

ENVIRONMENTAL AUDIT

2022-23

"There is sufficiency in the world for man's need but not for man's greed."

- Mahatma Gandhi

Plant more
trees



Recycle
waste



Preserve
water




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P.K.M. COLLEGE OF EDUCATION
KAITHAPRAM. P. O., MADAMPAM
SREEKANDAPURAM, KANNUR DT.,-670631



P. K. M. College of Education

(Govt. Aided Teacher Education Institution)
Affiliated to Kannur University
Accredited by NAAC with A Grade

ENVIRONMENT AUDIT TEAM

EXTERNAL AUDIT MEMBERS

External Auditor: Dr. Sreeja P
Asst. Professor & HOD
Dept. of Botany
Sir Syed College, Taliparamba

Local body Member: Dr. Philomina K V
Municipal Chairperson
Sreekandapuram Municipality

INTERNAL AUDIT MEMBERS

Convenor: Mrs. Jomol Jose
Asst. Professor Dept. of Natural science

Members:

1. Dr. Veena Appukuttan
(Asst. Professor in Social Science & IQAC Coordinator)
2. Dept. of Natural Science – STUDENT TEACHERS.




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AUTHENTICATION

This is to certify that we have conducted an environment audit for P.K.M College of Education, Madampam to assess the eco-friendly initiatives and sustainable development of the campus. The measures and actions taken by the college management towards the development of the sustainable green environment are highly appreciable and commendable.



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(External Auditor)

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Sir Syed College, Taliparamba
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Date: 20-03-2023

Place: Madampam



Dr. Philomina K V

(Municipal Chairperson, Sreekandapuram)

Dr. K.V. Philomina Teacher
Chairperson
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ACKNOWLEDGEMENT

The team responsible for this audit comprised of I. Dr. Veena Appukuttan (Asst. Professor in Social Science & IQAC Coordinator) under the supervision and direction of Mrs. Jomol Jose (Asst. Professor Dept. of Natural science, P.K.M College of Education, Madampam), would like to thank those individuals who contributed to this project, particularly the college management, Principal, P.K.M College of Education Madampam, all the faculties and staff who provided insights and comments as part of this audit.

A handwritten signature in blue ink, appearing to be "J. Jose".
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1.INTRODUCTION

About the college

P.K.M. College of Education, Madampam, Kannur is a Christian minority educational institution. The College was established in 1995 as a self-financing institution and was transformed into an aided college in 1997. It is affiliated to Kannur University and is recognized by NCTE and UGC under 2(f) & 12(B) category. This temple of learning is dedicated to the Sacred Heart of Jesus and is named after Prof. Joseph Kandoth, who was an educational visionary, social reformer and a zealous missionary. He initiated the historical migration of Knanaya Catholic Community which in turn changed the social and economic history of Malabar. P.K.M. College of Education is a temple of learning with difference among the scores of educational institutions in Kerala. The institution is run by the Arch Diocese of Kottayam, belonging to the Knanaya Catholic Community and has invariable relevance as a training institution moulding the prospective teachers for the community, in particular, and society, at large. The college aims to spell out the darkness of ignorance and illiteracy and radiate the glow of enlightenment. The mission of the college is "To Nurture the Holistic Development of Prospective Teachers for a Just and Humane Society."

At present H.E. Mar. Mathew Moolakkat, Arch Bishop of Kottayam Diocese is the patron and H.E. Mar. Joseph Pandarasseril, the Auxiliary Bishop is the Manager. The college is accredited by NAAC with A grade (4-point scale), in the second cycle also.

Mission

To Nurture the Holistic Development of Prospective Teachers for a Just and Humane Society

Vision

Excellence and Committed Service in Every Realm of Teaching Endeavour.



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Table : 1.Course offered by the college

Bachelor of Education	• English
	• Malayalam
	• Mathematics
	• Natural science
	• Physical science
	• Social science

Table : 2 . Students and faculty strength

Total number of students	99
Teachers	9
Non – teaching staff	13
Total	121

2.TARGET AREAS OF ENVIRONMENT AUDITING

Table 3: Area details of the PKM college of education campus

Sl. No	Class Rooms	Room No	Size in sq.m
1	English	19	63.48
2	Malayalam	18	64.38
3	Mathematics	31	63.33
4	Natural Science	10	43.32
5	Physical Science	11	64.44
6	Social Science	30	95.69



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7	Staff Room	23	87.97
8	Office – 1	4	30.38
9	Office – 2	21	30.45
10	Principal Room	1	55.66
11	Multipurpose hall Auditorium	28	180.77
12	Multipurpose hall General class	16	180
13	Library cum Reading room	7	108.93
14	Seminar Hall	20	29.59
15	Canteen	24 , 26	82.67
16	IQAC	5	35.09
17	Psychology Room	17	30.63
18	Health fitness, Sports & Yoga room	33	119.94
19	Art & Drama	23	20.24
20	Visitors Room	3	40.19
21	Library store Room	9	20.11
22	IT Room	15	46.85
23	Conference hall	27	46.85
24	Common Room	34	15.88
25	Godown	36	42.84
26	Kitchen	12	7.16

3.OBJECTIVES OF THE AUDIT

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- To recognize the initiative taken by institution towards the environment.
- To secure the environment and reduce the threats posed to human health.
- To provide baseline information to enable institutions to evaluate and manage environmental change, threat, and risk.
- To diagnose and resolve environmental problems.
- To identify the effects of institutions on the environment and vice versa.
- To control the impact of institutional activities on the environment.
- To suggest the best protocols for sustainable development organization and environment.
- To assess environmental performance and the effectiveness of the measures to achieve the defined objectives and targets.
- To identify the different pressures on institutions to improve their environmental performance.
- To ensure that the natural resources are utilized properly as per the national policy of environment.
- To establish the parameters for maintaining the health and welfare of the community of the institution.

4. ENVIRONMENTAL AUDIT

An environmental audit is a systematic, documented, periodic and objective evaluation of how well an organization or project is managing its environmental responsibilities. It is a tool used to identify, quantify, and assess environmental risks and to evaluate the effectiveness of environmental management systems.

Environmental audits can be a valuable tool for organizations that are committed to environmental protection. They can help organizations to:

- * Identify and assess environmental risks
- * Improve compliance with environmental laws and regulations



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- * Reduce environmental impacts
- * Save money
- * Improve public relations

5. METHODOLOGY ADOPTED

1. Field visit:

The purpose of the field visit is to analyse the biodiversity of different sources and waste management practices. The environmental audit team conducted field visits during specific intervals and collected the data on different indicators.

2. Group discussion:

Group discussions were held with Bhoomithrasena, Eco club, Nature club, NSS, faculties, office staff, and management of the various strategies of target areas.

3. Survey:

The environment audit team conducted surveys on various aspects of target areas by distribution of survey founders on different headings. All the departments, office, canteen, and library participated in the detailed questionnaire survey study

6. BIODIVERSITY AUDIT




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The College conducted a Biodiversity survey and listed the flora and fauna of the campus. It reveals that a large number of plants and animals inhabit the campus and it is important to take measures for conserving them. The list of the flora, fauna and medicinal plants arises following table.

Butterfly Garden

A butterfly garden in a college is a purposefully designed space that attracts butterflies, providing students with a firsthand experience of these insects' life cycle and ecological significance. This living classroom offers a practical application of ecological concepts, promoting environmental awareness, and conservation education. By observing butterflies and their interactions with the garden's plants, students can learn about pollination, biodiversity, and the delicate balance of ecosystems. The garden's vibrant colors, fragrances, and serene ambiance also offer sensory stimulation, contributing to a holistic learning environment. Furthermore, the garden's presence can serve as a symbol of the institution's commitment to environmental stewardship and sustainability, inspiring students to become advocates for conservation. Overall, a butterfly garden in an educational setting serves as an invaluable educational tool, enriching the curriculum with hands-on experiences that foster a deeper understanding of the natural world.

Fauna and Flora

FAUNA OF P.K.M COLLEGE CAMPUS

NON-CHORDATA

Phylum -Annelida

- | | | |
|---|-----------|-------------------|
| 1 | Earthworm | Megascolex sp. |
| 2 | Earthworm | Pheritima postuma |

Phylum -Arthropoda

- | | | |
|---|-----------|-------------------|
| 3 | Centipede | Scolopendra sp. |
| 4 | Millipede | Spirostreptus sp. |

Insects

- | | | |
|---|-----------|-----------------------|
| 5 | Cockroach | Periplanata americana |
|---|-----------|-----------------------|



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6	Lepisma	Lepisma sp.
7	Grasshopper	Poecillocerus (Melanopus)
8	Cimex	Cimex sp.
9	Cricket	Gryllus sp.
10	Mole cricket	Gryllotalpa
11	Leaf insect	Phyllium
12	Termite	Termes sp.
13	Termite	Zootermopsis
14	Treehopper	Cicada
15	Praying mantis	Mantis sp.
16	Beetle	Hippodamia
17	Mosquito	Anophilus sp.
18	Mosquito	Culex sp.
19	House fly	Musca
20	Fruit fly	Drosophila melanogaster
21	Wasp	Vespa orientalis
22	Black ant	Camponotus compressus
23	Red ant	Oecophylla smaragdina
24	Honey bee	Apis indica
25	Mite	Acara

Butterflies

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26	Common Jay	Graphium Dason
27	Blue bottle	Graphium Sarpedon
28	Common Mormon	Papilio polytes
29	Common emigrant	Captopsila pomona
30	Common jezebel	Delias eucharis
31	Common albatross	Appias albina
32	Common wanderer.	Pareronia valeria
33	Common Indian crow.	Euploea core
34	Glassy blue tiger	Parantica aglea
35	Common bushbrown	Mycalesis perseus
36	Tawny coster	Acraea biolae
37	Great egg fly	Hypolimna bolinia
38	Paris peacock	Papilio paris
39	Lime butterfly	Papilio demoleus
40	Rhinoceros beetle	Oryctes rhinoceros
41	Paddy pest	Leptocoriza acuta
42	Scorpion	Palamneus sp.

Phylum -Mollusca

43	Snail	Planorbis sp.
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CHORDATA**Class- Reptilia**

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44	Garden lizard	Calotus versicolor
45	House lizard	Hemidactylus sp.
46	Skink	Mabuya
47	Varanus	Varanus monitor
48	Krait	Bungarus caeruleus
49	Viper	Vipera russelli
50	Tree snake	Dryophis
51	Rat snake	Zamemis(Ptyas)

Class- Aves

52	Red-whiskered Bulbul	Pyenonotus jocosus
53	Jungle babbler	Turtoides striatus
54	Rock pigeon	Columba livia
55	Rufous Treepie	Dendrocitta vagabunda
56	Greater caucal	Centropus sinensis
57	Green bee-eater	Meropes orientalis
58	Racket tailed Drongo	Dierurus paradiseus
59	Asian koel	Eudynamys scolopacea
60	House crow	Corvus splendens
61	Large-billed crow	Corvus macrorhynchos

Class -Mammalia

62	Bat	Pteropus sp.
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63	Squirrel	Funambulus palmeram
64	Mongoose	Herpestes edwardsii
65	Fox	Vulpus bangalensis

FLORA OF P.K.M. COLLEGE CAMPUS**BRYOPHYTES**

1	Riccia sp.	Ricciaceae
2	Anthoceros sp.	Anthocerotae
3	Pellia sp.	Pelliaceae
4	Funaria sp.	Funariaceae

PTERIDOPHYTES

5	Selaginella sp.	Selaginellaceae
6	Lygodium sp.	Lygodiaceae
7	Pteris vitata	Pteridaceae
8	Drynaria quercifolia	Polypodiaceae
9	Microsorium scolopendria	Polypodiaceae
10	Nephrolepis hirsuta	Nephrolepidaceae
11	Adiantum latifolium	Pteridaceae
12	Adiantum lunulatum	Pteridaceae

ANGIOSPERMS**BOTANICAL NAME****FAMILY**

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13	<i>Polyalthia longifolia</i>	Annonaceae
14	<i>Cyclea peltata</i>	Menispermaceae
15	<i>Cleome viscosa</i>	Capparidaceae
16	<i>Hibiscus furcatus</i>	Malvaceae
17	<i>Urena lobata</i>	Malvaceae
18	<i>Sida rhombifolia</i>	Malvaceae
19	<i>Sida acuta</i>	Malvaceae
20	<i>Sida cordata</i>	Malvaceae
21	<i>Biophytum sensitium</i>	Geranaceae
22	<i>Murraya konigii</i>	Rutaceae
23	<i>Evodia lunu-ankenda</i>	Rutaceae
24	<i>Aegle marmelos</i>	Rutaceae
25	<i>Zizypus ocnoplia</i>	Rhamnaceae
26	<i>Cardiospermum helicacabum</i>	Sapindaceae
27	<i>Anacardium occidentale</i>	Anacardiaceae
28	<i>Mangifera indica</i>	Anacardiaceae
29	<i>Clitoria ternatea</i>	Papilionaceae
30	<i>Centrosma pinnata</i>	Papilionaceae
31	<i>Gliricidia maculata</i>	Papilionaceae
32	<i>Desmodium triflorum</i>	Papilionaceae



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33	<i>Crotalaria striata</i>	Papilionaceae
34	<i>Bauhinia purpurea</i>	Caesalpinaceae
35	<i>Peltophorum pterocarpum</i>	Caesalpinaceae
36	<i>Cassia tora</i>	Caesalpinaceae
37	<i>Cassia fistula</i>	Caesalpinaceae
38	<i>Libidibia coriaria</i>	Caesalpinaceae
39	<i>Mimosa pudica</i>	Mimosaceae
40	<i>Rosa alba</i>	Rosaceae
41	<i>Carica papaya</i>	Caricaceae
42	<i>Mukia scabrella</i>	Cucurbitaceae
43	<i>Centella asiatica</i>	Apiaceae
44	<i>Chasalia curviflora</i>	Rubiaceae
45	<i>Borreria pusilla</i>	Rubiaceae
47	<i>Mitracarpus verticillatus</i>	Rubiaceae
48	<i>Mussaenda frondosa</i>	Rubiaceae
49	<i>Tridax procumbens</i>	Asteraceae
50	<i>Cosmos sulphureus</i>	Asteraceae
51	<i>Synedrella nodiflora</i>	Asteraceae
52	<i>Eupatorium odoratum</i>	Asteraceae
53	<i>Mikania scandens</i>	Asteraceae
54	<i>Emilia sonchifolia</i>	Asteraceae



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55	Vernonia cineria	Asteraceae
56	Ageratum conizoides	Asteraceae
57	Achras sapota	Sapotaceae
60	Ervatamia coronaria	Apocynaceae
62	Hemidesmus indicus	Asclepiadaceae
63	Evolvulus alsinoides	Convolvulaceae
64	Merrimia tridentata	Convolvulaceae
65	Ipomaea palmata	Convolvulaceae
66	Solanum torvum	Solanaceae
67	Capsicum annuum	Solanaceae
68	Scoparia dulcis	Scrophularaceae
69	Rungia repens	Acanthaceae
70	Asystasia gangetica	Acanthaceae
71	Thunbergia erecta	Acanthaceae
72	Tectona grandis	Verbenaceae
73	Lantana camara	Verbenaceae
74	Leucas aspera	Lamiaceae
75	Pogostemon paniculatus	Lamiaceae
76	Hyptis suaveolens	Lamiaceae
77	Ocimum sanctum	Lamiaceae
78	Boerhaavia diffusa	Nictaginaceae



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79	Cyathula prostrata	Amaranthaceae
80	Aerva lanata	Amaranthaceae
81	Alternanthera tannela	Amaranthaceae
82	Piper nigrum	Pipraceae
83	Loranthus longiflorus	Loranthaceae
84	Tragia involucrata	Euphorbiaceae
85	Phyllanthus amarus	Euphorbiaceae
86	Phyllanthus emblica	Euphorbiaceae
87	Euphorbia hirta	Euphorbiaceae
88	Macranga peltata	Euphorbiaceae
89	Artocarpus integrifolia	Moraceae
90	Musa paradisiaca	Musaceae
91	Sansevieria roxburghiana	Liliaceae
92	Gloriossa superba	Liliaceae
93	Aloe vera	Liliaceae
94	Asparagus racemosus	Liliaceae
95	Cocos nucifera	Arecaceae
96	Colocasia antiquorum	Araceae
97	Pothos scandens	Araceae
98	Heteropogon contortus	Poaceae
99	Oplismenus compositus	Poaceae



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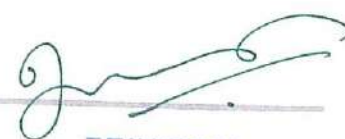
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100	<i>Panicum trypherom</i>	Poaceae
101	<i>Panicum repens</i>	Poaceae
102	<i>Arundinella leptochloa</i>	Poaceae
103	<i>Ottochloa nodosa</i>	Poaceae
104	<i>Ischaemum indicum</i>	Poaceae
105	<i>Dactyloctenium aegyptium</i>	Poaceae
106	<i>Pennisetum hohenackeri</i>	Poaceae

EXOTIC GARDEN

No	Name	Family
1.	<i>Begonia gracilis</i>	Begoniaceae
2.	<i>Impatiens walleriana</i>	Balsaminaceae
3.	<i>Syzygium samarangense</i>	Myrtaceae
4.	<i>Plumeria pudica</i>	Apocynaceae
5.	<i>Alternanthera sp.</i>	Amaranthaceae
6.	<i>Mirabilis jalapa</i>	Nyctaginaceae
7.	<i>Portulaca sp.</i>	Portulacaceae
8.	<i>Pilea mucosa</i>	Urticacea
9.	<i>Ravenea rivularis</i>	Aracaceae
10	<i>Philodendron sp.</i>	Araceae
11	<i>Anthurium andraeanum</i>	Araceae




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12	<i>Episcia cupreata</i>	Gesneriaceae
13	<i>Ixora</i> sp.	Rubiaceae
14	<i>Chamaecostus</i> sp	Costaceae
15	<i>Thithonia diversifolia</i>	Asteraceae
16	<i>Desmodium dendrolobium</i>	Fabaceae
17	<i>Pandanus veitchii</i>	Pandanaceae
18	<i>Hibiscus</i> sp	Malvaceae
19	<i>Tradescantia spathaceae</i>	Commelinaceae
20	<i>Spathoglottis plicata</i>	Orchidaceae
21	<i>Polyscias</i> sp.	Araliaceae
22	<i>Codiaeum variegatum</i>	Euphorbiaceae
23	<i>Jatropha multifida</i>	Euphorbiaceae
24	<i>Eugenia</i> sp.	Myrtaceae
25	<i>Schefflera</i> sp.	Araliaceae
26	<i>Cordyline fruticose</i>	Asparagaceae
27	<i>Sansevieria zeylanica</i>	Asparagaceae
28	<i>Aloe vera</i>	Liliaceae
29	<i>Strobilanthes alternata</i>	Acanthaceae
30	<i>Allamanda cathartica</i>	Apocynaceae

FRUIT GARDEN

No. Name Family



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1	Achras sapota	Sapotaceae
2	Artocarpus heterophyllus	Moraceae
3	Phyllanthus embilica	Phyllanthaceae
4	Psidium guajava	Myrtaceae
5	Mangifera indica	Anacardiaceae
6	Anacardium occidentale	Anacardiaceae
7	Citrus limonum	Rutaceae

7. FINDINGS:

- Many steps toward a sustainable environment are implemented including the restrictions of vehicles other than stakeholders within the campus.
- Students are encouraged to depend on the public mode of transportation by availing of the bus fare concession issued by the Government of Kerala.
- Planting more trees within the campus.
- Maintenance of plants with the support of students.

8. SUGGESTIONS BY EXTERNAL AUDIT TEAM

- To enhance Biodiversity through planting native species and maintaining Natural habitat.
- Suggesting Ecofriendly alternatives for Fertilizers and Pesticides
- Measures to minimize the impact on existing Flora
- Provide recommendations for preventive care and sustainable treatments for existing trees

