



**MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA  
(MACFAST)**



**MACFAST**<sup>TM</sup>  
Igniting wisdom since 2001

**GEO-TAGGED PHOTOGRAPHS OF  
GREEN INITIATIVES**

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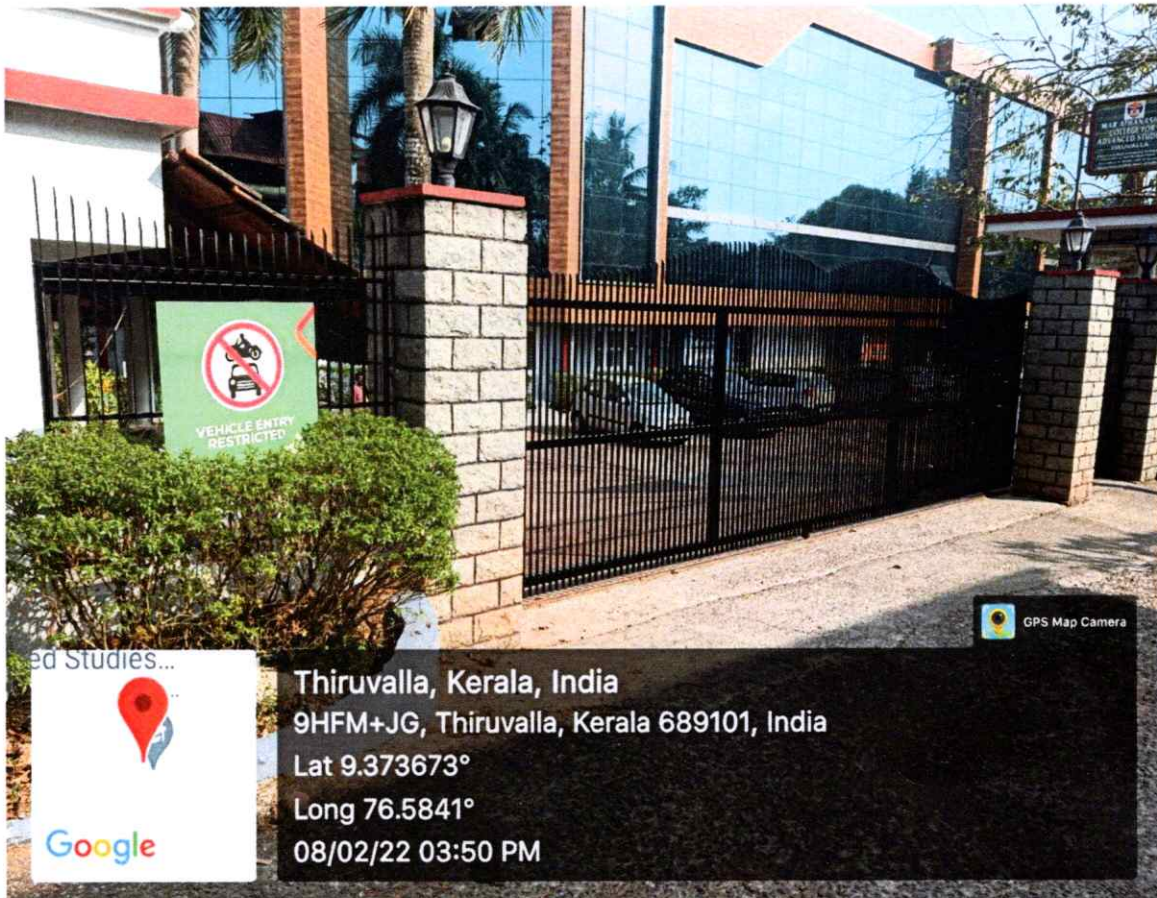
**MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA (MACFAST)**

**Thiruvalla, Pathanamthitta, Kerala 689 101**



**RESTRICTED ENTRY OF AUTOMOBILES**

As an initiative to green mission and environmental sustainability, the college has allotted parking area outside the campus. Students' vehicles will be only allowed up to the designated parking area. This helps to reduce pollution inside the campus.



**RESTRICTED ENTRY OF AUTOMOBILES**



**SEPARATE PARKING AREA FOR STUDENTS**

**USE OF BICYCLES**



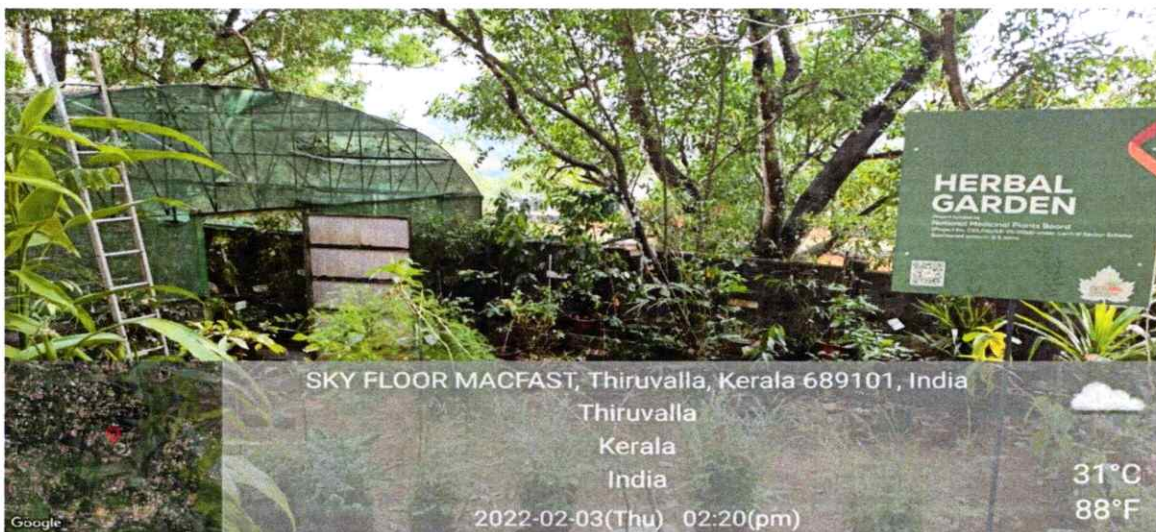
### LANDSCAPING WITH TREES AND PLANTS

The landscape at MACFAST beautify the surroundings, assist the students' learning process and encourage them to love and appreciate the environment. Students are able to breath in cleaner air since plants absorb carbon from the air and provide ample opportunities for students to engage in physical activities.

For more details; <https://green.macfast.org/>



### LANDSCAPING WITH TREES AND PLANTS



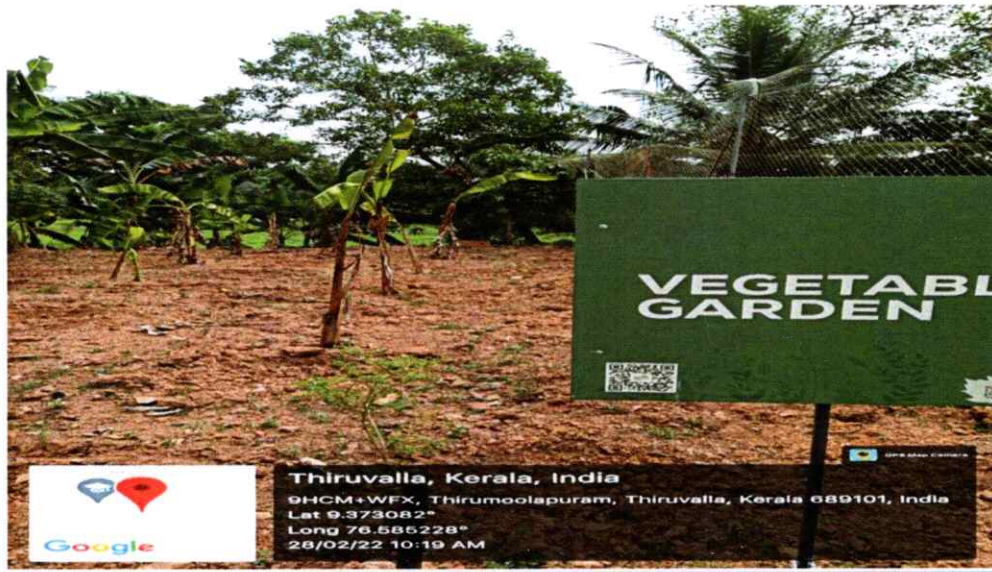
**HERBAL GARDEN**



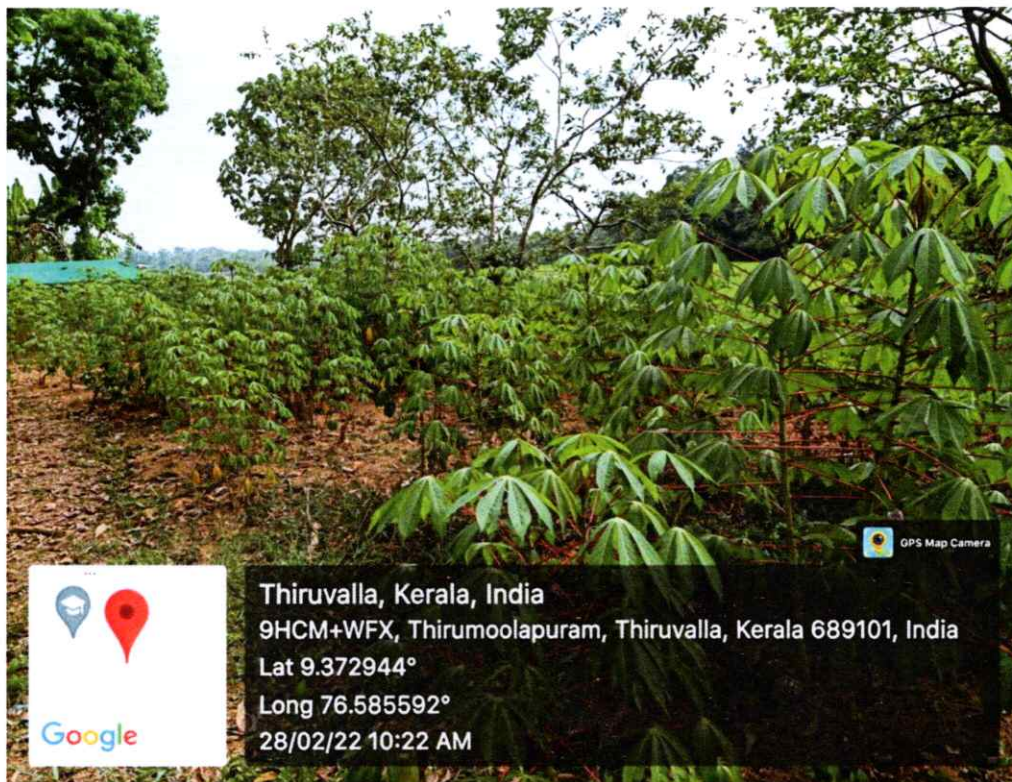
**ORCHIDARIUM**



**LAWN AREA**

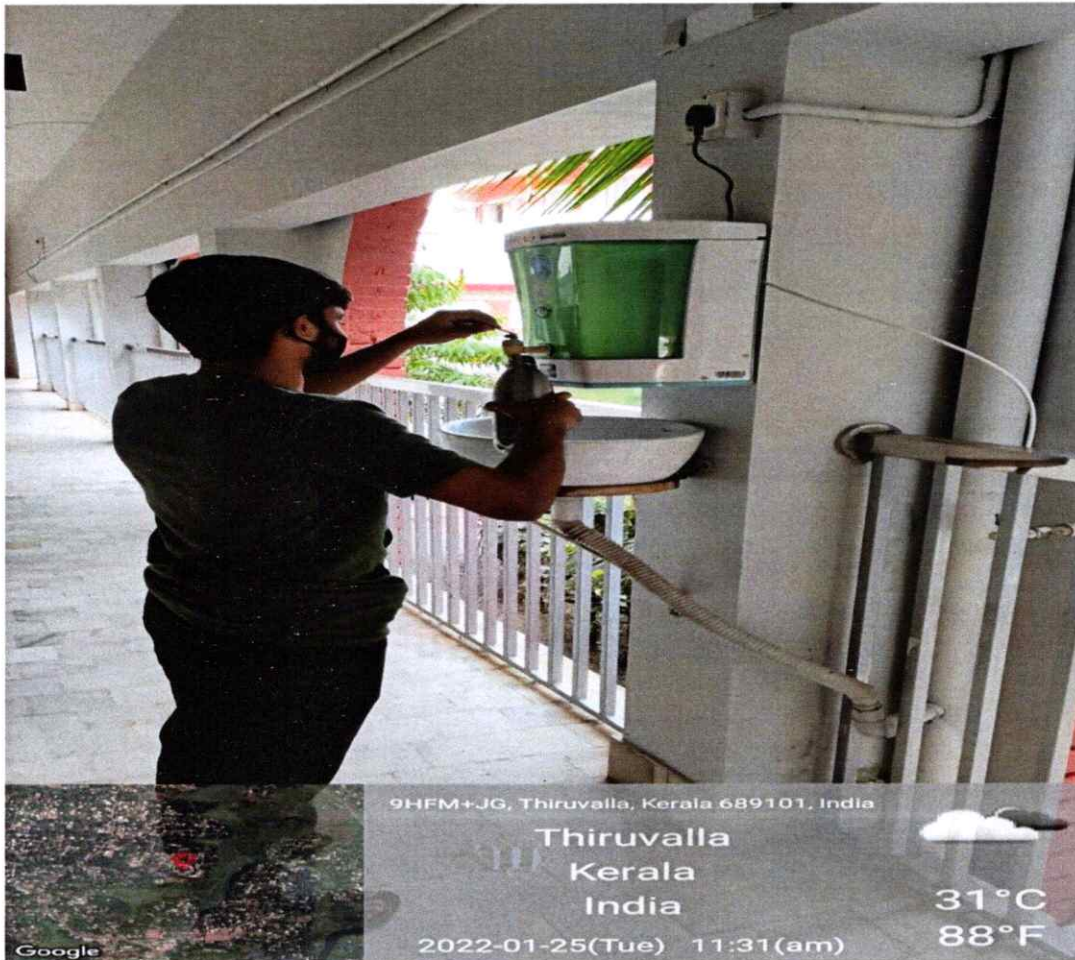


**VEGETABLE GARDEN**

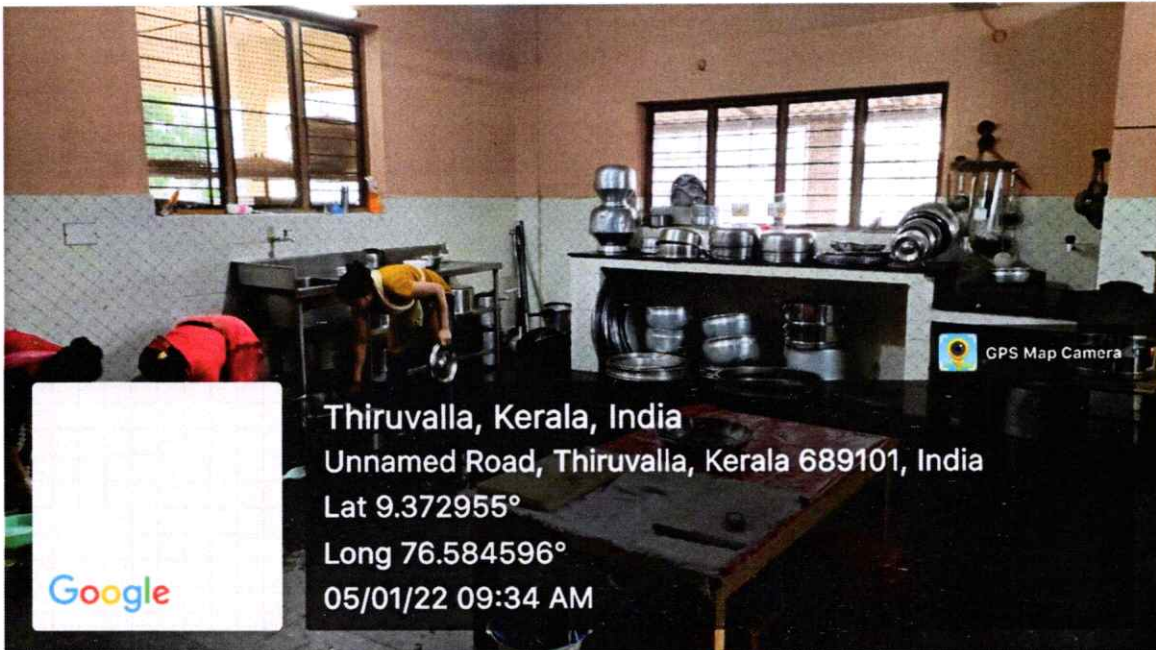


**BAN ON USE OF PLASTICS**

Millions of tons of single use plastics are produced every year. These non-biodegradable single use plastics which are thrown away are not recycled. This will cause harmful impact and is one of the major causes of environmental pollution. It is therefore obvious that we should stop using single use plastics. The college has avoided the use of single use plastics in the campus thereby educating and encouraging students and faculty members to reduce plastic consumption.



**STUDENT USING STEEL BOTTLE INSIDE THE CAMPUS**



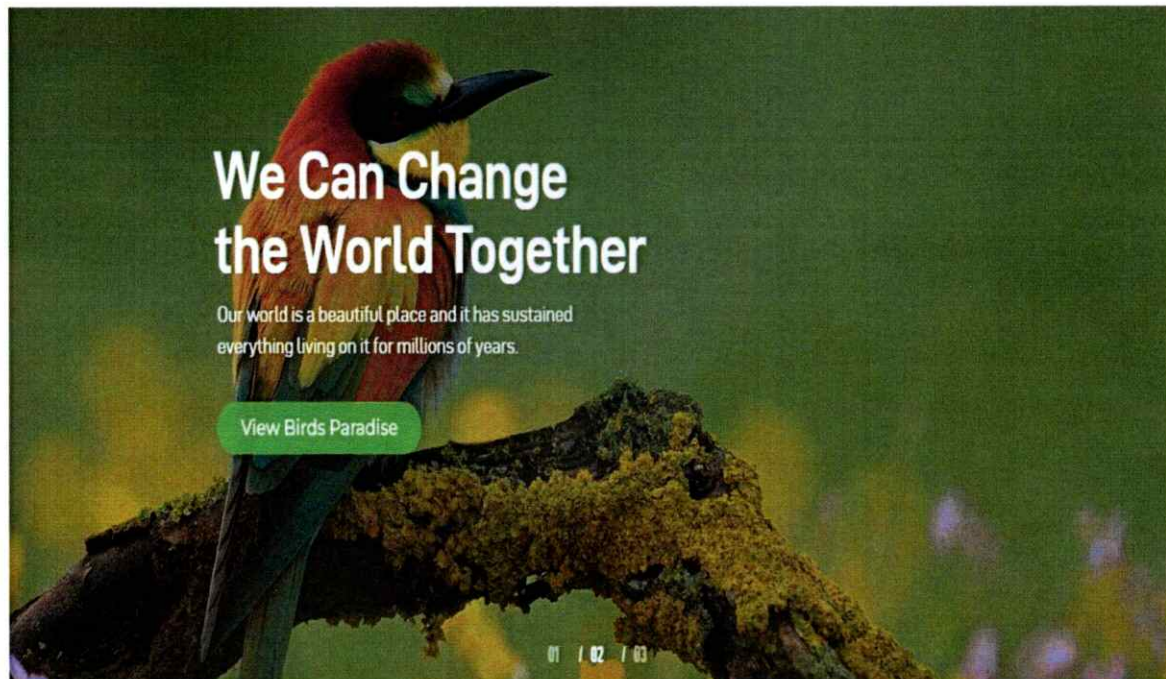


## Green Initiative Website of the College

The college maintain a website containing the details of the green initiative measures implemented in the campus. The website holds the details of the various plants and trees grown in the campus. The Forestry Club members have identified different birds (including migratory) and butterflies in the campus premises. Data regarding the birds and butterflies identified in the campus are also mentioned in the website.



[Home](#) [Eco Friendly Systems](#) [Campus Highlights](#) [Green Campus Initiatives](#) [Going Green](#) [Quality Audits](#)



**Green Initiative Website**



Dark-branded  
Bushbrown



Long-branded  
Bushbrown



Common  
Four-ring



Common Five-  
ring



Tawny Coster



Cruiser



Dustie



Common



Tamil Yanman



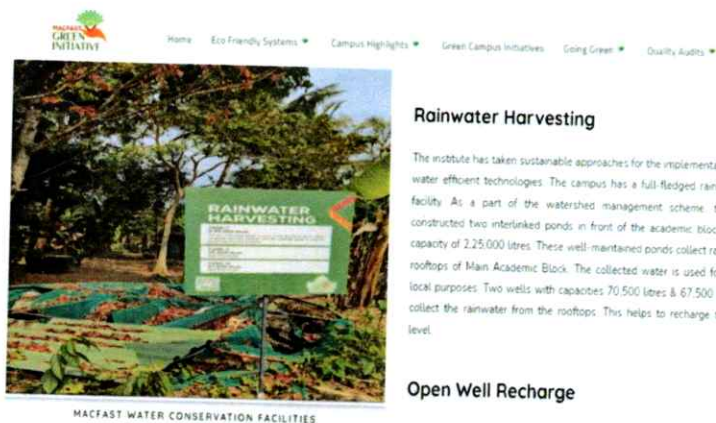
Common

### Details of Butterflies identified in the campus



Mar Athanasios College For Advanced Studies Thiruvalla (MACFAST) added another feather on its cap of achievements by becoming the State's first solar-powered campus in 2011. MACFAST installed a 30KW rooftop solar power plant envisaging a yearly production of 45,000 units (kilowatt hours) of electricity which could meet half of the annual power demand of the institution. Electricity Minister, Arayanan Mohammed, inaugurated the solar power plant at MACFAST as part of the 10th anniversary celebrations.

### Details of energy conservation



Home Eco Friendly Systems Campus Highlights Green Campus Initiatives Going Green Quality Audits

**Rainwater Harvesting**

The institute has taken sustainable approaches for the implementation of innovative water efficient technologies. The campus has a full-fledged rainwater harvesting facility. As a part of the watershed management scheme, the institute has constructed two interlinked ponds in front of the academic block with a storage capacity of 2,25,000 litres. These well-maintained ponds collect rainwater from the rooftops of Main Academic Block. The collected water is used for gardening and local purposes. Two wells with capacities 70,500 litres & 67,500 litres are built to collect the rainwater from the rooftops. This helps to recharge the groundwater level.

**Open Well Recharge**

Open well recharge is an effective method for rain water harvesting. The college has constructed two wells with capacities 70,500 litres & 67,500 litres to collect rainwater from the rooftops. This helps to recharge the groundwater level.

**Waste Water Recycling**

The college installed an odour-free, eco-friendly Sewage Treatment Plant in the premises of the boys' hostel for treatment, recycling and reusing of waste water. Bio-filtration, aeration and oxidation are the major stages of treatment. The tank capacity is 25,000 litres and the treated water is used for gardening purpose.

MACFAST WATER CONSERVATION FACILITIES

### Details of water conservation facilities



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**Biogas Plant**



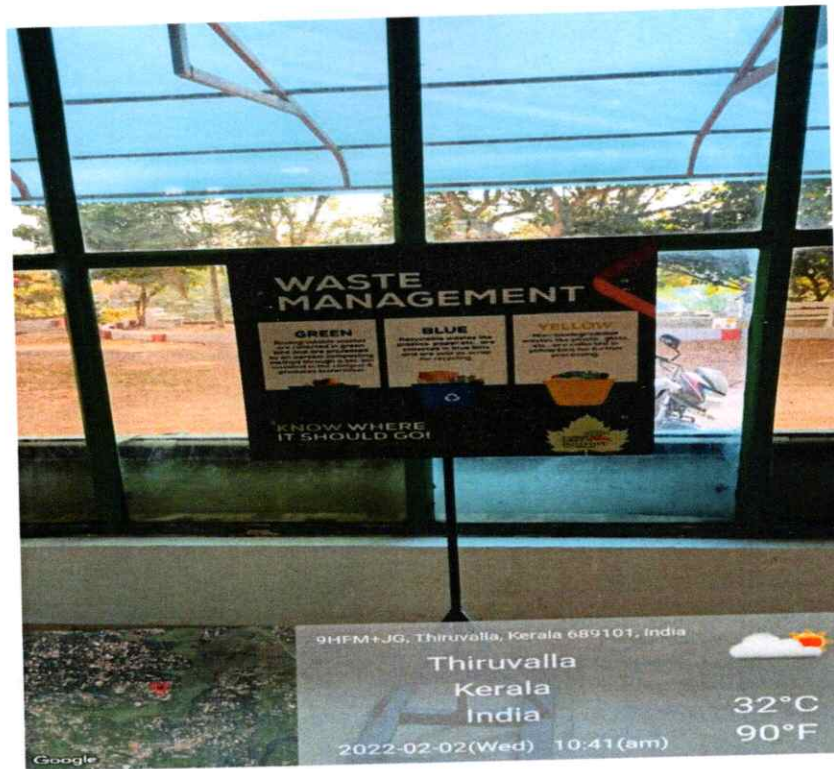
**BIOGAS PLANT**

The College has installed two biogas plants in the campus. The institution totally depends on indigenously created biogas for all its cooking purposes. The geomembrane bioreactor plant is fully pre-fabricated and the accessories include geomembrane reactor, gas scrubber and pressure booster. The gas generated from the digesters could be collected in a single gas collector. Bio-methanisation is a universally accepted and proven technology for bioenergy generation from bio-waste. By applying this technology, fast decomposing waste materials like human excreta, food waste, fruits and vegetable waste, fish and meat waste etc. can be treated hygienically. The liquid and major bio-degradable wastes from both boys' and girls' hostels and college canteen are collected and are processed through the bio-gas plant in the campus. The plant installed in the campus

### Details of green initiatives



7.1.3



WASTE MANAGEMENT BOARD



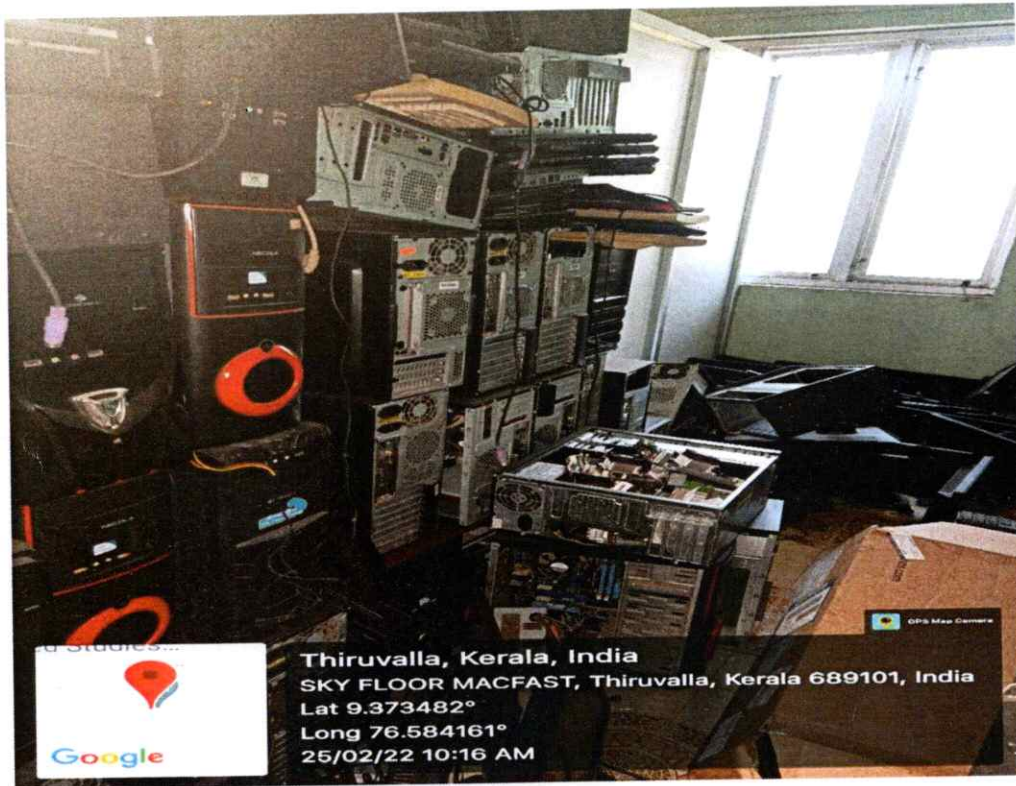
WASTE BINS

# BIOGAS PLANT

Plant Size	35 m <sup>3</sup>
Waste Holding Capacity	70 m <sup>3</sup>
Gas Holding Capacity	17500 L
Minimum Quantity of Waste	250 kg/day
Biogas Production	12600 m <sup>3</sup> /year



## BIOGAS PLANT SPECIFICATIONS



**E- WASTE SPACE**



**BIOGAS PLANT (NEAR MEN'S HOSTEL)**



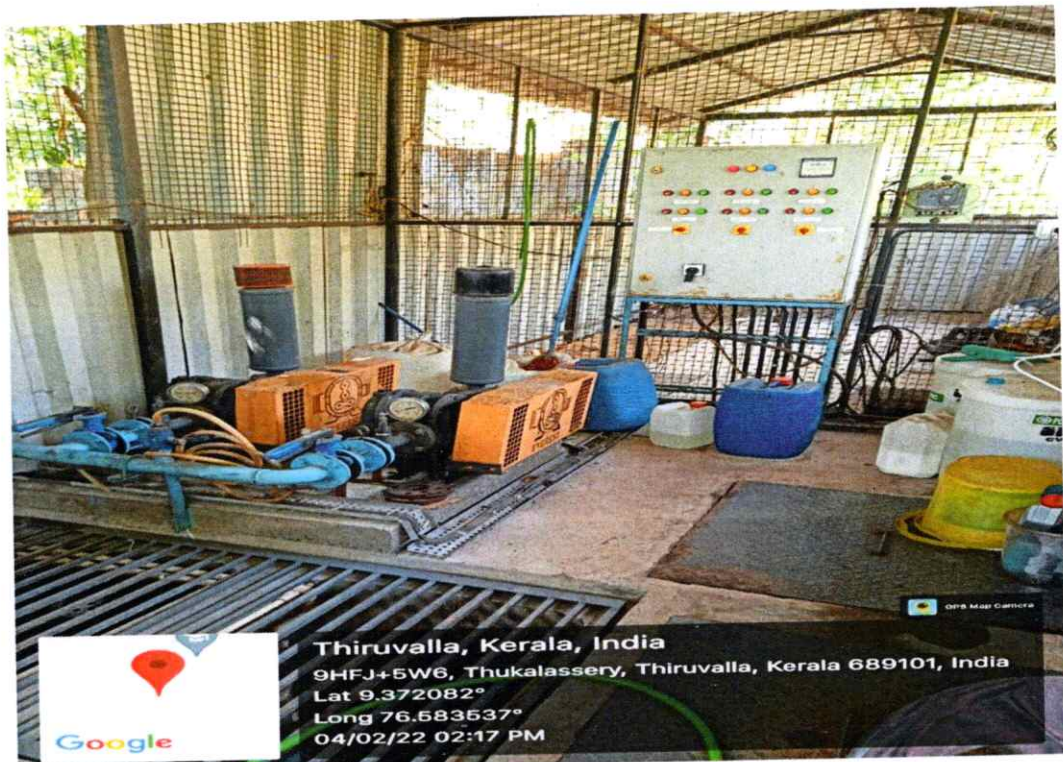
**BIOGAS PLANT (NEAR WOMEN'S HOSTEL)**



**INCINERATOR**



SEWAGE TREATMENT PLANT





# SEWAGE TREATMENT PLANT (STP)

Purpose	Conservation of water
Treatment Procedure	3 stages-Bio-filtration, Aeration & Oxidation
Chemicals Used	Caustic soda & Chlorine
Outcome	Filtered water
Tank Capacity	25,000 Litres



## SEWAGE TREATMENT PLANT SPECIFICATIONS