis	Nermala
34	Tagetisminuta	Satrajari
35	Taxuxwallichina	-
36	Urticadioica	Bhabher
37	Solanumvirginianum	Kadingan
38	Xanthium strumarium	

# 13.Annexure-ii: list of animal spotted in & around Theog college

Few species of Mammal (Dog, Cow, Cat), Birds like sparrows, Insects (Beetles, Dragon), Reptiles (Lizards, Snake), Amphibians (Frog) were reported