REPORT OF ENVIRONMENT AUDIT

Submitted to

Dr. N.G.P. ARTS AND SCIENCE COLLEGE
Coimbatore – 641 048, Tamil Nadu, India.

Date of Audit: 27.06.2018 (Wednesday)

Submitted by

NATURE SCIENCE FOUNDATION

(A Unique Research and Development Centre for Society Improvement)

An ISO 9001:2015 Certified Organization

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Motto

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

Contents

1. Introduction

Environment (Eco) audit is quantitative and qualitative data to track air, soil and water waste, and to gain actionable insights to improve the operational performance in the atmosphere. This audit is generally used to observe the clean and green environment of an Organization. It provides a 360˚ view of a surrounding campus and makes it easy for Owners / Managers / Environmentalists to collaborate, measure, control, and reduce environmental impacts. Finally it leads to enhancing the quality of life for human beings, animals and plants. Eco audit initiatives are the need of the hour across the world due to change in environmental conditions, global warming and increasing human population (Maltby, 1995; Haahkim and Yunus, 2017). It aims to make a sustainable and friendly environment for the stakeholders.

Environment audit is a well-developed process of extracting information about an Organization that provides a realistic assessment of how the Organizations take steps towards protecting the environment. In order to save the eco-friendly atmosphere of an Organization, well-developed environmental objectives and targets should be undertaken to reduce the harmful effects to a greater extent. The audit process can minimize the environmental pollution in the campus remarkably which in turn reduces the global warming that affects as a whole. As per the Government law, the environmental legislations should be followed by all the Institutions and Organizations and make sure that their activities should not destroy the environment (Ramachandra and Bachamanda, 2007). An environmental audit is a kind of assessment supposed to create awareness of environmental compliance and implementation gaps in the management system, along with related corrective movements.

This audit is a systematic, documented, periodic and objective review by a regulated entity of facility operations and practices related to meeting the environmental requirements. Environment audit should be undertaken by observing, measuring, recording the data and collecting and analyzing the various components in an Organization related to the environment. To be effective, it must be done systematically and thoroughly together with full management support (Conde and Sanchez, 2017). In general, environmental audit is designed to achieve a maximum resource optimization and improved process performance in the audit sites. It is a ‘Common Sense Approach’ to identify the problems and solve those problems pertaining to curb eco-friendly atmosphere (APHA, 1981; Venkataraman, 2009). Environmental audit enables a comprehensive look at the audit sites to facilitate our understanding of material flows and to focus our attention on areas where waste reduction is executed and therefore cost saving is made possible (Gowri and Harikrishnan, 2014).

Environmental audits ensure that the environment is not disturbed from its balanced existence, so that it provides an eco-friendly atmosphere to the stakeholders. Similar to that of Environmental audit, Green campus audit is also a type of assessment to ensure that the Institution and Organization campus should grow a large number of trees, shrubs, herbs, lawns, climbers, twins and lianas in their campus to produce more amount of oxygen and absorb more amount of carbon-di-oxide to provide a healthy atmosphere to the stakeholders (Aparajita, 1995; Adeniji, 2008). Environmental audit provides vivid dimensions on how waste materials are being managed and the source

of wastes along with the solutions for environmental degradation is managed. Environmental Management System (ISO EMS 14001:2015) should be implemented by every Organization to ensure that the eco-friendly campus is being given to the stakeholders. Eco-friendly youth leadership programmes, green campus practices, social responsibility and Institutional values comprehending the relationship with the ecosystem for a sustainable environment are being evaluated (IGBC, 2018).

2. Aims and Objectives of Environment Audit

The important goal of an Environment audit is to promote the environment management and conservation for future generations. The reason for the environmental audit is to perceive, quantify, describe and prioritize the framework of environment sustainability in compliance with the applicable rules, regulations and requirements. In general, Environment audit can be achieved by creating awareness on the importance of safeguarding the environment among students, faculties and staff members, including public domain. The major goals of environment audit are:

- To safeguard the environment and reduce the threats posed to human health by the Organization.
- To create awareness among the stakeholders about the importance of environmental degradation and conservation as per the Environment Management Systems (ISO standard of 14001:2015) and Environmental Legislations by the Organization.
- To establish a baseline information about the eco-friendly environment in the campus to the stakeholders for future sustainability.
- To review the disposal of solid wastes and wastewaters in the campus and identify the sources of waste generation and possibilities of mitigation with respect to environmental compliance.
- To conduct outreach programmes to the rural, tribal and urban community people on the environment damage and conservation.
- To correlate the flora and fauna with environmental sustainability in the audit sites to provide a healthy atmosphere to the members of the Organization.
- To take steps to minimize the environmental pollution and degradation by means of developing ‘Sanitation and hygiene policy’, ‘Water conservation policy’, ‘Waste management policy' and ‘Green campus and Environment policy’ by the Organization.

3. Procedures followed in Environment Audit

Environmental audit involves monitoring an organization concerning about the green campus, environment, sanitation and hygiene policies. It is a regular process that is conducted periodically by a regulated entity to check whether an organization meets the requirements of environmental compliance. The process of environmental audit includes examining, collecting, evaluating, documenting data and analyzing various components related to environmental aspects (IGBC, 2018; WGBC, 2018). Environmental audit was carried out as per the procedures mentioned of the Manual of Gnanamangai *et al*. (2018). The environmental audit possesses the following characteristic features in which various aspects of wastes generation and steps taken by the Organization to reduce both solid and liquid wastes without harming the environment.

- Identification of various sources to generate wastes and types of degradable and non-degradable wastes in the campus.
- Collection of information related to type of operations, use of various raw materials and products that generate wastes.
- Finding the highlights of inefficiencies in the process that generate wastes and areas that are to be monitored with extra care.
- Setting up the target for reduction of wastes and source of waste generation without affecting the environmental health.
- Steps taken to minimize the environmental pollution and degradation by means of developing internal policy methods.
- Suggestion of cost effective waste management strategies and zero waste discharge in the Organization.
- Creation of awareness among stakeholders on the benefits of reducing wastes without damaging the ecosystem.
- Aids in increase of process efficiency and status report with regards to environmental compliance and management.

4. Steps involved in the Process of Environmental Audit

The following are the major steps involved in the process of environmental audit:

Step #1: Opening meeting among the audit team and auditees, discussed about the audit procedure and document verification.

Step #2: Visited the on-site of the audit along with the audit team and auditees.

Step #3: Walked around campus to check the facility as walk-through audit and took photographs for preparing the audit report.

Step #4: Monitor the components as per the environmental audit checklist (Sanitation and hygiene, water conservation, waste management and green campus and environment policies).

Step #5: Noted down what all components are present and what are all not available in the campus as of environmental audit components listed by NSF ISO-EMS checklist.

Step #6: Identified the issues in the campus with respect to the environmental compliance and strengths and weaknesses of the Auditee's Management controls and risks associated with the audit.

Step #7: Looked into other items to be monitored as per the NSF checklist with respect to Ecology and Environment studies.

Step #8: Exit meeting held after the audit in which the audit findings with the members of the Organization was discussed.

Step #9: Prepared and distributed the findings as a Report and Certificate along with the recommendations including the best practices followed by the Auditee.

Step #10: Comparison between the last audit report with the present audit report in which the number of suggestions and recommendations were taken into consideration and rectified significantly by the Management.

Step #11: Observed the audit process undertaken by the certifying agency between the last audit and current audit processes, whether the same certifying agency has undertaken the audit process or not?.

5. Benefits of an Environmental Audit:

Environmental audit provides the following benefits to the Organization:

- Discover various issues related to the environment in the Organization.
- Compute the issues, identify and assess the impact of the issues.
- Provide suggestions to minimize the issues found in the Organization.

On conducting an Environmental audit, it provides the following results:

- Conservation of resources and reduction of raw materials.
- Minimizing wastes, control of pollution and reduction of costs.
- Improvement in working conditions and improvement in process efficiency.

6. Phases of an Environmental Audit:

The environmental audit encompasses three phases such as pre-audit, during- audit and post-audit. These phases involve various components to resolve the problems in the campus as well (Arora, 2017; Gnanamangai *et al*., 2018).

6.1. Pre-Audit:

Pre-audit involves the following components:

- ✓ Planning the audit
- ✓ Selecting the audit team
- ✓ Scheduling the audit facility
- ✓ Acquiring the background information
- ✓ Visiting the site of audit
- ✓ Collection of data and documents verification

6.2. During-Audit:

During the audit, the following components are involved:

- ✓ Understanding the scope of audit
- ✓ Analysing the strength and weakness of the internal controls audit
- ✓ Conducting the on-site audit
- ✓ Evaluating the observations of audit programme
- ✓ Noting down the key observations and taking photographs
- ✓ Clarifications if required during the audit site and document verification

6.3. Post-Audit:

Post-audit involves the following components:

- ✓ Identification of the best practices followed by the Organization
- ✓ Compiling a report of the data collected
- ✓ Distributing the report and certificate to the Organization
- ✓ Preparing an action plan to overcome the flaws
- ✓ Providing suggestions to implement the action plan
- ✓ Setting up the future environmental aims and objectives

7. Components of an Environmental Audit:

Environmental audit has five components, namely: 1) Sanitation and hygiene policy, 2) Water conservation policy, 3) Rainwater harvesting policy, 4) Waste management policy and 5) Waste management initiatives

7.1. Sanitation and Hygiene Policy:

In this component, the following are being considered:

- Physical appearance and overall ambience
- Adequacy of toilets (Student/Employee: toilet ratio)
- Gender balance and disabled-friendly toilets (Male: Women)
- Water taps and sanitation plumbing, adequacy and efficiency
- Adequate clean drinking water facilities
- Kitchen staff apparel and hygiene
- Canteen and hostel hygiene maintenance
- Kitchen hygiene and fly proof condition
- Cutlery, crockery and utensils hygiene
- Dining hall hygiene and bad odour free
- Cleaning equipment and consumables

7.2. Water Conservation Policy:

In this component, the following are being considered:

- Know the source of the campus water availability
- Monitor overhead tanks for periodical cleaning
- Reuse of treated water, recycling, leakages etc.
- Drip irrigation / sprinkler irrigation system for watering to plants
- Water efficient dispensing mechanism in campus

7.3. Rainwater Harvesting Policy:

In this component, the following are being considered:

- Implementation of rainwater harvesting system
- Functioning status of rainwater harvesting system
- Connectivity between rainwater harvesting and open wells and bore wells

7.4. Waste Management Policy:

In this component, the following are being considered:

- Is the campus a 'Plastic free zone'?
- What are the methods adopted for waste segregation and storage?
- Disposal of solid wastes, reuse and recycling process
- Vermicompost, cow dung and organic manure units
- Availability of Biogas plant and its implementation status
- Installation of incinerators and their functioning status
- Adequate number of waste bins, separate bins for dry and wet wastes
- Food waste dumped status methods of disposal

7.5. Waste Management Initiatives:

In this component, the following are being considered:

- Sign boards indicating energy / water conservation in respective places
- Awareness sign boards on usage of tobacco and tobacco free campus
- Awareness sign boards on plastic usage and plastic free campus
- Programmes related to waste segregation / waste disposal systems
- Sufficient ventilation facility
- Social responsible activities to rural, tribal and urban areas

7.6. A good environmental audit

- Defines sources, quantifies types of waste being generated
- Collates information on unit operations, raw material, products and water usage
- Highlights process inefficiencies and areas of poor management
- Helps in setting targets for waste reduction
- Permits the development of cost effective waste management strategies
- Raises awareness in the workforce regarding the benefits of waste reduction
- Helps to improve process efficiency
- Assess the quantity of water usage within the company.
- Find out various sources of organic and solid waste generation and mitigation possibilities.
- Document the waste disposal system properly and bring out a status report on environmental compliance with respect to the waste disposal system.

8. About the Organization

With a view to providing education to all, Dr. N.G.P. Arts and Science College was established by the Kovai Medical Center Research and Educational Trust, Coimbatore in 1997. The Founder and Chairman Dr.Nalla G. Palaniswami, and Secretary Dr.Thavamani D. Palaniswami are the driving force of the institution. The College began its educational journey with 4 Under Graduate programmes, now it is emerging as the one of the top self-financing colleges in Tamil Nadu.

It is a Co-Educational Autonomous College, affiliated to the Bharathiar University, Coimbatore. Also, it is recognized under 2(f) and 12(B) of UGC act 1956 by University Grants Commission, New Delhi. The college was accredited by the NAAC with "A" Grade with the CPGA of 3.17 in the second cycle, March 17, 2016. The college is consecutively ranked at the national level within 100 ranks by the National Institutional Ranking Framework (NIRF) by MHRD. The College is also granted the DST-FIST to enrich the research facilities. The college, at present offers 26 UG, 13 PG, 8 M.Phil & 9 Ph.D programmes. Our college has an intellectual capital of more than 294 academically well experienced teaching fraternity amongst 91 faculty members are doctorates and they cater to the needs of 6391 students on roll.

The Institution has been granted funds to undertake major and minor research projects, and conduct seminars, conferences and workshops by various funding agencies like UGC, DRDO, ICMR, ICSSR, CSIR, DST, DBT and TNSCST. The College exercises 43 Best Practices to aggrandize the holistic development of the students. Through these

practices students have been given space for enhancing employability skills, research culture, and entrepreneurship attitude.

The Training and Placement Cell in the college functions effectively in providing various placement oriented training, value added programmes, company specific training to make them employable in the top MNCs. Every year, more than 90% placement opportunities are achieved. Apart from the placement cell, the Career Guidance Cell, Entrepreneurship Development Cell play vital role in fulfilling needs of the student community. The Management provides scholarships every year to 100s of meritorious students in academics and sports as well. It creates opportunities for many students to excel in education who belong to socially economically weaker section. The College firmly believes that the blend of discipline and education will make the students enter the present phenomenon with the flying colours.

Dr. N.G.P. Arts and Science College is maintaining more green cover area and open unutilized landfills zone after building construction as per the guidelines of World Green Building Council, Indian Green Building Council, Environmental Regulations and Compliances.

9. Audit Details

Date/Day of Audit	**: 27.06.2021 (Monday)**
Venue of Audit	**: Dr. N.G.P. Arts and Science College** Coimbatore – 641 048, Tamil Nadu, India.
Audited by	**: Nature Science Foundation,** Coimbatore, Tamil Nadu, India.
Audit type	**: Environment Audit**
Name of ISO EMS Auditor	**: Mrs. S. Rajalakshmi,** Chairman & ISO EMS Auditor, NSF.
Name of Lead Eco Auditor	**: Dr. R. Mary Josephine,** Board of Directors (South Zone) & Botanist, NSF.
Name of Subject Expert-I	**: Dr. D. Vinoth Kumar,** Joint Director & Certified Lead Eco Auditor, NSF.
Name of Subject Expert-II	**: Er. M. Priya,** Joint secretary
Name of IGBC AP Auditor	**: Dr. B. Mythili Gnanamangai,** IGBC AP, Indian Green Building Council.
Name of the Energy Auditor	**: Er. D. Dinesh kumar & Dr. N. Balasubramanian** Certified BEE Energy Auditors
Name of the Eco Auditor-I	**: Er. B. Vijayalakshmi** Deputy Director & Certified Lead Eco Auditor.
Name of the Eco Auditor-II	**: Er. S. Srinivash** Tamil Nadu Fire and Rescue Services, Coimbatore
Name of Eco & Green Officer	**: Ms. S. Sowndharya** Eco & Green Council Programme Officer, NSF.

10. Observations of the Environment Audit

10.1. Plastics use and their impact on the environment

People use plastic bags and plastic ware items every dayto hold objects like meals, clothes, grocery and stationary items, which can be bought from shops. Generally, the plastic items are non- degradable in nature that lead to soil pollution and affect the soil health significantly. Most of the plastic items are considered as solid waste. This has resulted in many damaging environmental effects inclusive of animal choking, pollution, blockage of channels, rivers and streams, and landscape disfigurement. According to the World Health Organization (WHO) report, plastic items take at least 400 years to decompose completely in the soil which illustrates the subsequent effects on the environment. Plastic pollutants form a basis for damage to humans, animals and flora through toxic pollution. It can take masses or even heaps of years for plastic to break down so the environmental harm is lengthy-lasting. It impacts all organisms in the food chain from tiny species to big ones. There is a need to reduce the plastic use to effectively limit plastic waste in the campus.

The Dr. N.G.P. Arts and Science College has taken sufficient attempts not to use plastics in the campus and displayed a slogan ‘Plastic free campus’ in places like canteen, hostel dining halls, seminar halls, department premises, open places, car parking areas, corridors, etc. to the students, parents and public. These efforts are very much essential to keep the environment neat and clean to conserve nature for the future generations.

10.2. Solid Waste Management

Solid waste control is a term that is used to consult the method of accumulating and treating solid wastes by following the method of eco- friendly manner. It also offers solutions for recycling objects that do not belong to garbage or trash. As lengthy as humans have been living in settlements and home regions, rubbish or solid waste has been a difficult task. In the solid waste management, the wastes are accrued from different parts and are disposed of based on degradability materials like paper and non- degradability materials like glasses, plastics and metals. Integrated Solid Waste Management (ISWM) is an activity that promotes prevention of waste, recycling, composting, and disposal. A powerful ISWM considers how to save, recycle, and manage stable waste in better methods that will protect the humans and the environment.

In Dr.N.G.P.Arts and Science College, both degradable and non-degradable items are being collected from different Department laboratories, canteens, cafeteria, stationary shops and hostels every day and based on the nature of degradability. In addition, dust bins are kept in different places across the campus to provide a dust free atmosphere to the stakeholders. The dust bins are labelled properly for the indication of degradable and non-degradable items. These bio composts are utilized for cultivation of plants in the campus and enhance the health of soils and population density of beneficial microorganisms to a greater extend.

10.3. An account of Oxygen producing and Carbondioxide absorbing plants in the Campus

There are some plants which are being considered highly efficient in oxygen production and carbondioxide absorption which in turn reflected the quality of the green campus. If more oxygen is made available in the campus naturally, the stakeholders may be free from various cardiovascular and pulmonary problems and breathing troubles.The college campus has several oxygen producing plants and trees. The notable species are *Azadirachta indica*, *Nerium oleander* L., *Thespesia populnea L Sol ex Correa*, *Bamboosa aridinarifolia.*

Thespesia populnea

Nerium oleander

Azadirachta indica

Bamboosa aridinarifolia

10.4. Rainwater Harvesting System in the campus

Rainwater harvesting system is a traditional old practice not only in drought prone areas and also in areas having seasonal rainfall. The Indian traditional rainwater harvesting is being practiced in various parts of the country to improve the ground water status (Musayev *et al*., 2015; Khanal *et al*., 2018). Now the threatening features of the lower ground level of water has created a revamp of newly featured rainwater harvesting systems. Indian traditional rainwater harvesting systems are constructed based on three modes either direct pumped, indirect pumped or by gravity alone in the campus. In addition, lakes, bonds, water channels and any other water reservoir methods are considered as the rainwater harvesting system. The green campus should have adopted any

of the above said modes of rainwater harvesting or any new methods that has the benefit of conserving the water resource as well. A small square shaped pit containing gravels and sands may be constructed near the building in which rainwater will be harvested from the roof of the building using a pipe. There was two rain water harvesting system in the college campus.

Rain Water Harvesting pit in front of A1 Block and B1 Block

10.5. Recycling of Wastewaters at Dr. N.G.P. Arts and Science College

Wastewater recyclers are important features in any Organization or Industry. Once for all the implementation should follow the proper guidelines for wastewater treatment system discharge standards as per Central Pollution Control Board (CPCB). The main feature of these discharge standards is the treated water should not be harmful to the biodiversity, resources and the environment. If an industry or Organization has the wastewater treatment plan, proper records on the analysis of water input and output parameters including the running time of the wastewater treatment plant; its operation cost, its maintenance and the reuse records of the treated water should be well accounted. A typical wastewater treatment system should be based on the waste characterization and the treatment of wastes which can be modified so as to fit into the motto of treating the wastewater which in turn to release of safe water (Senior and Brightman, 2015).

The Dr. N.G.P. Arts and Science College Campus has wastewater treatment facility covering primary, secondary and tertiary water treatments for elimination of excess phosphorus, potassium, zinc, chromium and nitrogen contents along with harmful pathogens and the degradation of inorganic wastes. There is a proper connectivity and

channels for the discharge of wastewaters from various departments, canteens, cafeteria and hostels to wastewater treatment plants. The wastewaters are purified considerably and reused for gardening as water reclamation. The Organization has a waste water treatment facility at the campus to treat all the used water from various locations of the campus. Sewage Treatment Plant that has a treatment capacity in Dr.N.G.P.Arts and Science College is of around 1,00,000 Lit/day including septic tank wastes. Out of the 1,00,000 liters of waste, 30,000 Lit/day is used in watering the greenery of the campus.

Waste water treatment plant in front of A Block

10.6. Environment related activities implemented at Dr.N.G.P. Arts and Science College

The students of Dr. N. G. P. Arts and Science College conduct more awareness programmes on cleanliness, use of plastics, solid waste management and sanitation and importance of environment to the rural people across Coimbatore District of Tamil Nadu through NSS and Eco club units.

10.6.1.

AWARENESS PROGRAMMES / OUTREACH ACTIVITIES RELATED TO ENVIRONMENT

ACADEMIC YEAR – 2015-16

S. No	Name and Designation of the Resource Persons	Event	Date	No. of Beneficiaries
1	Dr. T. Radhakrishnan, NSS Coordinator, Bharathiar University	Clean India Programme SWACHH BHARAT	16.07.2015	100
2	Dr. P.R. Muthuswamy, Principal, Dr. N.G.P. Arts and Science College	Clean India Programme SWACHH BHARAT	21.12.2015	300
3	Mr. Krishna Kumar, Former Rotary Club President	Cleaning Temple Campus SWACHH BHARAT	07.01.2016	150
4	Mr. N.R. Vaitheeswaran, PCRA, Coimbatore	Cleaning School Campus SWACHH BHARAT	08.01.2016	150
5	Ms. Akila, Member, OSAI NGO	Tree Plantation	11.01.2016	150
6	Mr. D. Govindarajan, S.T. Garden, Nehru Nagar	Awareness on Plastic Pollution	12.01.2016	150
7	Dr,Pramod, Principal Scientist, Salim Ali Centre for Ornitology (SACON), Anaikatti, Coimbatore	One day educational programme based on Nature to Salim Ali Centre for Ornitology (SACON), Coimbatore	20.01.16	40

8	Dr.B.A.Daniel, Principal Scientist, Zoo outreach organization, Vellankuruchi, Coimbatore	"The Sahyadri Freshwater Biodiversity Conservation Education Workshop"	10.02.2016	45
9	Dr.P.Pandian, Assistant Professor, Department of Botony and Dr.T.Kumar, Associate Professor, PG and Research Department of Botony and Microbiology A.V.V.M.Pushpam College, Thanjavur	Green Auditing	18.02.2016 and 19.02.2016	50

Report on Event 2015 – 16

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Clean India Programme SWACHH BHARAT. The event took place on 16.7.2015 during 10.30. A.M. - 3.30. P.M. at Bharathiar University. Dr. T. Radhakrishnan, NSS Coordinator, Bharathiar University addressed the students. 100 number of students participated in this event and benefitted out of it.

Clean India Programme SWACHH BHARAT event conducted on 16.7.2015 at Bharathiar University

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Clean India Programme SWACHH BHARAT. The event took place on 21.12.2015 during 9.00. A.M. - 3.00. P.M. at S.S.Kulam. Dr. P.R. Muthuswamy, Principal, Dr. N.G.P. Arts and Science College addressed the students. 300 number of students participated in this event and benefitted out of it.

Clean India Programme SWACHH BHARAT event conducted on 21.12.2015 at S.S.Kulam

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Cleaning Temple Campus SWACHH BHARAT. The event took place on 7.1.2016 during 8.00. A.M. - 6.00. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Mr. Krishna Kumar, Former Rotary Club President addressed the students. 150 number of students participated in this event and benefitted out of it.

Cleaning Temple Campus SWACHH BHARAT event conducted on 7.1.2016 at Kalapatti, Veeriyampalayam, Karupparayampalayam

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Cleaning School Campus SWACHH BHARAT. The event took place on 8.1.2016 during 8.00. A.M. - 6.00. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Mr. N.R. Vaitheeswaran, PCRA, Coimbatore addressed the students. 150 number of students participated in this event and benefitted out of it.

Cleaning School Campus SWACHH BHARAT event conducted on 8.1.2016 at Kalapatti, Veeriyampalayam, Karupparayampalayam

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Tree Plantation. The event took place on 11.1.2016 during 8.00. A.M. - 6.00. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Ms. Akila, Member, OSAI NGO addressed the students. 150 number of students participated in this event and benefitted out of it.

Tree Plantation event conducted on 11.1.2016 at Kalapatti, Veeriyampalayam, Karupparayampalayam

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Awareness on Plastic Pollution. The event took place on 12.1.2016 during 8.00. A.M. - 6.00. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Mr. D. Govindarajan, S.T. Garden, Nehru Nagar addressed the students. 150 number of students participated in this event and benefitted out of it.

Awareness on Plastic Pollution event conducted on 12.1.2016 at Kalapatti, Veeriyampalayam, Karupparayampalayam

10.6.2. One day educational programme was arranged for students on 20.01.2016 to Salim Ali Centre for Ornitology (SACON), Anaikatti, Coimbatore.

Visit to Salim Ali Centre for Ornitology (SACON), Anaikatti, Coimbatore -20.01.2016

10.6.3. The Sahyadri Freshwater Biodiversity Conservation Education Workshop was conducted for the students at kambarr arangam of the College on 10.02.16




Biodiversity conservation Workshop – 10.02.16

Green auditing

The Green audit committee of our college is chaired by Dr.P.R.Muthuswamy, Principal and Co-ordinated by Dr.N.Kannikaparameswari, Professor (Biochemistry) and Mrs.V.Kavitha, Head (Costume Design and Fashion). Dr.J.Karthikeyan, Co-ordinator (Eco-Club) and the members of the Eco-Club are the committee members. The student members of the Eco-club actively participate during green auditing.

MoU have been signed between the Department of Biochemistry of Dr.NGP Arts and Science College, Coimbatore and the Department of Botany/, Microbiology of A.V.V.M.Sri Pushpam College, Poondi, Thanjavur Dt. for the identification of plants in our college campus. Green auditing have been conducted through this MoU for which Dr.P.Pandiyan and Dr.T.Kumar were the resource persons. Dr.M.U.Sharief, Joint Director and holding the charge as the Curator of the A. J. C. Bose Indian Botanic Garden, Howrah visited our college on 12th February 2016 and identified the plants of the college campus.

Dr.N.G.P. ARTS AND SCIENCE COLLEGE(AUTONOMOUS)
GREEN AUDIT
LIST OF TREES/PLANTS

S.No	Botanical name	Family
1	*Cocos nucifera* Linn.	Arecaceae
2	*Peltophorum ferrugineum* (DC.) Hayne	Fabaceae
3	T*ectona grandis* L.f.	Lamiaceae
4	*Azardiracta indica* A.Juss	Meliaceae
5	*Delonix regia* (Boj. Ex Hook.) Raf.	Fabaceae
6	*Samanea saman* Jacq.	Fabaceae
7	*Pongamia glabra* (Vent.)	Fabaceae
8	*Eugenia jambolana* Lam.	Myrtaceae
9	*Dalbergia latifolia* Roxb	Fabaceae
10	*Michelia champaca* Linn.	Magnoliaceae
11	Bassia longifolia Linn.	Sapotaceae
12	*Artocarpus integrifolia* L.f.	Moraceae
13	*Melia dubia* Cav.	Meliaceae
14	*Eucalyptus grandis* L.	*Myrtaceae*
15	*Bambusa denrocalamus*	Poaceae
16	*Ficus religiosa* Linn	Moraceae
17	*Mimusops elengi* Linn.	*Sapotaceae*
18	*Polyalthia longifolia* Benth.	Annonaceae
19	*Calophyllum inophyllum* Linn.	Clusiaceae
20	*Araucaria excelsa* Lamb.	*Araucariaceae*
21	*Schefflera actinophylla* (Endl.)	Araliaceae
22	*Cassia fistula* L.	Fabaceae
23	*Nerium oleander* L.	Apocynaceae
24	*Nerium indicum* Mill	Apocynaceae
25	*Plumeria alba* Linn.	Apocynaceae
26	*Plumeria rubra* Linn.	Apocynaceae

27	*Ficus benjamina* L.	Moraceae
28	*Ficus elastica* L.	Moraceae
29	*Casuarina equisetifolia* L.	Casuarinaceae
30	*Phoenix dactylifera* L.	Arecaceae
31	*Vinca rosea* L.	Apocynaceae
32	*Bougainvillea spectabilis* Wild	Nyctaginaceae
33	*Allamanda schottii*	Apocynaceae
34	*Musa paradisiaca* Linn.	Musaceae
35	*Ixora coccinea* Linn.	Rubiaceae
36	*Quisqulis indica*	Combretaceae
37	*Hibiscus rosa-sinensis* L.	Malvaceae
38	*Heliconia brasiliensis*	Heliconiaceae
39	*Morinda tinctoria* Roxb.,	Rubiaceae
40	*Psidium guajava* L.	Myrtaceae
41	*Carica papaya* L.	Caricaceae
42	*Punica granatum* Linn.	Punicaceae
43	*Moringa oleifera* Linn	Moringaceae
44	*Tamarindus indica* Linn	Caesalpinaceae
45	*Gomphrena globosa* L.	Amaranthaceae
46	*Aibizia lebbeck (L.)Benth*	Fabaceae
47	*Ficus benghalensis* L.	Moraceae
	Plectranthus barbatus Andrews	Lamiaceae
48	*Celosia argentea* L.	Amaranthaceae
49	*Phyllanthus acidus* L.	Euphorbiaceae
50	*Millingtonia hortensis* L.f.	Bignoniaceae
51	*Borassus flabellifer* L.	Arecaceae
52	*Cascabela thevetia*	Apocynaceae
53	*Millingtonia hortensis* L.f.	Bignoniaceae
54	*Thespesia populnea* L Sol ex Correa	Malvaceae

55	*Citrus limon* (L.) Burm.f.	Rutaceae
56	*Acalypha hispida L*	Euphorbiaceae
57	*Tithonia diversifolia* (Hemsl.) A.Gray	asteraceae
58	*Cycas revoluta* Thunb.	Cycadaceae
59	*Pisonia alba* Span	Nyctaginaceae
60	*Caryota urens* L.	Arecaceae
61	Lantana camara l	verbenaceae
62	Wodyetia bifurcata	Aracaceae
63	Swietenia macrophylla	Meliaceae

Plant identification and keeping the name boards for identified Plants/Trees – 18.02.16&19.02.16

ACADEMIC YEAR – 2016-17

S. No	Name and Designation of the Resource Persons	Event	Date	No. of Beneficiaries
1	Mr. Osai Kalidasan, OSAI NGO	A Mass Tree Saplings Plantation	17.12.2016	100
2	Mr. Ragupathy, 36th Ward Former Councellor, Veeriyampalayam	School & Temple Campus Cleaning - SWACHH BHARAT	06.01.2017	150
3	Mr. A. Kandaswamy, Former Students Chairman, Veeriyampalayam	Eradication of Plastics - SWACHH BHARAT	07.01.2017	150
4	Mrs. J. Thamizhmozhi, 34th Ward Former Councellor, Veeriyampalayam	Eradication of Parthenium Plants - SWACHH BHARAT	08.01.2017	150
5	Mr. N.R. Vaitheeswaran, PCRA, Coimbatore	Awareness on Energy Conservation and Water Management	10.01.2017	150
6	Dr,Pramod, Principal Scientist, Salim Ali Centre for Ornitology (SACON), Anaikatti, Coimbatore.	Guest Lecture on “Biodiversity Conservation: Problems & Prospects”	12.07.16	50

Report on Event 2016 – 17

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted A Mass Tree Saplings Plantation. The event took place on 17.12.2016 during 9.00. A.M. - 3.00. P.M. at Government Primary School, Kalapatti. Mr. Osai Kalidasan, OSAI NGO addressed the students. 100 number of students participated in this event and benefitted out of it.

A Mass Tree Saplings Plantation event conducted on 17.12.2016 at Government Primary School, Kalapatti

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted School & Temple Campus Cleaning - SWACHH BHARAT. The event took place on 6.1.2017 during 8.00. A.M. - 6.00. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Mr. Ragupathy, 36th Ward Former Councellor, Veeriyampalayam addressed the students. 150 number of students participated in this event and benefitted out of it.

School & Temple Campus Cleaning - SWACHH BHARAT event conducted on 6.1.2017 at Kalapatti, Veeriyampalayam, Karupparayampalayam

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Eradication of Plastics - SWACHH BHARAT. The event took place on 7.1.2017 during 8.00. A.M. - 6.00. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Mr. A. Kandaswamy, Former Students Chairman, Veeriyampalayam addressed the students. 150 number of students participated in this event and benefitted out of it.

Eradication of Plastics - SWACHH BHARAT event conducted on 7.1.2017 at Kalapatti, Veeriyampalayam, Karupparayampalayam

Report of the Event

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Eradication of Parthenium Plants - SWACHH BHARAT. The event took place on 8.1.2017 during 8.00. A.M. - 6.00. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Mrs. J. Thamizhmozhi, 34th Ward Former Councellor, Veeriyampalayam addressed the students. 150 number of students participated in this event and benefitted out of it.

Eradication of Parthenium Plants - SWACHH BHARAT event conducted on 8.1.2017 at Kalapatti, Veeriyampalayam, Karupparayampalayam

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Awareness on Energy Conservation and Water Management. The event took place on 10.1.2017 during 8.00. A.M. - 6.00. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Mr. N.R. Vaitheeswaran, PCRA, Coimbatore addressed the students. 150 number of students participated in this event and benefitted out of it.

Awareness on Energy Conservation and Water Management event conducted on 10.1.2017 at Kalapatti, Veeriyampalayam, Karupparayampalayam

ACADEMIC YEAR – 2017-18

S. No	Name and Designation of the Resource Persons	Event	Date	No. of Beneficiaries
1	Mr. T.N. Hariharan I.A.S., District Collector, Coimbatore	Dr.A.P.J.Abdul Kalam's Second Memorial Day - Environment Awareness Rally	27.07.2017	150
2	Mrs. K. Nagarathinam, Head Mistress, Government Middle School, Veeriyampalayam	Swachh Bharat Programme	11.08.2017	150
3	Mr. N.R. Vaitheeswaran, PCRA, Coimbatore	Tree Plantation at Schools	02.02.2018	150
4	Mr. Ragupathy, 36th Ward Former Councellor, Veeriyampalayam	Eradication of Plastics - SWACHH BHARAT	03.02.2018	150
5	Prof.P.Kandasamy (Retd), Camp Director, ECO-Education nature camp	Invited Lecture on "குறிஞ்சிமுதல்நெய்தல்வரை… ஒருபின்னல்"	08.09.2017	80
6	Dr.N.Senthilkumar Scientist F IFGTB Coimbatore	Training on "Bioprospecting and Biopiracy" under Umbrella Scheme of "Forestry Training and Capacity Building" for other stake holders.	10.10.2017 to 12.10.2017	03
7	Mr.B.Chandrasekaran, Chief Executive Officer, Olirum Erodu foundation	National workshop on Pollution control and Environmental protection in Kongu college of arts and Science, Erode	05.03.2018	20
8	Prof.P.Kandasamy (Retd), Camp Director, ECO-Education nature camp	Eco education nature camp for Eco club volunteers to Parson's valley and Porthimund forest at Ooty from 7th to 10th February 2018.	07.02.2018 to 10.02.2018	80

Report on Event 2017 – 18

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Dr.A.P.J.Abdul Kalam's Second Memorial Day - Environment Awareness Rally. The event took place on 27.07.2017 during 9.15. A.M. - 3.00. P.M. at District Collector Officer. Mr. T.N. Hariharan I.A.S., District Collector, Coimbatore addressed the students. 150 number of students participated in this event and benefitted out of it.

Dr.A.P.J.Abdul Kalam's Second Memorial Day - Environment Awareness Rally event conducted on 27.07.2017 at District Collector Officer.

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Swachh Bharat Programme. The event took place on 11.08.2017 during 9.00. A.M. - 2.30. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Mrs. K. Nagarathinam, Head Mistress, Government Middle School, Veeriyampalayam addressed the students. 150 number of students participated in this event and benefitted out of it.

Swachh Bharat Programme event conducted on 11.08.2017 at Kalapatti, Veeriyampalayam, Karupparayampalayam

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Tree Plantation at Schools. The event took place on 2.2.2018 during 8.00. A.M. - 6.00. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Mr. N.R. Vaitheeswaran, PCRA, Coimbatore addressed the students. 150 number of students participated in this event and benefitted out of i

Tree Plantation at Schools event conducted on 2.2.2018 at Kalapatti, Veeriyampalayam, Karupparayampalayam

National Service Scheme of Dr. N.G.P. Arts and Science College has conducted Eradication of Plastics - SWACHH BHARAT. The event took place on 3.2.2018 during 8.00. A.M. - 6.00. P.M. at Kalapatti, Veeriyampalayam, Karupparayampalayam. Mr. Ragupathy, 36th Ward Former Councellor, Veeriyampalayam addressed the students. 150 number of students participated in this event and benefitted out of it.

Eradication of Plastics - SWACHH BHARAT event conducted on 3.2.2018 at Kalapatti, Veeriyampalayam, Karupparayampalayam

Invited Lecture on "குறிஞ்சிமுதல்நெய்தல்வரை… ஒருபின்னல்", 08.09.17

The club conducted Invited Lecture on "குறிஞ்சிமுதல்நெய்தல்வரை… ஒருபின்னல்" by Dr.P.Kandasamy by Prof.P.Kandasamy(Retd),Camp Director,ECO-Education nature camp on 08thseptember 2017. He explained the importance of forests. Besides providing habitats for animals and livelihoods for humans, forests also provide protection of watershed, prevention of soil erosion and mitigate climate change. Despite of our dependence on forests, we are still allowing them to disappear.

Inauguration of Lecture – 08.09.17

Lecture by Guest – 08.09.17

Students were participating in Lecture – 08.09.19

Training on "Bioprospecting and Biopiracy" under Umbrella Scheme of "Forestry Training and Capacity Building" for other stake holders, 10.10.17 to 12.10.17

Training on "Bioprospecting and Biopiracy" under Umbrella Scheme of "Forestry Training and Capacity Building" for other stake holders from 10th -12th October 2017. In this Training the resource persons from inside and outside IFGTB were given the the medicinally valuable plants and the use of secondary metabolites in clinical medicine. They also arranged for Tribal visit and gave awareness on their traditional usage of medicinal plants.

Training on Bioprospecting and Biopiracy – 12.10.17.

National workshop on Pollution control and Environmental protection in Kongu College of Arts and Science, Erode, 05.03.18

National workshop on Pollution control and Environmental protection in Kongu college of arts and Science, Erode on 05th March 2018. They explained about the different types of pollution India and the ways of protecting our environment.

Guest was delivering the Lecture-05.03.18

10.6.4. Eco education nature camp for Eco club volunteers to Parson's valley and Porthimund forest at Ooty from 7th to 10th February 2018.

The club organised four days Eco education nature camp for our students to Parson's valley and Porthimund forest at Ooty from 7th to 10th February 2018. 76 girl students from various departments participated in the camp along with four faculty members

REPORT OF ECO EDUCATION NATURE CAMP (07.02.18 -10.02.18)

An Eco education nature camp from 7th to 10thFebruary 2018 was organized by the Eco Club of Dr. N.G.P. Arts and Science College, Coimbatore and conducted by Prof. P.Kandasamy, Camp Director-Eco Education Nature Camps. Totally, 76 girl students from various departments were participated in the camp along with the 4 faculty members

Activities of the camp

Date: 07/02/2018 ***Day1: Wednesday***

The journey started from Dr. N.G.P Arts and Science College at early morning and reached to Parson Valley by afternoon. The accommodation was provided by the Forest Department at Parson Valley, to the staff and students and all had their lunch.

After the lunch, the students were asked to assemble in the hall and were briefed about the regulations to be followed during the camp. The students got ready for the evening trek to nearby forest at the onset of evening. The students were very much excited and enjoyed the trek though it was difficult and first trekking experience for the majority of the students. As the trekking continued after sunset, wild darkness has already spread across the woods.

That was the most dreadful challenge. The students trekked through the narrow steep hills with the help of torch light and reached back to the cottage at 7:30 pm. The evening session started at 8 pm in the hall. During the session the students were asked about the experience. In that session, Prof. P.Kandasamy highlighted the origin and meaning of the word 'Nilgiri'. The word 'Nila' denotes Blue and 'Giri' denotes Hills, which literally means 'Blue Hills'. The purplish blue kurinji flower (*Strobilantheskunthianus*) shrubs that bloom only once in 12 years gave rise to the name 'Nilgiri'. Much of the 'Nilgiris' natural montane grasslands and shrub lands interspersed with sholas has been much disturbed or destroyed by extensive coffee and tea plantations, extensive commercial planting and harvesting of non-native plantations like eucalyptus, pine and wattle trees and cattle grazing. The session concluded at 9pm after which delicious dinner was served. After the dinner the students were briefed about the next day's program and were let off for sleep.

Parson's valley trekking shed – 07.02.18

Started the trekking- 07.02.2018






Eucalyptus and grassland in Forest – 07.02.2018


Return to shed at 7pm - 07.02.18

Date: 08/02/2018 ***Day2: Thursday***

The students woke up early in the morning as already instructed and got ready for the day. Everyone assembled in the hall at 8 a.m. after a hot cup of tea to warm up from misty morning. The morning session lecture prolonged till 9:30 am. During this session, the students were enlightened by Prof.P.Kandasamyabout necessity of protecting Tigers in India, habitat of tigers and their ecosystem.

After the morning session, breakfast was served immediately. Later the students got ready equipping themselves with essential requirements needed for one day trek. Packed lunch was provided to each student. The students left for trekking into the forest at around 10:45 a.m. It was a challenging trek with elevated features, as well as steep slopes along with scenic beauty of grass land. The students were guided all along the trek by the concerned member of staff. On the way through the forest land, the students witnessed bones and other remains of many animals attacked by predators. After the lunch, Prof. P.Kandasamy briefly explained about the forest environment and its need for mankind. He also explained about different types of forests such as deciduous forest, tropical and sub-tropical forest, wet evergreen forest that exist in south India. Types of rocks, species of plants and brief history of deforestation that caused loss of habitats in forests of India, destruction of grasslands and sholas during the British era for various purposes. Grasslands and sholas that is rich in its own biodiversity.

Flora & fauna of shola grassland are unique; they are home to most of the birds endemic to Western Ghats. Like black – orange flycatcher, pipit, Nilgiri laughing thrush, and mammals like Nilgiri languor and most endangered species. The grassland is being rapidly closed in by various woody exotic species for example *Lantana camera, UlexEuropaeus, Acacia mearnsii, Schoch broom* and wattle. These plants are not native plants of the grassland. In the middle of 19th century, British set their sights in the upper Nilgiris because there was close resemblance of climate and vegetation with their homeland. They cut the shola trees for need of timber and fire wood. Some of the forest conscious Britishers did take some care to protect sholas, though. Since grasslands were considered as wastelands they were turned into farming land. They started to plant exotic plant wattle, pine, Acacia mearnssii, eupatorium varities, *Scotch broom*, resulting in decline in number of population of NilgiriTahr (an Asian goat antelope). The reason was that those exotic plants competed with the grass land species for soil nutrients resulting in stunted growth.

As it was time to move on, the students continued adventurous trekking across brooks, streams and mire. The students returned to the cottage in the evening. After a short break which included evening tea and snacks, the students assembled in the hall for the evening session lead by Prof.P.Kandaswamy. The students were given an opportunity to watch documentary film regarding Western Ghats, features of Western Ghats, flora and fauna existing in Western Ghats. It greatly enhanced the knowledge about the geographical features of Western Ghats. Western Ghats contribute to one among the “hot-spots” of biological diversity in the world. The Western Ghats extend from the Satpura Range in the north, stretching from Gujarat to Tamil Nadu. It covers the states of Maharashtra, Goa, Karnataka and Kerala. Major gaps in the range are the Goa Gap, between the Maharashtra and Karnataka sections, and the Palghat Gap on the Tamil Nadu and Kerala border between the Nilgiri Hills and the Anaimalai Hills.PalGhat, ThalGhat and BhorGhats are the most important gaps in the WesternGhats.The northern portion of the narrow coastal plain between the Western Ghats and the Arabian Sea is known as the Konkan, the central

portion is called Kanara and the southern portion is called Malabar. In the southern part of the range is Anamudi (2,695 metres (8,842 ft.)), the highest peak in Western Ghats.

The session concluded with a documentary on Tiger Reserve Forest, awareness about rules, regulations and Acts persisting in the country followed by serving dinner. The students came to the fact that “If there are no tigers in the forest, there is no forest and also there is no water in the pipes”.

Second day trekking - 08.02.18






Pine forest Visit- 08.02.18

Date: 09/02/2018 *Day 3: Friday*

The routine followed as the students woke up early in the morning, gathering in the hall at 8 a.m. The morning session briefed an introduction to Shola forest. Shola finds its origin from Tamil word ‘cholai’ meaning thicket, cold place. Shola forests are found in the higher altitude hill regions of the Nilgiris, Kanyakumari district, Idukki district, the Western Ghats and related ranges in the states of Karnataka, Kerala and Tamil Nadu.

Generally found to occur above 2000 meters above sea level, Shola - grasslands are rich store houses of biodiversity and also home to extremely rich wildlife. They consist of dwarf trees growing around 25-30 feet height. Its vegetation is double layered with closed canopy top which hardly permits a single ray of sunlight to penetrate in the natural vegetation.

After the morning session lecture, the participants were taken into a shola forest. The calmness and the greenery of the Shola was major attraction. The heavenly beauty of Shola captured every single heart. The students were supposed to maintain complete silence inside the Shola as not to disturb the habitat. During the trekking inside the shola Prof.P.Kandasamy explained the definition of shola.A Shola forest may be defined as a temperate wet evergreen forest, with cauliflower tops in the canopy and with multicolouredfoliages. Shola forest can be found only in the mountain slopes of western ghats, particularly in Nilgiris, Anaimalais and palni hills. Shola tree barks and rocks are covered with green mosses. Here every living organism is not independent but interdependent.The inside of Shola is always maintained between 12 to 17°C which is known as microclimate. The students were given an opportunity to witness few samples of plants, leaves that included wild pepper, orchids, cinnamon, bay leaves, mosses and lichens. The students were fascinated to learn about the interdependence of mosses and lichens. These little plants lie upon the rocks, secrete an acid which dissolves the hard minerals. They have the power to condense moisture from the air for they must have water as food. When lichens disappear, they give early warning of harmful conditions. Also, lichens, mosses, and cyanobacteria together form a microbiotic crust, which stabilizes soil and is a major source of nitrogen in certain ecosystems, all of which are threatened by overgrazing and development.

Some shola area suffered from excessive burning, resulting in shrinkage of forest and fire is also one of the major factors which not only depletes undergrowth but also facilitates the seed germination of fast invading, weed plants by breaking seed dormancy. Shola is a very sensitive type of vegetation. Once it vanishes from its original habitat, it is very difficult to make it reappear in view of the change in climate which does not allow shola seedling to grow in open grasslands, the few remaining shola - grassland landscape are found inside the Mukurthi national park on the western slopes of the Nilgiris and in vicinity of Avalanche.

Unfortunately nearly 80% of the original environment has been destroyed by encroachment, ignorance of its value and more than 60% of the grassland has disappeared, shola-grass lands are declining at an alarming rate. Deforestation for purpose of agriculture has sounded the death knell for shola and grasslands as well as warning bells for the flora and fauna of Nilgirisgrassland. It is necessary to document the unique biodiversity and evolve strategies to conserve this vital and threatened ecosystem, urgent action needs to be taken by all of us to save this priceless natural heritage at any cost. Deforestation not only affects the biodiversity of flora and fauna of shola-grassland but it results in a severe imbalance of whole ecosystem. Hence, arise the need to conserve the portrait of the Indian Forest.

It was time for lunch as the students moved out of Shola. All of them enjoyed their packed lunch. After the lunch they clicked few snaps and viewed the Porthimund dam. After the dinner, a small session was conducted in the hall which included guidelines for appearing civil service exam by Prof.P.Kandasamy.






Third day trekking -visit to Sholas --09.02.18

Date: 10/02/2018 Day 4: Saturday

The students woke up early in the morning for the activities of the concluding day. The day started as usual with morning assembly and breakfast.

After the breakfast the students were taken to Parson's valley dam. Prof. Kandasamy gave a session on the water harvesting strategies of TamilNadu. There are eight lakes covering the highest to the lowest catchment in The Nilgirisare Upper Bhavani, Western Catchment 1-2-3, Portimund, Avalanche, Emerald and Parson Valley.They were

explained about the structural function of dam. The structure of rivers adjoining Karnataka, Tamil Nadu and Kerala. The major river systems originating in the Western Ghats are Godavari, Kaveri, Krishna, Thamiraparani, Vaigai and Tungabhadra. The majorities of streams draining the Western Ghats joins these rivers, and carry large volume of water during the monsoon months. These rivers flow to the east due to the gradient of the land and drain out into the Bay of Bengal. Major tributaries include Kali, Bhadra, Bhavani, Bhima, Malaprabha, Ghataprabha, Hemavathi and Kabini.The students were highly enlightened about the river system of Western Ghats.

Visit to Porthimund dam and Parson's Valley dam-10.02.18

Feedback session-10.02.18

After the visit to the dam, the students were gathered at the cottage hall for the last session. A student from each department stood up as to represent their feedback on the experience during the camp. Last but not the Least, a sincere sense of gratitude towards the District Forest Officer, The Nilgiris were not left unmentioned. The students were very excited and were not willing to leave for the backward journey to their homes. After the lunch, the students were instructed for packing their belongings and prepare for the return journey. These students and faculties are very fortunate to get this opportunity to attend this Eco education nature camp. This camp gave environmental awareness to the younger generation which is need of today. This Eco education nature camp should be continued to educate the importance of our ecosystem.

10.7. Public transport, Low emitting vehicles and Control of Car Smokes and Exhausts for Environment Management

A smart method is to pick out public transportation as much as feasible without polluting the environment by way of driving a car or bike. It additionally often is cheaper, and it leaves much tear in personal automobile expenses. Public transportation cars together with buses reduce carbon emissions which greatly decreases the development of smog within the towns. This means that human beings have more healthy air to respire. Comparing a bus travelling with seven people to one single person using a vehicle, it's been observed that buses are the most effective by producing 1/5 the quantity of carbon gas emissions compared to the findings of the car effects. This is a huge decrease in discharge of natural resources per person. Public transportation is better for the surroundings which have been proven through research on emissions. Other than this, it also gives more benefits like less noise and traffic congestion. Whenever possible, try to take public transport in place of one's own vehicle. Fewer miles means approaching fewer emissions.

Dr. N.G.P. Arts and Science College operates some vehicles (Bus) to pick up the students and staff members around Coimbatore city to enhance the teaching and learning processes. The vehicles are maintained properly by following periodical services, changing oil filters and belts, grease and lubricate, batteries, and etc. It is observed that staff members and students are coming to Dr.N.G.P.Arts and Science College every day using their own vehicles (Cars and Bikes / Scooters) which accounted to be moderate. It is Dr. N.G.P. Arts and Science College to operate some bicycles and battery cars for internal mobility for all stakeholders who wish to use it inside the Dr. N.G.P. Arts and Science College Campus to control car smokes and exhaust significantly. It is playing an important role to act as a global indicator for checking the purity of the atmosphere in terms of car smokes and exhaust in the level of carbon dioxide. The observation showed that the concentration of CO_2 in the atmosphere is found to be low which did not exceeds the critical limit of CO_2 having pure air without any air contaminants with good air exchange/circulation in Dr.N.G.P.Arts and Science College campus.

11. Best Practices on Environment Audit Initiatives followed in the Organization

1. A well-established 'Rainwater harvesting system'' to recharge wells and ground water status by collecting rainwaters from the campus.

2. The waste water is recycling system is installed in the campus and is used for greenery maintenance.

3. NSS Units and 'Eco Club' which are functioning well and conducting a large number of awareness programmes related to nature conservation and environmental protection.

4. Swachh Bharath Abhiyan under Clean India Mission is implemented effectively by NSS units

5. The Dr. N.G.P. Arts and Science College has created a very good campus ecosystem for making a coexisting and sustainable environment which includes natural and planted vegetation supporting a rich biodiversity of flora and fauna.

12. Recommendations for sustainable environment

- Suggested to conduct a large number of awareness programmes on nature conservation and environmental protection.

- Recommended to include various courses related to environmental safety, conservation and environmental pollution in the Curriculum for the students and research scholars.

- Amended to plant more number of oxygen producing and carbon dioxide absorbing plants in the campus to create a very good ecosystem to the stakeholders

13. Conclusion

Dr. N.G.P. Arts and Science College, Coimbatore, Tamil Nadu is a well-established Institute in India in terms of academic activities, efforts are continuously made in providing an eco-friendly atmosphere to the students, research scholars, parents and staff members. The environmental protection initiatives are substantial by means of creating wastewater treatment, rainwater harvesting system and natural vegetation in the Dr. N.G.P. Arts and Science College, Campus without harming the environment. Dr.N.G.P.Arts and Science College has wastewater treatment facility to recycle wastewaters. A campus ecosystem is supported a rich biodiversity of flora and fauna which is making a sustainable environment and eco- friendly campus. Swachh Bharath Abhiyan is implemented effectively by the Dr. N.G.P. Arts and Science College to promote sanitation and cleanliness to rural and tribal people across Coimbatore District of Tamil Nadu. Environmental audit is carried out to provide an indication to the University about how the environmental system is performing to provide an ecofriendly atmosphere to the stakeholders. The report of environment audit may be useful to implement ecofriendly practices in Dr. N.G.P. Arts and Science College campus in coming years without harming the environment.

14. Acknowledgement

Nature Science Foundation, Coimbatore, Tamil Nadu, India is grateful to the Hon'ble Vice-Chancellor and Registrar and IQAC Coordinator of Dr. N.G.P. Arts and Science College, Coimbatore, Tamil Nadu for providing us necessary facilities and cooperation during the Environment Audit. This helped us in making the audit a magnificent success. Further, we hope this will boost the new generation to take care of the environment and propagate these views for many generations to come by the Dr. N.G.P. Arts and Science College Management.

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