



CARMEL COLLEGE, MALA

Nationally Re-accredited with 'A' grade (Third Cycle)

Thrissur Dt., Kerala- 680732, Ph:04802890247, Fax: 04802890247

E-mail: carmelcollege@rediffmail.com, Website: www.carmelcollegemala.ac.in



Criteria VII

Institutional Values and Best Practices

7.1.6 Quality audits on environment and energy are regularly undertaken by the institution

Certification by the Auditing Agency

Submitted to




THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

**Environment (Biodiversity) - Green Audit
Compliance Statement
Carmel College, Mala, Thrissur, Kerala
For the AY 2019 - '20**

Overall Objective	Main Objectives	Compliance Status
<p>Ensure that an effective biodiversity protection plan is followed in the campus with the maintenance of all plants animals living in and around the campus, and expanding the same even to communities outside the campus in addition to working for capacity building to withstand Climate Change impacts.</p>	<ol style="list-style-type: none"> 1. Ensure that there is a competent Biodiversity Expert from an external agency, who will provide guidance on Biodiversity and Resource conservation, and improve the ecology. 2. Ensure that an Environment Protocol is adopted and followed by the entire campus community, adherence of which is reviewed, monitored, and targets reset annually. 3. Ensure that frequent training and awareness programs are planned and carried out focusing on climate change resiliency and maintenance of air quality in the campus. 4. Ensure that every student and staff member commit to the lowering of carbon footprint of the institution arising out of energy, transportation and other facets. 5. Ensure that Environment Audit is conducted annually, with participation of staff and students, and that recommendations are followed up. 	<p>Ensured continuous guidance from experts with CED and NGGFN.</p> <p>Ensured.</p> <p>[Vide Page 13 of Green Audit Report for the year]</p> <p>Done.</p> <p>[Vide # 2.1, # 3.5 & 3.6 of Green Audit Report]</p> <p>Commitment Ensured.</p> <p>Environment Audit conducted annually.</p>




<p>Prof. V K Damodaran</p> <p><i>Ex-UNEP Expert For NGGFN Audit Team</i></p> <p>30 July 2020</p>



Nature's Green Guardians Foundation

Trivandrum 695 043 India

Environment Biodiversity- Green Audit Certificate

Carmel College, Mala, Thrissur, Kerala

For the AY 2019 - '20

This Green Audit including evaluation of Biodiversity conservation has been conducted for Carmel College, Mala, Thrissur, in accordance with the International Standards for ISO 14000 family of standards set by ISO TC 207 and its sub-committees, Bureau of Energy Efficiency standards, and stipulations under the Energy Conservation Act 2003 of Government of India and other relevant mandates for promotion of sustainable living and education in a healthy environment.

In our opinion, the Institution has presented true and up-to-date data on the various aspects of working of this higher education institution before the audit team, and appropriate audit procedures have been completed by the audit team for preparing this report. The assessments and recommendations are based on data presented before the team as they existed at the time of audit.


In order to meet the objectives of the audit, the methodology did combine physical inspection of the campus on several work days and holidays, with analytical reviews of relevant documents and activities, as well as interviews with the Principal, selected Staff and students of the College.

This audit is conducted to ensure that a Green lifestyle is followed and implemented in the campus across all academic and non-academic departments, as well as the body of students undergoing studies in the College, so as to make all stakeholders aware of the need for individual efforts in perpetuating conservation efforts among the people.

Carmel Green Audit 2019-'20 has found that the institution's per capita carbon footprint for the year is only 0.077 ton of CO₂ equivalent, a level well below the current national per capita average, with potential to develop into a carbon neutral campus. All efforts are taken to conserve and protect the existing biodiversity and also to extend the efforts even beyond the college boundary through outreach, and further by adopting a dedicated Green Protocol, and having a commitment to continue its green practices to positively influence the society at large.

Prof. V K Damodaran <i>Ex- UNEP Expert: For NGGFn Audit Team</i> 30 July 2020	
--	--

I agree with the data presented in this report, as true, and further express my willingness to implement the recommendations of this audit report after internal review, even if any or many of them are in excess of the relevant mandates.

Sr. Prof. (Dr.) Licy, AD <i>Principal</i> <i>Carmel College, Mala, Thrissur</i> Date:	  Signature & Seal
---	---


Energy Audit Compliance Statement

Carmel College, Mala, Thrissur, Kerala

For the AY 2019 – '20

Overall Objective	Main Objectives	Compliance Status
<p>Ensure that an effective energy management plan is followed in the campus with high degree of energy efficiency, and increasing rate of utilization of renewable energy, in order to help raise the Climate Change resiliency, which is periodically reviewed and implemented wholeheartedly by the stakeholders.</p>	<ol style="list-style-type: none"> 1. Ensure that there is a competent Energy Management Expert from an external agency, who will provide guidance on Energy conservation and energy transition initiatives. 2. Ensure that the Energy Conservation Strategy is reviewed annually, progress monitored and achievable and measurable targets set for the future. 3. Ensure that a Policy on embracing Green energy, energy efficiency, and wastes to energy is evolved, enforced, and reviewed regularly. 4. Ensure that every stakeholder in the campus commits to the lowering of emissions from the institution from all facets of energy use. 5. Ensure that Energy Audit is conducted annually, with involvement of staff and students and action taken on all the viable recommendations of the linked external expert/Consultant. 	<p>NGGFN, headed by a former UN Expert is in active consultation.</p> <p>Ensured. [Vide # 2.2.1 of Gr Audit Report for the year]</p> <p>Ensured.</p> <p>Commitment ensured. [Chapter 5 of GA Report]</p> <p>Energy Audit conducted annually. Implementation in progress.</p>




<p>Prof. V K Damodaran</p> <p><i>Ex-UNEP Expert For NGGFN Audit Team</i></p> <p>30 July 2020</p>



Nature's Green Guardians Foundation
Trivandrum 695 043 India
Energy Audit Certificate
Carmel College, Mala, Thrissur, Kerala
For the AY 2019-20

Energy Audit for the period July 2019 to June 2020 has been conducted for Carmel College, Mala, Thrissur, Kerala, in accordance with the International Standards for ISO 14000 family of standards set by ISO TC 207 and its Sub-committees, Bureau of Energy Efficiency standards, and stipulations under the Energy Conservation Act 2003 of Government of India, and other relevant mandates for maintenance of sustainable and healthy environment for education in the campus.

In our opinion, the Institution has presented true and up-to-date data on the various aspects of working of this education institution before the audit team, and appropriate audit procedures have been completed by the audit team for issuing this Audit Certificate and the Compliance Statement. The recommendations are based on verified data presented before the team as they existed at the time of audit.

In order to meet the objectives of the audit, the methodology did combine physical inspection of the campus on several work days and holidays, with analytical reviews of relevant documents and activities, as well as interviews with the Principal, IQAC team, and selected other members of Staff, as well as Students of the College.

Audit findings indicate that, of the 169.1 T CO₂ of carbon footprint of the institution for the year, the contribution from direct use of energy was limited to 71.1 T CO₂. Transportation including public transport use (outside the campus) is at 51.6 T CO₂ – with only 27% of it coming from use of personal vehicles by staff and students. Introduction of renewable energy returned 32.7 T CO₂ (remedial measures). The per capita electricity consumption (35 kWh) is at the lowest possible level for a college with nearly 1500 students. Only very few students stay in the hostel. Awareness and training programs were conducted during the year. Stakeholders are aware of the need for individual efforts.

Prof. V K Damodaran

*FIE (India), LSM IEEE, Chairman, NGGFn
Ex-UNIDO Expert; For NGGFn Audit Team
30 July 2020*

I agree with the recommendations of this report and further express my readiness to implement the recommendations of this audit report after internal review, even if any of them is in excess of the minimum compliance level.

Sr. Prof. (Dr.) Licy, AD

*Principal
Carmel College, Mala, Thrissur
Date:*




Signature & Seal

Environmental Quality - Green Audit Compliance Statement

Carmel Women's College, Mala, Thrissur, Kerala
For the AY 2019-20

Overall Objective	Main Objectives	Compliance Status
<p>Ensure that an effective environmental protection plan is followed in the campus with the maintenance of high level of air quality, and 3R policy on waste management - focusing on mitigation, adaptation and capacity building for Climate Change impacts, which is periodically reviewed.</p>	<ol style="list-style-type: none"> 1. Ensure that there is a competent Environment Expert from an external agency, who will provide guidance on Resource conservation, Waste management and Air and Water quality assurance. 2. Ensure that an Environment Protocol or Policy is adopted and followed by the entire campus community, adherence of which is reviewed, monitored, and targets reset annually. 3. Ensure that frequent training and awareness programs are planned and carried out focusing on climate change resiliency and maintenance of air quality in the campus. 4. Ensure that every student and staff member commit to the lowering of carbon footprint of the institution arising out of energy, transportation and other facets. 5. Ensure that Environment Audit is conducted annually, with participation of staff and students, and that recommendations are followed up. 	<p>Ensured continuous guidance from experts of NGGF_n having international experience.</p> <p>Ensured. [Vide Page 13 of Green Audit Report for the year]</p> <p>Done. [Vide # 1.4,2.1 & 2.4. of Green Audit Report for the year]</p> <p>Commitment Ensured.</p> <p>Environmental Audit conducted annually.</p>




<p>Prof. V K Damodaran <i>Ex-UNEP Expert For NGGF_n Audit Team 30 July 2020</i></p>



Nature's Green Guardians Foundation
Trivandrum 695 043 India

Environmental Quality - Green Audit Certificate
Carmel College, Mala, Thrissur, Kerala
For the AY 2019-20

Environment Audit for the period July 2019 to June 2020 has been conducted for Carmel College, Mala, Thrissur, Kerala, in accordance with the International Standards for ISO 14000 family of standards set by ISO TC 207 and its Sub-committees, Environmental Protection Act 1986 (and its amendments) of Government of India, and other relevant mandates for maintenance of sustainable and healthy environment for education in the campus.

In our opinion, the Institution has presented true and up-to-date data on the various aspects of working of this education institution before the audit team, and appropriate audit procedures have been completed by the audit team for issuing this Audit Certificate and the Compliance Statement. The recommendations are based on data presented before the team as they existed at the audit time.

In order to meet the objectives of the audit, the methodology did combine physical inspection of the campus on several occasion, with analytical reviews of relevant documents and activities, as well as interviews with the Principal, and other members of Staff and Students of the College.

Audit findings indicate that, of the 169.1 T CO₂ of carbon footprint of the institution for the year, the contribution from Transportation and Mobility including public transport use outside the campus is at 51.6 T CO₂ – with 27% of it coming from the use of personal vehicles by staff and students, and that out of Wastes is at 29.7 T CO₂. But, remedial activities brought in, returned a relief of 32.7 T CO₂. Vehicle movements inside the campus is allowable only in emergencies. Awareness programs and outreach programs are stepped up during the year. Environmental Quality in the campus is maintained well and is good.

Prof. V K Damodaran

*FIE (India), LSM IEEE, Chairman, NGGFn
Former UNEP International Consultant
30 July 2020*

I agree with the recommendations of this report and further express my readiness to implement the recommendations of this audit report after internal review, even if any of them is in excess of the minimum compliance level.

Sr. Prof. (Dr.) Licy, AD

*Principal
Carmel College, Mala, Thrissur
Date:*



Licy AD
Signature & Seal