GREEN AUDIT – 2021-22

MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR, ERNAKULAM
KERALA

EXECUTED BY

ATHUL ENERGY CONSULTANTS PVT LTD
4th FLOOR, CAPITAL LEGEND BUILDING,
KORAPPATH LANE, ROUND NORTH, THRISSUR, KERALA-680020
Ph: +91 735611199/0-6 Web: www.athulenergy.com E-Mail: info@athulenergy.com

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PREFACE

Every institution should be imparting knowledge about the campus environment and its surroundings through activities that follows the principles of sustainability. Hence an evaluation is needed to understand where it stands in the path to be an environment friendly, talent nurturing educational institution. This Green Audit was done with the aim to assess and rate the sustainable nature of the campus. The college vision is "to enlighten and empower women in rural and suburban society and enable them to act as agents of social transformation and acquire knowledge of self and surroundings and to make the world a better place". And in the **social goals**, it is written as **"to make the students aware of the pressing global issues and the moral responsibility to handover to the coming generation an eco-friendly life style and an earth free from pollution, filth, bigotry and corruption".** It was observed by usfrom the students' participation during the green audit.

This report is compiled by the BEE certified energy auditor along with the project engineers who are experienced in the field of energy, environment and management. The student volunteers made a mammoth contribution with data collection and preparing an initialskeleton for the report.

ACKNOWLEDGEMENTS

We express our sincere gratitude to the M/s Mar Thoma College for Women's Perumbavoor for giving us an opportunity to carry out the project of Green Audit. We are extremely thankful to all the management and staffs for their support to carry out the studies and forinput data, and measurements related to the project of Green audit.

Mar Thoma College for Women– TEAM – Faculties and students of department of Physics

Dr. Sujo Mary Varghese | *Principal, Mar Thoma College for Women*

Also congratulating our Green audit team members for successfully completing the assignment in time and making their best efforts to add value.

GREEN AUDIT TEAM

1. **Mr. Santhosh A**
   Registered Energy Auditor of Bureau of Energy Efficiency (BEE – Govt. of India)
   Accredited Energy Auditor No – EA 7597

2. **Mr. Ashok KMP**
   Certified Energy Manager, GRIHA Certified Professional

Yours faithfully

Managing Director
Athul Energy Consultants Pvt Ltd

GREEN AUDIT SUMMARY

- Mar Thoma Management taken considerable effort for maintaining the green and sustainable campus.
- All the varieties of living eco systems such as trees of varies varieties of gardens (Herbal, Butterfly Vidyavanam, vegetable garden etc.
- Staff and student's collaboration of NSS is held responsible for maintenance of greenery inculcating a sustainable culture among the student's community.
- Creation of Kuttivanam is a best example maintained by the college
- Well placed rainwater collection facility provided in the college.
- Well maintained open ground and auditorium is maintained by the college

Suggestions for improvement

- Sub metering system for water consumption to be done in each areas of main usage
- Display boards are to be placed in the Oxygen Park, Leisure benches, Silent zone,
- Nashtravanam or star Garden Street on the path ways in the college. Each students have particular star and the responsibility of maintaining those star garden or star boundary wall can be given to them.
- Garden library can be set in the college nearer to the entrance left side with rain canopy. Periodicals and newspapers can be kept in this rotating type garden library. Leisure benches also place in this open area under the mango tree.
- Practice Institutional Ecology- Set an example of environmental responsibility by establishing institutional ecology policies and practices of resource conservation.

GENERAL DETAILS

The general details of the Mar Thoma College for Women's are given below in table.

TABLE 1: GENERAL DETAILS

Sl. No:	Particulars	Details
1	Name of the College	**Mar Thoma College for Women**
2	Address	Perumbavoor, Ernakulam District,
		Kerala-683542
3	Contact Person	Principal
4	Contact Phone numbers	0484-2522723
		9446438500
5	E-mail ID	mtcwpbr@yahoo.in
6	Type of Building	Educational Institution
7	Annual Working Days	210
8	No: of Shifts	Day Shift (One) (9.30AM -4PM)
9	No: of students enrolled	969
10	No : of teaching staff	50
12	Total campus area	10 Acre
13	Total Built Up area	9200m^2
14	No: of programmes and departments	Degree -11, PG -02, Integrated PG -1 and departments -09
15	Herbal Garden	Yes
16	Vegetable garden	Yes
17	Butterfly Garden	Yes
18	Kuttivanam	Yes
19	Play Grounds	Open Natural Football ground , Badminton court

ABOUT MARTHOMA COLLEGE FOR WOMENS

Mar Thoma College for Women, established in 1982, has, since the inception been an institution striving towards excellence in all spheres of higher education, catering to the educational requirements of women from various parts of the state. The college has played an instrumental role in the progress of the locality, contributing proactively to its growth and development. It has been particularly successful in moulding generations of women into progressive thinkers and leaders contributing to the nation in multifarious ways. Over the years, the student strength has almost doubled and various new courses, including One new generation aided Integrated M Sc Physics, two PG courses and 3 UGC-sanctioned B.Voc courses, have been introduced to cater to the increasing needs of higher education in the region. The college, initially affiliated to the University of Kerala, started functioning as a junior college, offering the third and fourth groups of Pre-degree course with 92 students. When Mahatma Gandhi University was established in 1984, the college was affiliated to it. Science courses were offered since 1984. In 1991 the college was upgraded to a degree college. At present, it offers 8-degree courses – B.Sc. Mathematics (1991), B.Sc Zoology (1993), B.Com –Finance and Taxation (1995), B.Com-Computer Applications, B.A. History Vocational Archaeology and Museology (1998), B.A. English Vocational Administrative Assistant (1999), B.Sc Physics Vocational Applied Electronics (2001), B.Sc. Chemistry Model I (2006) and 2 postgraduate courses – M.Sc. Zoology and M.Sc Mathematics and Integrated M.Sc Physics in 2021. Mar Thoma College for Women is included under Sections 2(f) and 12B of the University Grants Commission. The college was accredited at the B+ level (2.63) by the National Assessment and Accreditation Council (NAAC) in 2017. Sprawling over an area of 10 acres, the college currently has a faculty strength of above 100. It serves as a district-level skill development centre of ASAP and conducts certified DCA courses in association with the IHRD. Other significant facilities in the college include a language lab, History Museum and a Biological Museum among others.

The student community of the college is a cross-section of society. The majority of the students of the college hail from socially and economically backward sections of the society. The total student strength at present is about 1000, of which SC/ST, OBC and students from other minority communities constitute a substantial part. Being a women's college, the institution has been significantly involved in the holistic development of young women for decades. It is the responsibility of the college to provide high-quality education for a broad range of students from all strata of society. The college has great potential to advance into a major higher educational institution in Kerala in the near future.

Our Vision

To enlighten and empower women in rural and suburban society and enable them to act as agents of social transformation and acquire knowledge of self and surroundings and to make the world a better place.

Our Mission

- To stimulate the most conducive ambience for the promotion of quality in teaching and learning.
- To empower women students hailing from rural background to face the challenges of life with dignity, honour and self-respect and to inculcate self-esteem in them.
- To become a centre of excellence providing value-based education aimed at the integrated development of individuals into responsible citizens with social commitment.
- To groom the personality of students making them self-sufficient to reach out to the less privileged, the downtrodden and the abandoned in the community
- To mould a team of students with the required knowledge, skills and attitude with global competency, capable of working towards the transformation of the society.
- To create awareness to live in harmony with the natural environment, to preserve it and to act as agents of peace, goodwill, natural integration and solidarity to make the world a better place.
- To enable students to communicate effectively and to empower them to face the issues and challenges with poise and confidence.

Being a reputed institution in a backward region dominated by low-income families, the college has been striving to provide the best possible academic platform for underprivileged girls. Despite the challenges, our students have managed to bring laurels to the institution by being university toppers in the academic and non-academic arena. We have also enabled them to become financially empowered by helping them secure employment in reputed institutions. Besides the regular courses, the college conducts certificate courses and vocational training programmes, including tailoring classes and courses in foreign languages, and also provide PSC and bank coaching. These endeavors have hugely benefited our students who, in turn, contribute proactively to the welfare of the local community, thus contributing to its development. The institution has also been growing quantitatively as the increasing number of enrolments in various courses and the inclusion of new courses testify.

FIGURE 1: MAIN COLLEGE ENTRY

GREEN AUDIT

The whole world is on the road to a sustainable development, and the environment conservation is the top priority among the list as every human activity has its effect on their surroundings, which is the environment. Hence be it a house, a commercial building, an industrial building, or any other construction will disturb the balance of the environment. It is very important to do a detailed study about the effects on the environment. This is conducted under the name of *Green Audit*, which can be defined as *the official examination of the effects a company or other organization has on the environment, especially the damage that it causes*. The objectives of the greenaudit can be listed as follows:

- Including participants from every section of the organization in the auditing process.
- Understanding the environment by drawing a simple sketch of the total area.
- Identifying the activities in the premises and listing them.
- Calculating the resource consumption like the land and water.
- Assessing the waste management and disposal.
- Study the energy usage pattern.
- Identify the good practices.
- Suggest the viable solutions to improve the sustainable nature of the organization.
- Compile the report with the above-mentioned details.
- Conduct a walkthrough audit to check the suggestions implemented by the institution and suggest for further improvements
- Verify all the points with actual measurements is it is meeting the performance and gave suggestions for improvement

CAMPUS ENVIRONMENT

The environment in and around the college campus plays an important part in maintaining a healthy atmosphere in nurturing talents. Trees are the major source of the oxygen we breathe, and receiver of the carbon dioxide we exhale. The sustainability of an ecosystem depends on the number of plants and trees in and around the surroundings. The open space in the college is usedfor gardening and maintain a botanical garden, herbal garden and Kuttivanam, fish pond, large open garden, peace garden etc.

Ultimately the campus is maintaining natural equilibrium with trees, birds and cattle's and water bodies along with human interactions.

FIGURE 2: COLLEGE CAMPUS

Scientific studies are proved that the nature can able to cure any diseases and this will reduce the stress among students during theirs studies and also increase the compassion amongthem and to nature. Ultimately the campus is maintaining natural equilibrium trees, birds and water bodies with human beings. Gardens and landscape are an aesthetic delight and it promotes attentiveness of students. Persons exposed to plants have higher level of positive feelings (pleasant,calm) as opposed to negative feelings (anger, fear).

SUSTAINABLE CONSTRUCTION OF BUILDINGS

Energy consuming devices installed to achieve the comfort levels for the occupants of the building gives rise to heat generation which adversely affects the environment within the building and in the surrounding. Buildings are thus the major pollutants that affect the urban air quality and contribute to climate change. Buildings are the major consumers of energy during their construction, operation and maintenance.

Mar Thoma College for Women has developed an ecological design in their buildings and adopted minimum negative impact on ecosystem. Their approach to the constructional activities consciously is to conserve energy and ecology and avoid the adverse effects of ecological damage.

Mar Thoma College for Women's constructed the building to optimum utilization of land and classrooms and with abundant light and natural ventilation. Maximum day light ingression and natural ventilation increases the indoor air quality and avoid the sick building syndrome.

Mar Thoma College for Women's set an example to develop a controllable microclimate in an urban city and urban gardeningand indoor gardening

FIGURE 3: BUILDING VIEW

1. CARBON DIOXIDE LEVELS

Air quality is a major area of concern inside a building. The percentage share of oxygen and carbon dioxide should be such that the occupants are able to perform their tasks without any discomfort. This is generally done through a provision of fresh air duct for the air conditioning systems or by providing windows. Numerous factors need to be considered for the design and fabrication of the fresh air supply system like the number of occupants, weather pattern and air quality of the location, and so on. For the human comfort, production of carbon-dioxide (CO2) withina building space is the prime area of consideration. This is associated with respiration which produces CO2. As a result, the carbon-dioxide levels will increase if ventilations are not provided.

As per various standards (like the ASHRAE Standard 62.1-2016), indoor CO2 concentrations up to 1200 ppm is considered acceptable. For a typical outdoor condition, this valuemay change from 300 to 500 ppm.

The measurements were recorded along different locations inside the campus and the peakvalues are given in the following sections. The key concentration was on the study of carbon dioxidelevels.

TABLE 2: CARBON DIOXIDE LEVELS

Sl. No.	AREA	Measured CO2	Standard CO2 level (Range)	Remarks
1	Zoology class room	500	300-500	**Good**
2	Mathematics Class room	425	300-500	**Good**
3	Dept. Physics	450	300-500	**Good**
4	Department of Chemistry			
5	Principal Office	550	300-500	**Good**
6	Front Office	360	300-500	**Good**
7	Class Room Commerce	500	300-500	**Good**
8	Corridor	425	300-500	**Good**
9	Library	510	300-500	**Good**
10	Dept. Of English	520	300-500	**Good**
11	Front Office	320	300-500	**Good**
Miscellaneous				
12	Canteen	450	300-500	**Good**
13	**Auditorium**	**350**	**300-500**	**Good**

2. HERBAL GARDEN

The literal meaning of Ayurveda is "science of life," because ancient Indian system of health care focused on views of man and his illness. It has been pointed out that the positive health means metabolically well-balanced human beings. Ayurveda is also called the "science of longevity" because it offers a complete system to live a long healthy life. It is an interactive system that is user-friendlyand educational. It teaches the patient to become responsible and self-empowered. It is a system for empowerment, a system of freedom, and long life. A significant part of knowledge and tradition is currently being eroded due to modernization, acculturation and availability of alternatives. Therefore, it is urgent to inculcate young minds to realize the fascinating knowledge and tradition associated with these resources, and help them understand the immense potentials the Kerala medicinal plants possess for the future.

The "Promoting Herbal Gardens in Schools and colleges" has been a fun-filled learning activity for the students where they got the opportunity to learn about the medicinal plants by actually planting the medicinal herbs and watching them grow in their gardens, and by exploring information about them from various sources.

FIGURE 4: HERBAL GARDEN AREA MARTHOMA COLLEGE

The task of making the garden itself has been enriching in terms of making students realize the importance of teamwork such as detailed planning, and allocation of tasks within a team. For the teachers, herbal garden project has been useful in terms of ease with which they could integrate the concept with other subject matter activities, such as writing essays, poems and stories, making posters, drawing and painting, making herbariums, and even preparing food recipe using some of the culinary herbs students have planted in their gardens. Kerala Government is also making lot of initiatives to developing and inculcating the herbal gardens in schools and colleges.

TABLE 3: LIST OF HERBAL PLANTS

Sl.no.	Name of trees	Botanical name
1	Cheroola	Aerva lanata
2	Karakil	Aphanamixis polystachya
3	Seethapazham	Annona squamosa
4	Plavu	Artocarpus heterophyllus
5	Shathavary	Asparagus racemosus
6	Mootil Pazham	Baccourea courtallensis
7	Madharam	Bauhinia acuminata
8	Kuppa Manjal	Bixa orellana
9	kulamavu	Buchanania axillaris
10	Plash	Butea monosperma
11	Kanikonna	Cassia fistula
12	Vayanna	Cinnamomum verum
13	Chagalam Paranda	Cissus quadrangularis
14	Shankupushpam	Clitoria ternatea
15	Neermathalam	Crateva religiosa
16	Nagadhandhi	Croton oblongifolius
17	Manjal	Curcuma longa
18	Karuka	Cynodon dactylon
19	Oorila	Desmodium gangeticum
20	Malamuriga	Diospyros buxifolia
21	Panachi	Diospyros peregrina
22	Vellakil	Diospyros malabarica
23	Kaara	Elaeocarpus serratus
24	Peral	Ficus benghalensis
25	Aathi	Ficus racemosa
26	Vayamkadha	Flacourtia jangomas
27	Kudam puli	Garcinia gummi-gutta
28	Kumizh	Gmelina arborea
29	Aaval	Holoptelea integrifolia

3. VIDYA VANAM

Gardens are a wonderful way to use the college campus as a classroom, reconnect students with the natural world and the true source of their food, and teach them valuable gardening and agriculture concepts and skills that integrate with several subjects, such as math, science, art, health and physical education, and social studies, as well as several educational goals, including personal and social responsibility. They gain self-confidence and a sense of "capableness" along with new skills and knowledge in food growing — soon-to-be-vital for the 21st century students become more fit and healthy as they spend more time active in the outdoors and start choosing healthy foods over junk food.

TABLE 4: LIST OF PLANTS IN VIDYVANAM

Sl No:	Vernacular Name	Sl No:	Vernacular Name	Sl No:	Vernacular Name
1	Kanikonna	21	Nedunar	42	Ungu
2	Asokam	22	Kara	43	Cherula
3	Sathavari	23	Ambazham	44	Poovam
4	Karinjatta	24	Neermathalam	45	Kooril
5	Chathuramulla	25	Aamathali	46	Vayana
6	Kunnivaka	26	Kudampuli	47	Vellakil
7	Kayamboo	27	Marotti	48	Manjal
8	Elichuzhi	28	Kurangumanjal	49	Adakkapine
9	Keezharnelli	29	Seethapazham	50	Plavu
10	Plasu	30	Ramathulasi	51	Karuka
11	Uravu	31	Kattuchethi	52	Panachi
12	Sankhupushpam	32	Irul	53	Chethikoduveli
13	Kulamavu	33	Karakil	54	Soapumkaya
14	Mandaram	34	Chorapala	55	Koodavazha
15	Manimaruthu	35	Thanni	56	Thambakam
16	Vengha	36	Laxmitharu	57	Ithi
17	Karimkurinji	37	Njaval	58	Athi
18	Kumbil	38	Changalam peranda	59	Palakapayani
19	Oorila	39	Koovalam	60	Thulasi
20	Aaval	40	Vayakatha	61	Pera
21	Puthramjeeva	41	Nagadanthi		

4. BUTTERFLY GARDEN

Butterflies are important because they are its own right but also quality of life indicators. Butterflies are part of Life on Earth and an important component of its rich biodiversity. The following are the main reasons for conserving butterflies. They are having an intrinsic value and it in the flag ship of the conservation. Have an Aesthetic value it portrays the essence of nature and beauty of peace.
Butter lies have an educational value as the transformation from egg to caterpillar to chrysalis is one of the wonders of nature. This has a scientific value as the important indicator climate change. Eco system value is Butterflies have been widely used by ecologists as model organisms to study the impact of habitat loss and fragmentation. People enjoy seeing butterflies both around their homes and in the countryside which improves the mental and social health of peoples. People enjoy seeing butterflies both around their homes and in the countryside.

FIGURE 5: BUTTERFLY GARDEN

TABLE 5: LIST OF PLANTS IN BUTTERFLY GARDEN6

Sl.no.	Name of Plants	Botanical name
1	Narakam	Citrus limon
2	Kilikkampetti	Crotalaria jimcea
3	Menthonni	Glalriosa superla
4	Chethikoduveli	Plumbago rossa
5	Neermathalam	Crateva religiosa
6	Nandyarvattam	
7	Erikku	Calatropies giganlea
8	Vellakoduveli	Plumbago zeylnica
9	Chethi	Ixona coccinea
10	Karimkurinji	Strobilanthes cillala
11	Kongini	Lantana Camara
12	Mandaram	Bahumia Tomrntosa
13	Ialamulachi	Bryophyllium pinnatum
14	Alpam	Thollea sllquosa
15	Aavannakku	Ricinus commumios
16	Eruveli	Coleus zeylanicus
17	Thozhukanni	Cotario calyx
18	Chembaruthi	Hibiscus ros-sinensis

5. OXYGEN PARK

Care taken by the college to have Plantation of oxygen rich plants in such as Neem Trees and Tulsi. The greenery has remained useful in developing Oxygen Park in our college. Trees release oxygen when they use energy from sunlight to make glucose from carbon dioxide and water. Like all plants, trees also use oxygen when they split glucose back down to release energy to power their metabolisms. Averaged over a 24-hour period, they produce more oxygen than they use up; otherwise there would be no net gain in growth

FIGURE 5: OXYGEN PARK

6. KUTTIVANAM (SMALL FOREST)

Marthoma College Management developed and protected forest area which is 10km away from college. Such a place can have following benefits to the ecosystem.

FIGURE 6: KUTTIVANAM

1. **Maintain the equilibrium of air and food:** Humans and animals need food and oxygen andexcrete carbon dioxide and water. The plants, algae, etc, in the Kuttivanam use carbon dioxide and water and release or produce oxygen and food.
2. **Filter and store water, and drastically reduce storm-water runoff:** Forests filter and regulate the flow of water. The litter over the forest floor acts as a sponge which filters, stores and gradually releases the water to natural channels and ground water.
3. **Conserve valuable topsoil and reduce soil erosion:** A forest is like a protective green cloth over Mother Earth's fragile body.
4. **Conserve biodiversity and balance ecology:** In a natural environment, the populations of species are balanced to an optimum minimum level
5. **Reduce pollution:** Plants can remove and/or Phyto remediate pollutants and contaminants from soil and water.
6. **Arrest or reverse global warming:** Global warming can cause extinction of species, tropical cyclones, extreme weather, tsunamis, abrupt climatic change, sea level rise, increased human stress resulting in violence, etc. These are just a few of its catastrophic effects. Plants can lock CO_2 in their bodies to save our planet and the life on it.

10. LIST OF TREES IN THE CAMPUS

Trees release oxygen when they use energy from sunlight to make glucose from carbon dioxide and water. Like all plants, trees also use oxygen when they split glucose back down to release energy to power their metabolisms. Averaged over a 24-hour period, they produce more oxygen than they use up; otherwise there would be no net gain in growth. Marthoma Womens College have 56 varieties of trees, the college have 400 numbers of major trees are placed in campus.

TABLE 7: LIST OF TREES

Sl.no	Name of trees	Botanical name	Nos
1	Croton (Ornamental)	Croton	**20**
2	Red palm	Cyrtostachys renda	**23**
3	Mavu	Mangifera indica	**14**
4	Kavughu	Areca catechu	**8**
5	Theghu	Cocos nucifera	**48**
6	Kolambi	Allamanda cathartica	**1**
7	Pappaya	Carica pappaya	**2**
8	Plavu	Artocarpus heterophyllus	**13**
9	Tambakam	Hopea parviflora	**16**
10	Rain Tree	Samanea saman	**4**
11	Anjili	Artocarpus hirsutus	**10**
12	Mahagani	Swietenia macrophycia	**29**
13	Pongalyam	Ailanthus excelsa	**2**
14	Aryaveepu	Azadirachta indica	**3**
15	Avacado	Persea americana	**1**
16	Rambutan	Nephelium lappaceum	**2**
17	Saprota	Manilkara zapota	**4**
18	Nelli	Phyllanthus emblica	**1**
19	Badham	Terminalia cattappa	**1**
20	Madharam	Bauhinia acuminata	**1**
21	Thekku	Tectona grandis	**72**
22	Chamba	Syzigium samarangense	**2**
23	Irubam Puli	Averrhoa bilimbi	**1**
24	Pera	Psidium guajava	**6**
25	Paneer Chamba	Syzigium jambos	**2**
26	Lakshmi taru	Ludwigia octovalvis	**2**
27	Curry Veepu	Murraya koenigii	**4**
28	Muringakka	Moringa oleifera	**1**
29	Royal Palm	Roystonea regia	**2**
30	Njaval	Syzigium cumini	**1**

31	Mangosteen	Garcinia mangostana	**2**
32	Vatta	Macaranga peltata	**5**
33	Vazha	Musa paradisiaca	**50**
34	Chembu	Colocasia	**0**
35	Arinelli	Phyllanthus emblica	**1**
36	Athachakka	Annona reticulata	**1**
37	Puli	Tamarindus indica	**1**
38	Sheemakonna	Gliricidia sepium	**1**
39	Elipla	Madhuca longifolia	**1**
40	Vaka maram	Delonix regia	**1**
41	Choola maram	Casuarina equisetifolia	**3**
42	Aathi	Ficus racemosa	**1**
43	Theghu	Cocos nucifera	**32**
44	Chempakam	Michelia champaca	**2**
45	Star apple	Chrysophyllum cainito	**1**
46	Mullatha	Annona muricata	**1**
47	Nagalinkam	Couroupita guianensis	**1**
48	Sarvasugandhi	Pimenta dioica	**1**
49	Kanjiram	Strychnos nuxvomica	**2**
50	Ughu	Pongamia pinnata	**1**
51	Pana	Caryota urens	**1**
52	Njaval	Syzigium cumini	**1**
53	Elanji	Mimusops elenji	**1**
54	Vaka maram	Delonix regia	**1**
55	Eruma nakku	Ficus hirsuta	**1**
56	Bougainvilla	Bougainvillea	**Set**
	Total		**409**

11. GREEN PALY GROUND

Education is incomplete without sports and games. Sports and games **are beneficial in teaching us punctuality, responsibility, patience, discipline, and dedication towards our goal.** The importance of games and sports in student's life is immense. It has proved to be very therapeutic in nature. Sports help improve social skills, such as dispute management and sport-based interaction. **Sports inculcate the feeling of fairness in a child and encourage them to be committed, taking defeat in a positive manner.** It teaches us to be joyful, united, and appreciative in life. Students are the youth of our nation, and they need to be energetic, physically active, and mentally fit. By understanding the responsibility to make its students healthy Marthoma College Management has built and maintained football ground and Volley ball court in green surroundings



FIGURE 7: GREEN PLAY GROUNDS

12. STUDENTS INITIATIVES

1. **World environment day celebrations**

NSS and IQAC units of Mar Thoma College for Women's planted samplings in KSRTC depo Perumbavoor in connection with World Environment day celebrations on June. The KSRTC depo Superintend Mini Varghese, ATO Mr. Jayakumar K. G. College Principal Dr. Sujo Mary Vargheese along with Dr. T V Anupama, Dr. Melvy Chandi, Roshin T Joy, Sunil Thomas M S Menon and Jhonson and Joseph are led the programme successfully.

പെരുമ്പാവൂർ കെ.എസ്.ആർ.ടി.സി. ഡിപ്പോ വളപ്പിൽ മാർത്തോമ വനിതാ കോളേജ് പ്രിൻസിപ്പൽ സുജോ മേരി വർഗീസിന്റെ നേതൃത്വത്തിൽ തൈകൾ നടുന്നു

കെ.എസ്.ആർ.ടി.സി. വളപ്പിൽ തൈകൾ നട്ടു

പെരുമ്പാവൂർ ▸ മാർത്തോമ വനിതാ കോളേജിലെ എൻ.എസ്.എസ്. യൂണിറ്റ്, ഐ.ക്യു.എ.സി. യൂണിറ്റ് എന്നിവയുടെ നേതൃത്വത്തിൽ പരിസ്ഥിതി ദിനാചരണത്തിന്റെ ഭാഗമായി പെരുമ്പാവൂർ കെ.എസ്.ആർ.ടി.സി. ഡിപ്പോ വളപ്പിൽ തൈകൾ നട്ടു. കോളേജ് പ്രിൻസിപ്പൽ ഡോ. സുജോ മേരി വർഗീസ്, ഡോ. പി. അനുപമ, ഡോ. മെൽവി ചാണ്ടി, റോഷിൻ ടി. ജോയ്, കെ.എസ്.ആർ.ടി.സി. സൂപ്രണ്ട് മിനി വർഗീസ്, എ.ടി.ഒ. കെ.ജി. ജയകുമാർ, സുനിൽ ജോസഫ്, എം.എസ്. സോമൻ, ജോൺസൺ ജോസഫ് എന്നിവർ നേതൃത്വം നൽകി.

FIGURE 8: WORLD ENVIRONMENT DAY CELEBRATIONS AT KSRTC DEPO

2. **Inauguration of Butterfly Garden**

College inaugurated a butter fly garden in the college campus. This butterfly garden with lot of flowering plants are developed and nurtured by the NSS and IQAC Unit of Mar Thoma College of Women's

FIGURE 9: INAGURATION OGF BUTTERFLY GARDEN

3. **World Environment day**

Mar Thoma College for women's celebrating the world environment day June 5 on every year in campus. NSS Unit of the college planted lot of samplings in the college boundary so as to make green boundary wall in the college. This is new concept as to protect the college against pollution from dusts from road and developing a green micro climate zone around the college.

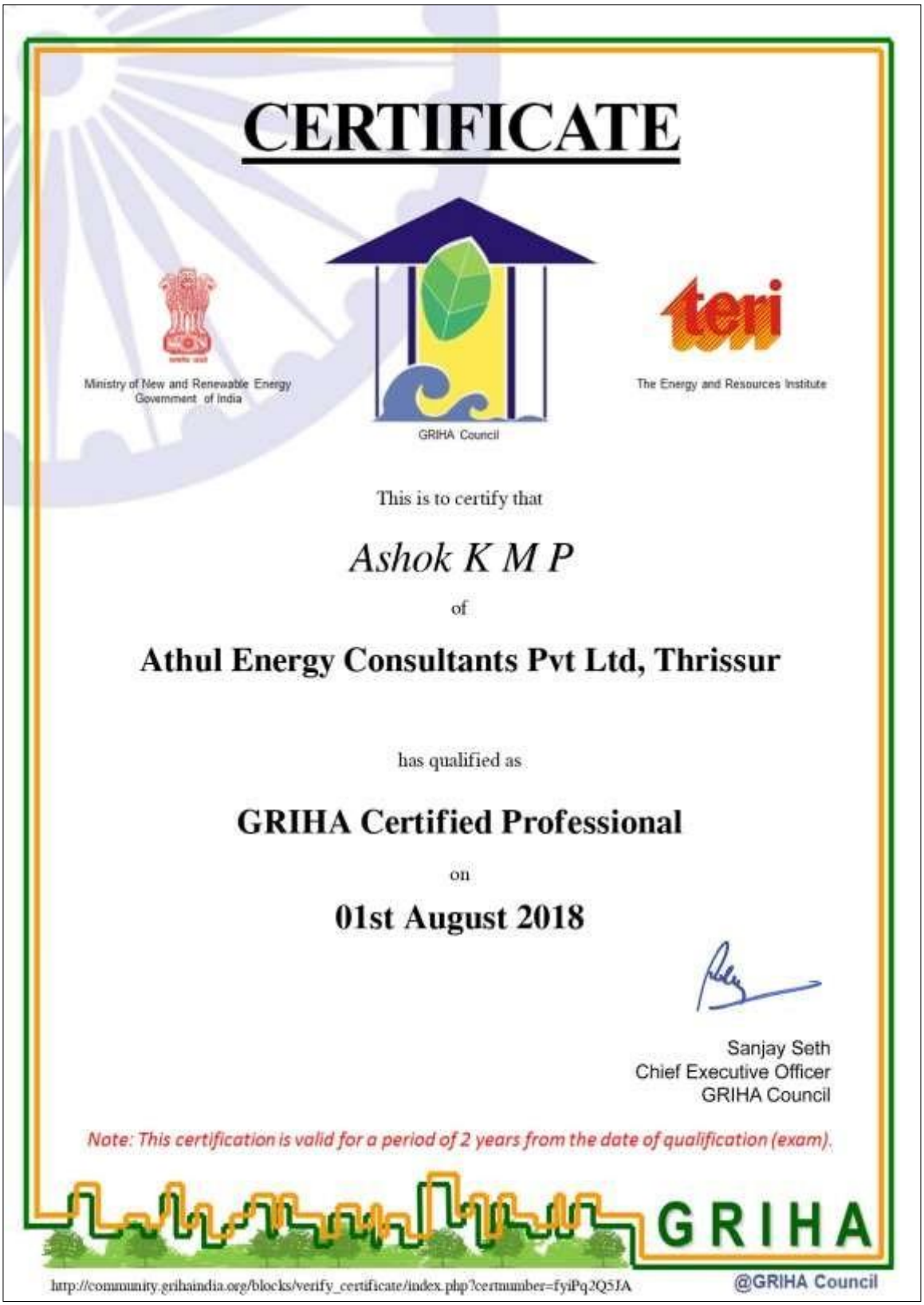
FIGURE 10: WORLD ENVIRONMENT DAY CELEBRATIONS

CONCLUSION:

Green Audit is the most efficient & ecological way to solve such an environmental problem. Green Audit is one kind of professional care which is the responsibility of each individual who are the part of economic, financial, social, environmental factor. Green audits can "add value" to the management approaches being taken by the college and is a way of identifying, evaluating and managing environmental risks (known and unknown). The green audit reports assist in the process of attaining an eco-friendly approach to the development of the college.

The auditors observed during the campus visit and after the conversation with the staff and students of Mar Thoma College for Women have taken continuous and considerable effort in several years for nurturing and maintaining the green coverage over the campus which is being well appreciated by us. There is still opportunity to attain the perfection some of the identified suggestions are listed in the executive summary.

ANNEXURE-1



CERTIFICATE

Ministry of New and Renewable Energy
Government of India

GRIHA Council

The Energy and Resources Institute

This is to certify that

Ashok K M P

of

Athul Energy Consultants Pvt Ltd, Thrissur

has qualified as

GRIHA Certified Professional

on

01st August 2018

Sanjay Seth
Chief Executive Officer
GRIHA Council

Note: This certification is valid for a period of 2 years from the date of qualification (exam).

GRIHA

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