

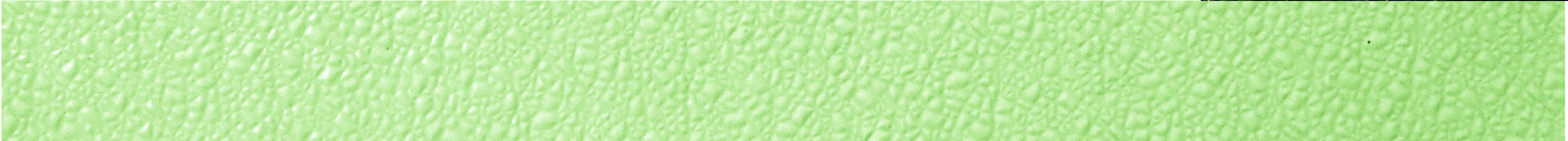


# ENVIRONMENT AUDIT REPORT

**SAFI INSTITUTE OF ADVANCED STUDY  
VAZHAYOOR**

**2021**

*Executed by*



# ENVIRONMENT AUDIT REPORT

## SAFI Institute of Advanced Study

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VAZHAYUR

September 2021





**Environment Audit Report**  
**SAFI Institute of Advanced Study**  
Report No: EA 824  
2021- September

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### **Environment Audit Team**

Ottotractions

1	Er. Suresh Babu B V,	Accredited Energy Auditor, AEA 33
2	Er. B. Zachariah	Director, Ottotractions
3	Er. Abin Baby,	Project Engineer, Ottotractions
4	Er. Devan J	Project Engineer, Ottotractions

### **About OTTOTRACTIONS**

OTTOTRACTIONS established in 2005, is an organization with proven track record and knowledge in the field of energy, engineering, and environmental services. They are the first Accredited Energy Auditor from Kerala for conducting Mandatory Energy Audits in Designated Consumers as per Energy Conservation Act-2001. Government of Kerala recognized and appreciated OTTOTRACTIONS by presenting its prestigious “The Kerala State Energy Conservation Award 2009” for the best performance as an Energy Auditor.

## Acknowledgment

We were privileged to work together with the administration and staff of SAFI Institute of Advanced Study, Vazhayur. for their timely help extended to complete the audit and bringing out this report.

With gratitude, we acknowledge the diligent effort and commitments of all those who have helped to bring out this report.

We also take this opportunity to thank the bona-fide efforts of team OTTOTRACTIONS for unstinted support in carrying out this audit.

We thank our consultants, engineers and backup staff for their dedication to bring this report.

Thank you.

B V Suresh Babu  
Accredited Energy Auditor  
AEA 33, Bureau of Energy Efficiency

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# INTRODUCTION

Ottotractions was asked by the SAFI Institute of Advanced Study , Vazhayoor to carry out an environmental audit of their campus building.

Each section contains recommendations for improvements relating to environmental issues, which are consolidated in the action plan in section 4.



# BACKGROUND

SAFI Institute of Advanced Study (SIAS) is a centre for research and higher education founded in August 29, 2005. It is the academic wing of Social Advancement Foundation of India (SAFI). SIAS is partly residential and is located on a vast campus, 22 Kms away from Calicut City towards Calicut Airport. Along with the management, a dynamic team of teachers and scientists contribute significantly to the fulfillment of the academic programmes. The Institute is housed in a sprawling building in a lush green backdrop and serene and picturesque environment.

SAFI Institute of Advanced study (SIAS) provides rich avenues of teaching, learning and research with excellent infrastructure. SIAS envisages total personality development and generation of manpower capable of providing leadership and direction at the cutting edge in science and technology as well as management, commerce and other areas of humanities studies.

SOCIAL ADVANCEMENT FOUNDATION OF INDIA (SAFI) is a non-profit, registered charitable trust, which came into existence in September 2001. The trust is constituted by educationists, philanthropists and social activists, with the objective of taking up academic and research programmes in the frontier areas of science and technology and humanities in order to produce highly proficient manpower. SAFI is committed to generating skilled manpower capable of providing leadership and direction in the areas of science & technology, commerce, management, information technology, arts and other spheres of studies. SAFI envisages setting up of a Deemed to be University in due course. SAFI Institute of Advanced Study is an endeavour in this direction.



Occupancy Details	
Particulars	2020-21
Total Students	1503
Staffs	97
Total Occupancy of the college	1600

Total student strength of the campus is 1600. For calculating per capita carbon emission estimation, the student strength is taken into account.



# ENVIRONMENTAL ISSUES

This section is broken down into the following different areas: waste, water, energy, resource and materials use and procurement. A final 'other' section is also included for any additional issues.

## 1.1. Waste

The way communities generate and manage their waste plays an absolutely key role in their ability to use resources efficiently. All buildings contain bins for both general waste and mixed recyclables

(Plastic bottles, card, cans and paper). On average each floor in the buildings areas has its own general waste bin and one recycling bin. When the bins are emptied by the cleaning staff.

Bins are marked and kept in different colors for identification, however in some locations throughout the building it was unclear which bins were for which waste streams.

There are four basic ways in which campus can do plastic recycling collection services for plastic bottles and containers – curbside, drop-off, buy-back or deposit/refund programs. The first, and most widely accessible, collection method is curbside collection of recyclables. The campus is installed bins to collect plastic bottles and single use plastics. SGC has given a proper awareness on plastic waste problems and they are discouraging the students or teachers to carry plastics to the campus. The ECO club is very active in the campus and do a variety of programs to build awareness on waste management. The reports on different activities of the club is attached as technical supplement of this report.

The major concern of waste management will be focused on the solid waste produced by the campus. Solid wastes produced in the campus are mainly of three types, food waste, paper waste, and plastic waste. Food wastes produced in the campus are mainly by two means. The vegetable wastes produced in the kitchen during the food preparation. The food waste produced by the students and staffs of the campus after the consumption of meals.

Degradable Waste Generation	
SAFI INSTITUTE OF ADVANCED STUDY	
	2020-21
Total Occupancy	1600
Waste generated in kg /day	12.8
Waste generated in kg /Yr	1689.6

Burning plastics shall be strictly restricted inside the campus. Burning plastic and other wastes releases dangerous substances such as heavy metals, Persistent Organic Pollutants, and other toxics into the air and ash waste residues. ... Such pollutants contribute to the development of asthma, cancer, endocrine disruption, and the global burden of disease.

### Solid non degradable Waste Generation

SAFI INSTITUTE OF ADVANCED STUDY	
	2020-21
Total Occupancy	1600
Waste paper generated in kg /day	0.16
Waste plastic generated in kg /day	0.24
Waste paper generated in kg /Yr	35.20
Waste plastic generated in kg /Yr	52.80

WASTE MINIMIZATION AND RECYCLING		
1	Does your institute generate any waste? If so, what are they?	Yes, Solid waste Canteen waste, paper, plastic, Horticulture Waste etc
2	What is the approximate amount of waste generated per day? (in Kilograms/month) (approx.)	Bio Non- Hazardous others Degradable Biodegradable
3	How is the waste generated in the institute managed? By	Reuse of one side printed Paper for internal communication. Sewage water is discharged to public Sewer. Kitchen waste is used to generate manures. Two types of Waste bins are provided at campus for biodegradable and non-biodegradable waste.
	1 Composting	In-house
	2 Recycling	In-house
	3 Reusing	In-house
	4 Others (specify)	
4	Do you use recycled paper in institute?	Yes
5	Do you use reused paper in institute?	Yes
6	How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, Please specify.	Number of awareness programs through ECO Club
7	Can you achieve zero garbage in your institute? If yes, how?	Not yet achieved. Possible through waste management plan.

Green Cover Audit			
1	Is there a garden in your institute?	Yes	
2	Do students spend time in the garden?	Yes	
3	Total number of Plants in Campus	Plant type	Approx. number
		Trees	224
		Ornamental	Not estimated
4	Number of Tree Plantation Drives	Yes, Through ECO club	
5	Number of Trees Planted in Last FY.	NA	
	Survival Rate	80%	

All the activities including energy consumption and waste management have their equivalent carbon emission and they positively contribute to the carbon footprint of the campus. Carbon sequestration is the reverse process, at which the emitted carbon dioxide will get sequestered according to the type of carbon sequestration employed. Even though there are many natural sequestration processes are involved in a campus, the major type of sequestration among them is the carbon sequestration by trees.

Trees sequester carbon dioxide through the biochemical process of photosynthesis and it is stored as carbon in their trunk, branches, leaves and roots. The amount of carbon sequestered by a tree can be calculated by different methods. In this study, the volumetric approach was taken into account, thus the details including CBH (Circumference at Breast Height), height, average age, and total number of the trees, are required. Details of the trees in the campus compound are given in the Table. Detailed table is included in the technical supplement.

Carbon Sequestration	
Particulars	2020-21
Total number of trees	224
Carbon sequestered by trees in the campus (tCO <sub>2</sub> e)	2.02

Carbon sequestered by a tree can be found out by using different methods. Since this study is employed the volumetric approach, the calculation consists of five processes.

- Determining the total weight of the tree
- Determining the dry weight of the tree
- Determining the weight of carbon in the tree
- Determining the weight of CO<sub>2</sub> sequestered in the tree
- Determining the weight of CO<sub>2</sub> sequestered in the tree per year

Carbon sequestered by each species of trees in the campus compound is given in the Table. Detailed calculation results are listed out in the tables provided in the technical supplements of 'Carbon sequestration'.



List of Trees in the Campus (above 15 cms growth)				
Sl No.	Malayalam name	Scientific name	English name	No:
1	പേഴ്	Careya arborea	Ceylon oak	2
2	ഏഴിലം പാല	Alstonia scholaris	Devil's tree	3
3	വെള്ളമരുത്	Terminalia paniculata	Flowering Murdah	4
4	ചന്ദനം	Santalum album	East Indian sandalwood	3
5	പൂവരൾ	Thespesia populnea	Portia tree	2
6	മുള്ളുവേങ്ങ	Bridelia retusa	Spinous Kino tree	5
7	ഇരുൾ / കടമരം	Xylia xylocarpa	Burma Ironwood	6
8	മട്ടി	Ailanthus triphysa	Maharukh	2
9	മഹാഗണി	Sweitenia macrophylla	Mahogany	4
10	താന്നി	Terminalia bellarica	Belliric myrobalan	6
11	മഞ്ചാടി	Adenanthera pavonina	Red bead tree	10
12	ഗുൽമോഹർ	Delonix regia	Royal poinciana	12
13	വേങ്ങ	Ptreocarpus marsupium	Malabar kino	5
14	നെന്മേനി വാക	Albizia lebbeck	Siris tree	6
15	കല്ലരയാൽ	Ficus arnottiana	Indian rock fig	7

16	വട്ട / ഉപ്പുത്തി	Macaranga peltata	Macaranga	6
17	ചുണ്ടപ്പന	Caryota urens	Solitary fishtail palm	9
18	വങ്കണ	Carallia brachiata	Freshwater mangrove	5
19	പേര	Psidium guajava	Guava	4
20	വെള്ളീട്ടി	Dalbergia lanceolaria	Bastard rosewood	3
21	കൃഷ്ണകിരീടം	Clerodendrum paniculatum	Pagoda plant	2
22	ചെമ്പരത്തി	Hibiscus rosa-sinensis	Hibiscus	12
23	റോസ്	Rosa chinensis	Rose	10
24	സീതപ്പഴം	Annona squamosa	Sugar apple	8
25	വലിയ അത്തി	Ficus auriculata	Elephant ear fig tree	5
26	വെള്ളില	Mussaenda frondosa	Schizomussaenda	6
27	എടല / കരിവെട്ടി	Olea dioica	Indian olive	5
28	കാറ്റാടി	Casuarina equisetifolia	Beef wood	2
29	കശുമാവ് / പനങ്കിമാവ്	Anacardium occidentale	Cashew tree	3
30	കണ്ണാമ്പൊട്ടി / കല്പൂരം	Sapium insigne	Tuning fork tree	3
31	ഇൗന്ത്	Cycas circinalis	Queen sago	5
32	കൂവളം	Aegle marmelos	Indian bael	6
33	ഉഴുദ്	Aquilaria malaccensis	Agarwood tree	3
34	ചെറുഞാവൽ	Syzygium caryophyllatum	South Indian plum	2
35	പൂവം	Schleichera oleosa	Lac tree	2
36	കുരികിൽ വള്ളി	Connarus paniculatus	Connarus vine	1
37	മലതാങ്ങി	Abutilon theophrasti	Buttonweed	5
38	കുന്നൻപാല	Tabernaemontana alternifolia	Alternate-leaved crape jasmine	3
39	തെങ്ങ്	Cocos nucifera	Coconut tree	20
40	മാഞ്ചിയം	Acacia mangium	Mangium	3
41	മന്ദാരം (വെള്ള)	Bauhinia acuminata	Dwarf white bauhinia	2
42	മണിമരുത്	Lagerstroemia speciosa	Pride of India	1
43	ഗുൽമോഹൻ	Delonix regia	Royal poinciana	1
44	ആരുവേപ്പ്	Azadirachta indica	Neem	3
45	ലക്ഷ്മിതരു	Simarouba glauca	Paradise tree	1
46	ഉങ്ങ്	Millettia pinnata	Indian beech	3
47	കണിക്കൊന്ന	Cassia fistula	Golden shower tree	2
48	മാവ്	Mangifera indica	Mango tree	5
49	ഇലഞ്ഞി	Mimusops elangi	Spanish cherry tree	3
50	മിൽക്ക് ഫ്രൂട്ടി	Chrysophyllum olviforme	Milk fruit tree	3
51	പ്ലാവ്	Artocarpus heterophyllus	Jackfruit tree	6

52	ഇന്ത്യപ്പന	Phoenix dactylifera	Date palm	4
53	സുബാബുൽ പീലിവാക	Leucaena leucocephala	River tamarind	3
54	ബുദ്ധമുള	Bambusa ventricosa	Buddha's bamboo	3
55	പെൻസിൽ മുള			8
56	അയ്യമ്പന	Ayapana triplinervis	Water hemp	5
57	പനിക്കൂർക്ക	Coleus aromaticus	Mexican mint	6
58	രാമച്ചം	Chrysopogon zizanioides	Vetiver	3
59	ചിറ്റരത്ത	Alpinia calcarata	Snake ginger	6
60	കൃഷ്ണ തുളസി	Ocimum tenuiflorum	Holy basil	3
61	എരുക്ക്	Calotropis gigantea	Giant milkweed	3
62	വാതംകൊല്ലി	Justicia gendarussa	Willow-leaved Justicia	2
63	കരിനൊച്ചി	Vitex negundo	Chaste tree	2
64	ഞാവൽ	Syzigium cumuni	Jamun	2
65	ആടലോടകം	Adathoda vasica	Malabar nu	4
66	കറിവേപ്പ്	Murraya koenigii	Curry leaf tree	6
67	ചെറുനാരകം	Citrus limon	Lemon	6
68	മുഞ്ഞ	Premna serratifolia	Headache tree	3
69	സർവ്വസുഗന്ധി	Pimenta dioica	Allspice	2
70	നായ്കമ്പ	Pogostemon quadrifolius	Pogostemon grass	1
71	മാതളം / റുമ്മാൻ	Punica granatum	Pomegranate	3
72	മുള്ളിലം	Zanthoxylum rhetsa	Indian prickly ash	4
73	കാവളം	Sterculia foetida	Java olive	3
74	ചേർ	Holigarna arnottiana	Black varnish tree	2
75	സിന്ദൂരമരം	Mallotus philippensis	Kamala tree	1
76	ഓടമുള	Ochlandra travancorica	Elephant grass	5
77	ശംഖുപുഷ്പം (നീല)	Clitoria ternatea	Asian pigeonwings	6
78	ശംഖുപുഷ്പം (വെള്ള)	Clitoria ternatea alba	White Asian pigeonwi	9

### 3.1.1 ENERGY

#### a. Electricity

The total emission of the carbon dioxide per student is 92.44 kg per year (2021). Emission reduction plans were prepared to bring the existing per capita carbon footprint to zero or below so as to bring the campus a carbon neutral or carbon negative campus. This can be achieved in many ways but, every alternate plan must be in such a way that, it must fulfill the actual purpose of each activity that is considered.

Here, three major methods are taken in to account as the plans for reducing the carbon emission of the campus.

- Resource optimization
- Energy efficiency
- Renewable energy
- Electricity Consumption

Base Line Energy Data		
SAFI INSTITUTE OF ADVANCED STUDY		
		2020-21
1	Electricity KSEB (kWh)	84428
2	Electricity Solar - Off grid (kWh)	0.00
3	Electricity (KSEB + Off grid) kWh	84428
4	Electricity Grid Tied (kWh)	0.00
5	Diesel (L)	80.00
6	LPG (kg)	228.00
7	Biogas (kg)	0.00

Occupancy Details	
Particulars	2020-21
Total Students	1503
Staffs	97
Total Occupancy of the college	1600

Sl. No	Location	LIGHT					FAN			IT			AC		
		T 8	T1 2	CF L	LE D TU BE	LE D BU LB	CF	W F	E F	P C	Sca nner	Pri nte r	1.5	2 t r	3 t r
1	105			1			4								
2	108						2		1						
3	109			2			4								
4	110			2			6								
5	111			1			2								
6	112			1			2								
7	114			5			8								
8	115			2			2								
9	118		2				2								
10	121			1			4								
11	122			1			4								
12	130			3			2								
13	131			4			6		2						
14	133			1			8								
15	136		1				2						1		
16	201		2	2			2								
17	202			1			4								
18	203			2			6								
19	205			2			2								
20	208-A			1			2								
21	209			1			4								
22	210			1			6								
23	211						2								
24	211b						2								
25	212			2			2								
26	214						3								
27	308			2			3								
28	307						1								
29	305						2								
30	304						1								
31	303						4								
32	302						2								
33	301						2								
34	101		1	2			2			3		1	1		
35	102		2	2			2			3		4	1		
36	103		2	1			2			1		2	1		
37	104		2	1			2						1		
38	106		3	3			6			31			2		

39	107			2		2		2		1			
40	126			3		2	1	1		1			
41	MB lab		5	6		8		2		1	1		
42	store		1	2		1							
43	BT lab		4	4		8							
44	instrument lab		7	6		4		2			2		
45	sickroom			2		1							
46	MCJ lab			1		2		11		1			
47	208		2	1		2		1		1			
48	ft lab		6	1		10		1		1			
49	chemistry lab			4		8							
50	boys bathroom												
51	ladies bathroom												
52	staff washroom												
53	aud 2			6		5							
54	aud 1			4		5							
55	213			1		2	1	1		1			
56	security room												
57	conference hall		4	8		8					4		
58	Conf. bedroom			2		1					1		
59	principal		1	2		2		1		1	1		
60	306			1		1		1		1			
61	gents bathroom												
62	ladies bathroom												
63	reception						1	2		1			
64	GF main loby						1						
65	micro loby			6									
66	ladies lobby			10									
67	bt lobby			4									
68	first floor lobby			18			1						
69	II floor lobby			9									
70	COO office			6		3		1		1	1		
71	SAFI Office		2				2	2		2			
72	LIB- REFERENCE			12		6							

73	Digital library			10			6			18					
74	lib entrance														
75	Lib - server						1								
76	lib lobby			10			4			1					
77	lib bathroom			6											
78	IS staff room		2				1			1		1			
79	seminar hall		5	2					7						
80	lib - 301			2			2								
81	lib - 302			12			5					4			
82	lib - 304			1			2								
83	lib - staff room econ						2			1					
84	lib- 201		4				4								
85	lib 202						3								
86	lib- eco-bathroom														
87	lib -B- hindi			1			2								
88	lib-B - bathroom														
89	lib- B - 101			1			4								
	TOTAL	0	58	213	0	0	239	0	17	87	0	21	21	0	0
	W		40	20			80		60	100		140	1200		
		0	2320	4260	0	0	19120	0	1020	8700	0	2940	25200	0	0

During the energy audit filed studies, 58 Numbers T12 were identified, which is considered as inefficient. 213 CFLs were found during the audit. The detailed energy efficiency projects are given in the respective chapters of this report.

## RESOURCE OPTIMISATION

The effective use of resources can limit its unnecessary wastage. Optimal usage of the resources (such as fuels) can save the fuel and can also reduce the carbon emission due to its consumption. This technique can be effectively implemented in the 'transportation' and 'waste' sectors of the campus.

## WASTE MINIMISATION

Optimal utilization of paper and plastic stationaries can reduce the frequency of purchase of items. This can reduce the unnecessary wastage of money as well as the excess production of waste. In the case of food, proper food habits and housekeeping practices can optimize its usage.

Currently, they taking an appreciable effort to reduce the unnecessary production of wastes. But the campus still has opportunities to reduce the generation of waste and can improve much more. Resource optimization can be effectively implemented in all type of waste generated in the campus and the campus can expect about 50% reduction the total waste produced.

## ENERGY EFFICIENCY

Energy efficiency is the practice of reducing the energy requirements while achieving the required energy output. Energy efficiency can be effectively implemented in all the sectors of the campus.

## FUELS FOR COOKING

The campus can install a solar water heater to rise the water temperature to a much higher level, then it has to consume only very less amount of thermal energy for preparing the same amount of food. This can make a positive benefit to the campus by saving money, energy and can reduce the carbon emission of the campus due to thermal energy consumed for cooking.

## TRANSPORTATION

Energy efficiency of the transportation sector is mainly depended on the fuel efficiency of the vehicles used. Here mileage of the vehicle (kmpl - Kilometres per Litre) is calculated to assess the fuel efficiency of the vehicle. Percentage of closeness is the ratio of actual mileage of the vehicle to its expected mileage. If the percentage of closeness of mileages of each vehicle is greater than that of its average, then the efficiency status of the vehicle is considered as 'Above average' and else, it is considered as 'Below average'

### Renewable Energy

After analyzing the historical and measured data the following projects are proposed to make the campus carbon neutral. The projects are from energy efficiency and renewable energy. The further additions in the green cover increase will also give positive impact in the carbon mitigation.

Executive Summary					
Consolidated Cost Benefit Analysis of Energy Efficiency Improvement Projects					
SAFI INSTITUTE OF ADVANCED STUDY					
Sl No	Projects	Investment (Lakhs Rs)	Cost saving (Rs)/Yr	SPB Months	Energy saved kWh/Yr
1	Energy Saving in Lighting by replacing existing 58 No's T12 (55W) Lamps to 18 W LED Tube	0.17	0.254	8.23	3172
2	Energy Saving in Lighting by replacing existing 213 No's CFL(15W) Lamps to 9W LED BULB	0.23	0.15	18.53	1897
3	Energy Saving by replacing existing 239 No's in-efficient ceiling fans with Energy Efficient Five star fans	5.98	0.86	83.12	10782
	<b>Total</b>	<b>6.38</b>	<b>1.27</b>	<b>36.63</b>	<b>15850.46</b>
(The saving are projected as per the assumed operation time observed based in the discussions with the plant officials. The data of saving percentages are taken from BEE guide books and field measurements.)					
Cost Benefit Analysis of Renewable Energy Efficiency Projects					
5	Installation of 100 kWp Solar Power Plant	75.00	10.22	88.06	127750
6	Installation of 15Kg/day Biogas plant	0.2	0.26	9.39	5647
	<b>Total</b>	<b>75.20</b>	<b>10.48</b>	<b>48.73</b>	<b>133397</b>

<b>Water Conservation Activities</b>	
List four uses of water in your institute	Basic use of water in campus:
	1. Drinking – Ground Water
	2. Gardening – Rain water
	3. Kitchen and Toilets –
	4. Others –
How does your institute store water? Are there any water saving techniques followed in your institute?	Overhead Water Tanks and Sumps installed for storage of water.
	Water conservation are in place
If there is water wastage, specify why and How can the wastage be prevented / stopped?	No
Record water use from the institute water meter for six months (record at the same time of each day). At the end of the period, compile a table to show how many litres of water have been used.	No logbooks are available
Does your institute harvest rain water?	Yes
Is there any water recycling system?	Yes

<b>General Environmental Awareness Questioner</b>	
Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
Does your institute have any rules to protect the environment? List possible rules you could include.	Yes
Dose Environmental Ambient Air Quality Monitoring conducted by the Institute?	Yes
Dose Environmental Water and Wastewater Quality monitoring conducted by the Institute?	Yes
Dose stack monitoring of DG sets conducted by the Institute?	Yes
Is any warning notice, letter issued by state government bodies?	No
Dose any Hazardous waste generated by the Institute? If yes explain its category and disposal method	No
Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
Does your institute have any rules to protect the environment? List possible rules you could include.	Yes
Does housekeeping schedule in your campus?	Yes
Are students and faculties aware of environmental cleanliness ways? If Yes Explain	Yes
Dose Important Days Like World Environment Day, Earth Day, and Ozone Day etc. eminent in Campus?	Yes
Dose Institute participated in National and Local Environmental Protection Movement?	Yes
Dose Institute has any Recognition/certification for environment friendliness?	Yes
Dose Institute using renewable energy?	Yes
Dose Institution conducts a green/environmental audit of its campus?	Yes
Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	Yes

<b>Best Practices and Initiatives</b>	
Renewable Energy	Yes
Solar Power Plant	
Energy Audit and Green Audit Conducted	
Biogas Plant installed	
Biodiversity Conservation	Yes
Green Cover	
Tree Plantation Drives	Yes
ECO clubs	
Ground Water Recharge	Yes
Rain Water Harvesting System.	
Pollution Reduction Public Transportation	Yes
E Waste Management	Yes
Connected to authorized recycler	
Solid Waste Management	Yes
Lifting of garbage from campus on alternate day by Municipal Corporation.	
Adoption of Village	Yes
CSR	
Water Conservation	Yes
Energy Conservation	Yes



# RECOMMENDATIONS

1. Implement a utility monitoring program.
  - Allocate staff to carry out meter readings for electricity, waste and water on regular basis
  - Add monitoring data to spreadsheet so results can be viewed graphically
  - Compare with the utility bills meter readings in order to ensure accuracy;
2. Consider adopting and implementing a sustainable procurement policy which takes into account the whole life cycle of a product, and make sure environmental issues are written into tenders when contracting out.
3. Consider trialing recycled paper again – many recycled brands today, such as Evolve, are just as good as virgin paper.

4. Trial the use of re-manufactured (i.e. refilled) ink and toner cartridges rather than purchasing new ones.
5. Consider producing some designated 'environmental' pages on the intranet to make it easier for staff to find environmental information. If possible, a discussion forum could be set up to allow easy internal communications and staff to make suggestions for environmental improvements.
6. Environmental training could be formalized and carried out for all staff. It does not have to be too long or onerous, providing it covers key points, particularly in relation to waste so all staff are aware of the legal requirements. At the very least, environmental information should be included in the induction pack.
7. It is strongly recommended that environmental information is also given to students and staff during induction. It is particularly important for them to be aware of what waste they can dispose on site and where they can dispose of it, and what waste streams they must take away with them.
8. Consider implementing an environmental management system to incorporate all improvements and monitoring requirements. It does not need to be a complex system certified to any particular standard, merely a way of ensuring that baselines are set and progress is measured. Formation of Environment Policy and communicated to all faculties and other staff.
9. Plan for Zero Waste Campus Project
10. E-waste monthly inventory be maintained at campus as per E waste rules 2016.
11. Water Meter should be installed at institute for monitoring of water consumption per capita.
12. Increase in Environmental promotional activities for spreading awareness at campus.
13. Environment/Green committee formation for regulating eco-friendly initiatives at campus premises and periphery.



# CONCLUSION

This audit involved extensive consultation with all the campus team, interactions with key personnel on wide range of issues related to Environmental aspects. The audit has identified several observations for making the campus premise more environmental friendly. The recommendations are also mentioned with observations for the team to initiate actions.

However, there is scope for further improvement, particularly in relation to waste minimization and energy monitoring. By implementing a basic environmental management

system, current good practice can be formalized and a framework can be set up for monitoring, implementation of action plans and continual improvement.

Carbon Foot Print			
Sl. No.	Particulars	2020-21	tCO2e
1	Electricity (kWh)	84428	66.70
2	Diesel (L)	80.00	0.26
3	LPG (kg)	80.00	0.12
4	Biogas (m3)	-	-
5	Degradable Waste in kg/yr.	1689.60	1.06
6	Paper Waste in kg/yr	35.20	0.02
7	Plastic Waste in kg/yr	52.80	0.02
Total Carbon Foot Print tCO2e/yr			68.18

The audit team observed that the overall site is maintained well from environmental perspective. There is no major observations but few things are important to initiate urgently are waste management records by monthly inventory of hazardous waste, rainwater harvesting recharge; water balance cycle and periodic inspection of buildings; environment policy and initiation of composting at campus.

## References

- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Water [Prevention & Control Of Pollution] Cess Act-1977 (Amended 2003) and Rules- 1978
- The Air [Prevention & Control Of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices

# TECHNICAL SUPPLEMENTS



GREEN INITIATIVES



**Conserve and Preserve nature**

A talk by **Mr. Hamid Ali Vazhakkad** a renowned environmentalist was conducted by the nature club. The purpose of the programme was to enlighten the students and participants about the present scenario prevailing in the environment. The program started with a warm welcome by Mr. Nasrulla Khan, Vazhakkad, Assistant Professor, Department of journalism and Mass Communication. The program was presided over by Nature club convener Mr. Lukmanul Hakeem M, Assistant Professor, Dept. of Economics. Mr. Hamid introduced the participants to new world of environment where everyone could coexist with harmony and peace. Participants were highly motivated to preserve the nature for the better tomorrow. He demonstrated world's condition by the pictures of various parts of the world in the screen. IQAC Coordinator, Ms. Shainy N. K. Assistant Professor, Dept. of Microbiology, Mr. Mujeeb Rahiman Kattali, Assistant Professor, Dept. of Commerce felicitated the function. The program was concluded by vote of thanks by Ms. Asha Member of nature club and assistant professor, Dept. of Microbiology



Mr. Hamid Ali Vazhakkad inaugurating the programme



Mr. Lukmanul Hakeem M addressing the gathering



Mr. Nasrulla, Vazhakkad addressing the gathering





### **Inter collegiate Logo making competition for nature club**

Nature club-SIAS conducted a Inter collegiate logo making competition 07-01-2020 and gave 10 days for entries. Several entries were received from colleges all over Kerala. From these entries the council of Nature club selected a logo designed by **Mr. Kripal** from IHRD College of Applied Science, Vadakkanchery, Palakkad.

### Some of the logos received by the committee



### Logo releasing ceremony

The official logo of nature club released on 21-1-2020 by Mr. Nasrullah, JMC Department, SIAS. Council members of Nature club and IQAC coordinator were

SAFI INSTITUTE OF ADVANCED STUDY, SIAS 5/5


**NATURE CLUB-SIAS**

**Inauguration  
&  
Logo release**

on  
21-01-2020

Chief guest: **Mr. Hamid Ali**  
Environmentalist

**Time: 10.00 AM**  
**Venue: Library Seminar hall**



felicitated in the function.



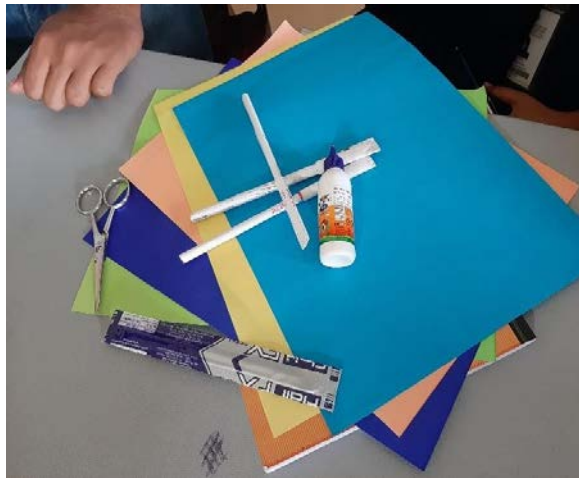
The logo releasing ceremony by Mr. Nasrullah

### **Paving the way for a Greener future with Seed pens**

The Department of Microbiology in association with the SIAS nature club has taken a step to go green and initiate the unique concept of growing a plant or a tree out of a used paper pen. These paper pens, are a great alternative to plastic ballpoint pens, which don't just address the plastic menace but also contain seeds that can grow into trees. The first and Second year students of Microbiology initiated the making and the usage of seed pens and reduce the use of plastics within the campus in the month of November. In one shot, these pens achieve, up-cycling of paper, plastic waste reduction and tree plantation. The Nature club Convener, Mr. Lukmanul Hakeem M, Assistant Professor, Dept. of Economics gave an introduction about the importance of going green and what are the opportunities that await where each individual can be responsible for the change in oneself and bring change in the society. The usage of plastics can be reduced to a greater extend only if we young individual can start from this moment and also educate others to build a better environment for the generations to come. Ms. Shainy N.K. Assistant Professor Microbiology and Ms. Farha Baramy, Head of Microbiology department also joined hands to make this a great initiative

and also develop skills within the students by creating their own biodegradable products and also distribute them among others. The Department also plans to conduct a ball point pen collection campaign in the college and make an art installation to create awareness about plastic waste problems.





**Medicinal herbal Garden**

A Medicinal Garden was set at the backyard of SIAS on 22-01-2020 .More than 50 medicinal plants were planted in the garden. The nature club took charge of the garden with the help and supervision of the gardener



### **Organic farm visit**

Nature club and Microbiology department jointly organized a visit to an organic farm in Aroor,

near Vazhayoor on 19-11-2019. The main aim of the visit was to understand the different methods of organic farming, fertilization, different kinds of biocomposts and to inculcate in students a love for their Mother Nature and environment. The farm is owned by Mr. Elyas, who has received the award “Karshakasree” from Govt. of Kerala



A campus cleaning initiative to make the campus free of plastic litters, was taken up by the nature club members on 5<sup>th</sup> March 2020. The entire campus was cleaned by the students and



the collected waste was given out to a certified waste recycling unit. All the members of nature



club (180 students) participated in the initiative. It gave the students a feeling self-satisfaction and an urge continue to maintain their surroundings clean and keep away from unwanted plastic usage .

# FATE n FIESTA '20

SAFI INSTITUTE OF  
SAFI INSTITUTE OF  
ADVANCED STUDY-SIAS

Inauguration

nature club  
SAFI INSTITUTE OF ADVANCED STUDY-SIAS

Fate n Fiesta '20  
LOCKDOWN EVENTS

**BINEESH BASTIN**  
(FILM ACTOR)

16-04-2020 THURSDAY  
9 AM

NATURE CLUB SIAS UNIT

nature\_club\_sias

nature club  
SAFI INSTITUTE OF ADVANCED STUDY-SIAS

Break the chain

NATURE CLUB SIAS PRESENT

**Fate n Fiesta '20**

- ◆ CREATIVE WORK  
(BOTTLE, PAPER AND OTHER MATERIALS)
- ◆ HOME CHEF  
(SPECIAL JUICE / FOOD RECIPE, ONE MINUTE MAKING VIDEO)
- ◆ HOME DECORATION  
(INDOOR / MONEY PLANT ART WORK ETC.)
- ◆ CAPTION  
(HEALTH / POLICE)
- ◆ CARTOON
- ◆ FANCY DRESS
- ◆ TROLL COMPETITION

DATE WILL ANNOUNCE SOON

ATTRACTIVE  
**CASH PRIZES**  
WILL BE THERE

FOR FURTHER DETAILS 📞:- +91 95394 44162 +91 97440 33463  
nature@siasindia.org

SAFI INSTITUTE OF ADVANCED STUDY-SIAS

A collection of programs were conducted under the umbrella of Fate n fiesta. The programme was inaugurated by Bineesh Bastin (cine actor). Under this umbrella 3 events named Quara craft (craft work competition)

### 1. Quara craft(craft work competition)



### 2. C'mon just one (caption writing competition)







SIAS NSS unit conducted a plantation drive of planting 1500 saplings on behalf of the World Environmental day in collaboration with the SIAS nature club with the motive of everyone needs to come together to support environmental initiatives even in the smallest way possible. Principal Prof. E .P Imbichikoya inaugurated the programme with planting a tree in the college campus. Chief administrative officer Col. Nizar Ahammed Seethi, NSS Programme officer Mr. Abdul noufal, Natural club convener Mr. Lukamanul Hakeem and many staff members joined them in the initiative.



Many planted a tree on their premises or home as a part of this initiative

SIAS NSS unit conducted a webinar on the topic “KOVID KALATHE PARISTHITHI CHINTHAKAL” online interaction with Mr. Nasrullah Vazhakkad (Asst. Prof. Department of JMC, SIAS) in collaboration with the SIAS nature club on 05-06-2020, as the part of the World Environment day with the motive of everyone needs to come together to support environmental

initiatives even in the smallest way possible. Students interacted with him through google meet.

JUNE 05  
WORLD ENVIRONMENT DAY  
**കോവിഡ് കാലത്തെ  
പരിസ്ഥിതി ചിന്തകൾ**



**NASRULLAH  
VAZHAKKAD**  
ASSISTANT PROFESSOR  
DEPARTMENT OF JMC, SIAS

 ONLINE INTERACTION AT GOOGLE MEET  
**JUNE 05-06-2020**  
**10:00 AM TO 11.00 AM**



**SIAS NSS & SIAS NATURE CLUB**

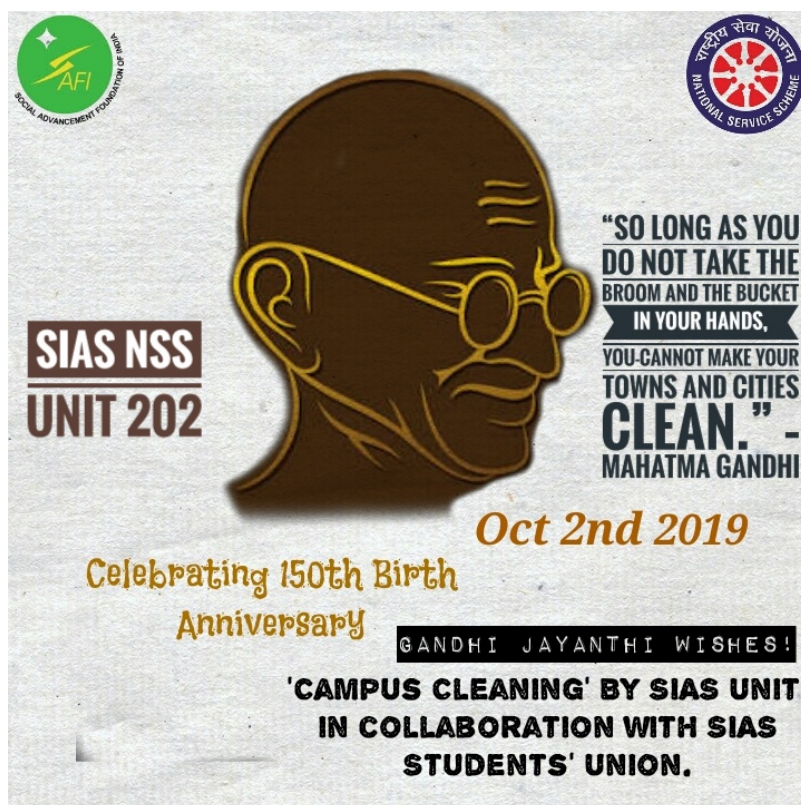
**“System Change NOT Climate change –A challenge for you”**

SIAS NSS unit organised a special session on climate change and plastic waste disposal by Mr. Aakash Ranison (Traveller, Climate activist and Founder and CEO of The Golden Bird Foundation, a Non-Governmental Organisation (NGO) in Indore, Madhya Pradesh). He revealed his travel experience and involvement in various climate activities in different parts of the country. The session was very interesting and inspiring to the participants.



### **“Plantation drive – A hope for existence”**

The SIAS NSS unit had done its second phase of plantation projects on 07/11/2019 Thursday 2pm. On behalf of the drive, the unit planted 22 varieties of seeds near by the gents and ladies’ hostels. 90 volunteers involved in the plantation activities.



This year the NSS Unit Observed Gandhi Jayanthi in an effective manner. The team engaged in campus cleaning process along with college union members. Programme Officer Naseema K.P. and Union Advisor Dr. Abdul Rasack coordinated the event.

### **“Gandhiji as a role model for every Citizens” – A discussion**

A talk was conducted on Oct 2<sup>nd</sup> 2020 by Union and NSS unit of SIAS about Gandhiji being a role model for all. All the students actively participated in the discussion and expressed their views. NSS coordinator Mr. Abdul Noufal M., Assistant Professor, Dept. of Commerce Mrs. Aneesunnesa, Assistant Professor, Dept. of English moderated this session.

Unit started this year GCCC programme by planting 29 saplings. The programme was inaugurated by dr. P.V.Basheer Ahammed (SIAS Principal) and Col.Nisar Ahmd Seethi,( SAFI CAO)jointly by planting saplings. It was a well planned activity for which college authority provided immense support for preparation of bits, purchasing of saplingsetc.28 volunteers participated in this first phase.



**The second phase of GCCC in this year have been done by planting 35 saplings in the campus ON 15/7/19. 44 volunteer students were participated.**



Engaged in campus cleaning as per the direction of health department along with College Union, 14/9/18

Participated in two-day residential nature camp 'KADARANGU' at Chandrakandam, Nilambur, on 2&3 Feb 2019..

## **Personalised Mask Making Workshop On 5<sup>th</sup> June 2020 – World Environmental Day Celebration**

**An IQAC, SIAS Initiative  
Jointly organized by  
Women Development Cell (WDC) and Advisory Committee  
SAFI Institute of Advanced Study (SIAS), Vazhayoor, Malappuram, Kerala**

Face masks have become an integral part of our lives in the context of COVID-19 pandemic and WHO has advised to use masks in communities, during home care, and in health care settings in areas that have reported cases of COVID-19. It is intended for individuals in the community, public health and infection prevention and control (IPC) professionals, health care managers, health care workers (HCWs), and community health workers.



Cloth face coverings are recommended as a simple barrier to help prevent respiratory droplets from traveling into the air and onto other people when the person wearing the cloth face covering coughs, sneezes, talks, or raises their voice. This is called source control. This recommendation is based on what we know about the role respiratory droplets play in the spread of the virus that causes COVID-19, paired with emerging evidence from clinical and laboratory studies that shows cloth face coverings reduce the spray of droplets when worn over the nose and mouth. COVID-19 spreads mainly among people who are in close contact with

one another (within about 6 feet), so the use of cloth face coverings is particularly important in settings where people are close to each other or where social distancing is difficult to maintain. The Women Development Cell (WDC) and Advisory committee of SIAS jointly organized a 'Personalised cloth mask making workshop' for the teaching and non-teaching staffs of SIAS on 5<sup>th</sup> June 2020, as part of World Environmental Day celebration. The workshop was also intended to spread the message of environmental conservation by using reusable and eco-friendly cloth masks.

The workshop was conducted by Ms. Asha B, Asst. Professor, Department of Microbiology and Convener, WDC, SIAS and assisted by Ms. Shainy NK, Asst. Professor, Department of Microbiology and IQAC Coordinator, SIAS and Ms. Farha Baramy, Head, Department of Microbiology and Advisory committee Convener. Members of teaching and non-teaching staffs actively participated in the workshop and prepared masks for themselves.





## **Installation of Bio-pedestal Composting unit**

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The Department of Microbiology is overwhelmed because we got the opportunity to introduce a best practice into the campus, ie, to manage wastes with the help of a composting unit. The composting process is currently viewed as the primary waste management method to stabilize organic wastes such as manure, yard trimmings, organic wastes, kitchen wastes etc. the stabilized end product which is the compost can be utilized as a soil amendment to improve soil structure, provide plant nutrients and facilitate the revegetation of disturbed or eroded soil.

The Bio-pedestal was installed on the 10<sup>th</sup> of December 2018 behind the canteen area to manage the wastes in the canteen. The Biopedestal unit requires the following materials, PVC pipe which has 8 inches in diameter and 1 metre in length, a plastic or a ferro lid which can close the open end of the pipe. For the Installation of the Biopedestal, dig a pit of nearly 30 cm in depth and then carefully place a pipe and then fill the pit with earth keeping the pipe portion inside. The open end of the pipe should be closed with a lid. To the biopedestal we can add in any type of bio- wastes, occasionally sprinkling it with cow dung slurry to improve its degradation process. The bio-wastes gets degraded in the vessel and then gets settled to the bottom of the tube and some of it may leach into the surrounding soil.

We would like to thank our principal Dr. PV Basheer Ahammed and Col. Nisar Seethi, SIAS Chief Administrative officer for giving encouragement and support for the fulfillment of this project. Col. Nisar Seethi, showed great enthusiasm and also acknowledged the students for the great initiative taken. He also asked the students to spread the message to friends, family and the society to manage the wastes in their area. We would also like to express our gratitude to Mr. Kumar, Mr. Musthafa, Mr Haque, Mr. Kareem and Mr. Junaid for extending help and support wholeheartedly.







### **Western Ghats – Trainers Training Work shop**

SIAS Media school hosted a two day trainers training workshop on 15 & 16/06/2019 in collaboration with Malabar Natural History Society Kozhikode, Peaceful Society Goa and Save western Ghats Movement. Friends of Nature, NGO based at Calicut was the chief partner of the Program and financially supported by Kerala Forest and Wildlife Department. Famous speakers like Dr. Kishore Kumar, Mr.Kumar kalanand Mani ( Goa) Chairman, Indian River Network, MP Chandran and Hamidali Vazhakkad were the present.



**നമ്മുടെ പശ്ചിമഘട്ടം**

## ദ്വിദിന പരിശീലക ശിൽപശാല

**ജൂൺ 15 ദിനം & 16 തീയതി**  
സാഹി കോളേജ്, വാഴയൂർ, രാമനാട്ടുകര



**Save Western Ghats Movement**

പ്രിയരേ, കേരളത്തിന്റെ അനുഗ്രഹങ്ങളായ ജലസമ്പത്ത്, കാലാവസ്ഥയും പശ്ചിമഘട്ടത്തിന്റെ സംഭാവനയാണ്. നമ്മുടെ കൃഷിയും വ്യവസായവും ടൂറിസവും മത്സ്യ ബന്ധനവും ഉൾക്കൊള്ളുന്ന ജലസേചനവും മറ്റും പശ്ചിമഘട്ടവുമായി അഭേദബന്ധം പുലർത്തുന്നു. എന്നാൽ പൊൻ മുട്ടയിടുന്ന താറാവിനെ കൊല്ലുന്ന അത്യാർത്ഥികളെപ്പോലെ മനുഷ്യനാണ് നമ്മുടെ ഇടയാരു പശ്ചിമഘട്ടത്തിൽ ശക്തമായ സമ്മർദ്ദങ്ങളിലൂടെ മാത്രമേ പശ്ചിമഘട്ടത്തെ രക്ഷിക്കാനാവൂ. ഇതിനായി ജാതി- മത- കക്ഷി- രാഷ്ട്രീയ ഭേദമന്യേ നാം ഭക്തന്മാരായിത്തീരണം. പശ്ചിമഘട്ടത്തിന്റെ പ്രസക്തിയും പ്രാധാന്യവും സംരക്ഷണത്തിന്റെ ആവശ്യകതയും ബോധ്യപ്പെടുത്തേണ്ടതുണ്ട്.

ഇതിനായി നാം ഒരുമ കൂട്ടുകയാണ്. ജൂൺ 15, 16 തീയതികളിൽ, തുടർ പ്രവർത്തനങ്ങളിൽ പങ്കെടുക്കാനും പരിപാടി മുപ്രകാശിപ്പിക്കാനും നമ്മുടെ ശ്രമം.

ശിൽപശാലയിലും തുടർ പ്രവർത്തനങ്ങളിലും അങ്കുരസമീപമായ പങ്കാളിത്തം പ്രതീക്ഷിക്കുന്നു. കൃത്യ സമയത്തിന് മുമ്പായി എത്തിച്ചേരണമെന്നപേക്ഷിക്കുന്നു.

സംഘാടക സമിതി

Organised By:  
**Friends of Nature**

In Association with:  
**Malabar Natural History Society Kozhikkode**  
**Peaceful Society, Goa**  
**SIAS Media School**  
**SAFI College, Vazhayaroor**

Supported by:  
**Kerala Forests & Wildlife Department**

**കാർഷികപാടി 2019 ജൂൺ 15 ദിനം**

**04.00 pm - 05.30 pm സെഷൻ 1 ഉദ്ഘാടന സമ്മേളനം**

സ്വാഗതം : വി. ശ്രീദേഷ് (ബന്ധുക്കുട്ടി, പ്രമേയൻ ഓഫ് നാച്ചർ)

അധ്യക്ഷൻ : പ്രൊഫ. പി. റിയാസ് (മലബാർ നാച്ചറൽ ഹിസ്റ്ററി സൊസൈറ്റി, കോഴിക്കോട്)

ഉദ്ഘാടനം : ഡോ. ബഷീർ അഹ്മദ് പി.വി. (പ്രിൻസിപ്പാൽ, SIAS, വാഴയൂർ)

ആശംസകൾ: ജംഷീർ അബ്ദുബക്കർ (വകുപ്പ് മേധാവ്, സിമാൻ റിഡിയൽ സ്കൂൾ) : ഡോ. എച്ച്. ഹബീബ് റഹ്മാൻ (എ.കെ.സി. വയറക്ടർ, പ്രമേയൻ ഓഫ് നാച്ചർ)

നന്ദി : സന്ദീപ്ത ഖാന (ജനറൽ കൺവീനർ)

**05.30pm - 07.00pm സെഷൻ 2 വിഷയാവതരണം**

**പശ്ചിമഘട്ടം: അവബോധവും നിലനിർമ്മിക്കലും**  
ഡോ. കിഷോർ കുമാർ (എല്ലെജെ. കോളേജ്, മലബാർ നാച്ചറൽ ഹിസ്റ്ററി സൊസൈറ്റി, കോഴിക്കോട്)

**07.00pm - 08.30pm സെഷൻ 3 പൊതു ചർച്ച**

**പശ്ചിമഘട്ടവും നമ്മളും**  
**രേഖാറേറ്റർ:** എം.പി. ചന്ദ്രൻ (പ്രൈം ടൈംസ് ഓഫ് നാച്ചർ)

**08.30pm - 09.00pm സെഷൻ 4 പ്രാഥമിക ഗ്രൂപ്പ് ചർച്ച**

**പശ്ചിമഘട്ട അവബോധം: സാധനങ്ങൾ, വെല്ലുവിളികൾ**  
**രേഖാറേറ്റർ:** വി.പി. ഷാമി (ബന്ധുക്കുട്ടി, പ്രമേയൻ ഓഫ് നാച്ചർ)

**09.00pm - 09.30pm സെഷൻ 5 സാംസ്കാരിക പരിപാടികൾ**

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**2019 ജൂൺ 16 തീയതി**

**07.00pm - 08.00pm സെഷൻ 6 ചർച്ച അവതരണം**

**08.30pm - 10.30pm സെഷൻ 7 വിഷയാവതരണം**

**പശ്ചിമഘട്ട നമ്മെ സന്നേഹിക്കുന്നു**  
ഹിന്ദിദിലി ടി (പ്രൈം ടൈംസ് ഓഫ് നാച്ചർ)

**10.30pm - 12.00pm സെഷൻ 8 വിഷയാവതരണം**

**'Conservation of Western Ghat and the total environment: Role, plan and action'**  
**ക്വാർ കലാനന്ദ ദസി** (എ.കെ.സി. ബന്ധുക്കുട്ടി, പിൻ-യുജ് സൊസൈറ്റി, ഞായർ)

**12.00 pm - 01.00 pm സെഷൻ 9 പൊതു മിനിമം പരിപാടി അവതരണം, ചർച്ച**

**01.00 pm - 01.30 pm സെഷൻ 10 സമാപന സമ്മേളനം**

### Rain Walk

As part of the orientation program the department has conducted a rain walk through the hills of Vahzyoor with the guidance of Mr. Hamidali Vazhakkad, famous environmental activist and the president of Friends of Nature, a Calicut based NGO. It was a program initiated to nculcate an environment friendly mindset among the students on 08/07/2019.





SOME MORE GREEN INITIATIVES FROM OUR CAMPUS.....

## 1. Plastic Free Campus

- The negative impacts of using plastics are increasing by the day. Some of the main constituent of plastic; vinyl chloride, dioxins, and plasticizers are the main cause of hormone-disruption, reproductive dysfunction, breast growth and testicular cancer amongst others.
- One of the safest and efficient methods of disposing plastic is recycling. To enable effective recycling we need to look into smart sorting. We would also need to develop smarter plastics and improve research to develop certain microorganisms that hasten degradation of plastic.
- There are 45 baskets for collecting waste plastic materials are set inside the campus. 20 of them are in the College Building, 12 of them are in Ladies hostel, 6 of them are in Men's Hostel, 5 of them in Library building and 4 in other places. In each fixed intervals, all plastic materials in the baskets are collected to a large repository and it hand over to an agency for healthy disposing.

## 2. Efforts towards the Paperless Office

### 1. Academic and accounting software .(Name is '@CAMPUS' )by Azure Software Limited)

- @CAMPUS is one of the most flexible Education Management Software. Features which make it highly flexible are:
- Separate configurable home page for each institutions and users , with the required actions, reminders and information in chart/table format that can be set themselves depending on their role
- Highly flexible Reporting Engine for creating any type of reports
- Highly flexible data entry forms where the customer can decide which fields to be shown, made mandatory, and what field labels to be used
- Role-based access control for enhanced security with per user access settings

- Quick link / bookmarking feature
- Help bulbs to get context sensitive help
- Customer selectable front-end color theme
- Multiple browser compatibility (Can even access using iPad browser)
- Product Installable on Windows, Linux or Unix
- Can be configured against Database of your choice(MySQL Server, Oracle or SQL)4.

### **3. Implemented a Software for taking Attendance and internal Assessment-Teacher - Parent Communication Application (T-buddy)**

- It automates and streamlines complete student life cycle from Pre-Admission to Course completion.
- It provides an easy way to perform different activities (like Admission, Timetable, Digital Attendance, Exams, Fees) and tasks for Teachers, Principal, Staff and Students.
- System provides an Instant communication mode between Parents School which works as an extremely use tool and promotes a Conductive learning environment.
- **Provides 24x7 communications among parents, teachers and students.**

#### **1. Platforms**

Cloud, Apple IOS And Google Android Platforms

#### **2. Development Technologies:**

Android SDK, IOS, PHP, LARAVAL, Jquery, Ajax, Angular 2.0 JSON APIs

#### **3. Features And Attractions**

Instant SMS, Chat Bot, RFID based and one touch Digital Attendance.

## **2. Public Announcement System**

It's an integrated system for the automatic ringing of College Bell and communication within a building. College Public announcement System helps you in saving time and better management of the College. Public Announcement System for College helps in saving lot of money efforts and time.

## **3. LCD Screen for display public information.**

An LCD Screen was set up in the Front lobby of the college to display notices, brochures and every day event details etc.

Following are the advantages of Public Screen:

- Ease of communication - change the display at any time and update information unlike static signs
- Improve internal communication by making information available to all
- Transparency - one communication for all visitors, students and staff members
- Connect with the public by providing relevant information
- Timely messaging

## **4. Green Landscaping**

2. Tree Plantation besides the way to Canteen at 2016.
3. Gardening in front of the college gate at 2017
4. Gardening in front of the college at 2018.