



## **St. Mary's College, Thrissur – 680020**

### **Management of Degradable and Non-degradable waste**

#### **Solid waste**

Wastes are segregated at the outset into recyclable waste, non-recyclable waste and biodegradable waste. Biodegradable wastes are put either to green or vermi compost pits and microbial enhanced manure, Vermi wash, Vermi compost so developed are sold under brand names MECSMC11, Vermiquil and Vermitol. There are two incinerators –one in the College and other in the hostel. and open burning is not done. Glass wastes are collected in glass pit The recyclable wastes, plastics and glass items are sold off to the local traders. A box is maintained in all floors to drop in used pens and pens are sold to scrap dealers. A small BSF Larvae Unit for food waste management is also set up. Department of Biotechnology funded by KSCSTE organized *Swastha Shudhi*- a campaign for effective remediation of solid waste and its management.

#### **Hazardous waste management**

Efficient management is ensured in handling hazardous wastes from the laboratories. Toxic wastes like Ethidium bromide are disposed only after treating with activated charcoal. Aqueous solutions containing  $<10\mu\text{g/ml}$  EtBr can be released to the drain while aqueous solutions containing  $>10\mu\text{g/ml}$  EtBr should be filtered or deactivated using charcoal and then the filtrate can be drained down. College plans to replace human mutagen, Ethidium bromide is replaced by SYBR green.

#### **Liquid waste**

The acidic and alkaline effluents are first diluted and mixed well. Then the pH is checked. To maintain neutral pH and if needed further treatment is done. Then the neutral effluent which is

discharged is less harmful. Students are trained to handle strong acids and other harmful chemicals to prevent any untoward incidents. Waste water is cleansed using charcoal, sand and brick powder and used to recycle ground water.

### **Waste recycling**

Enriched water from *Samrudhi* Fish Culture Unit is utilized for organic farming. Food waste is collected and processed as manure. Damaged machineries are upgraded to articles of use such as tables. Food waste from College and Hostel is utilized as input for biogas unit. Unused pages of assignment books are rebound into new books and distributed to the deserving. Paper pens and other utility articles are made from used papers.

### **Bio medical wastes**

Microbial cultures are treated with bleach or 70 percent alcohol and then decontaminated. Acidic and basic wastes are neutralized before disposing. Blood/ Pus test samples are destroyed under aseptic conditions in controlled environment.

### **E-waste management**

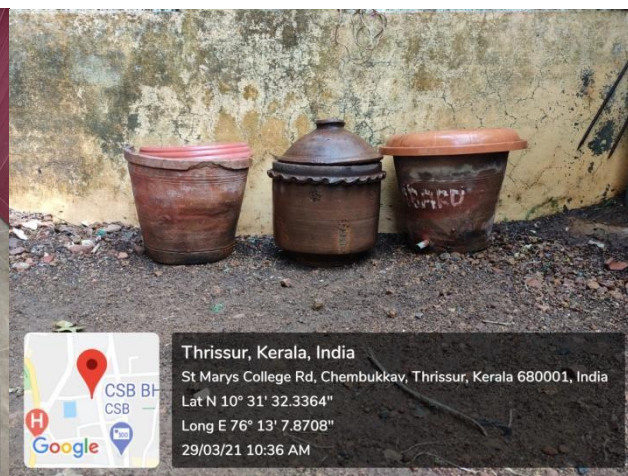
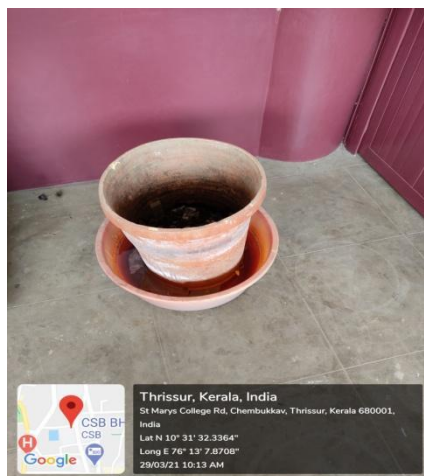
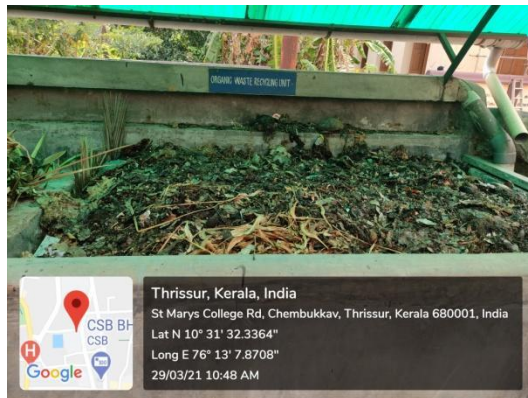
The damaged electronic products and other e waste is collected and sold off to the local traders for recycling. Upgradation to useful products ensures minimization of E waste. Best out of e Waste competitions are conducted to promote awareness to minimize e waste and develop utility articles. The computers and other items are upgraded to the maximum possible level and exchanged for new ones if not possible. The use of rewritable USB devices, additional hard disks to store excess data and use of e mails are promoted to regulate the waste. The College has a centralized intranet connection for dissemination of information and data transfer.

## Waste Management

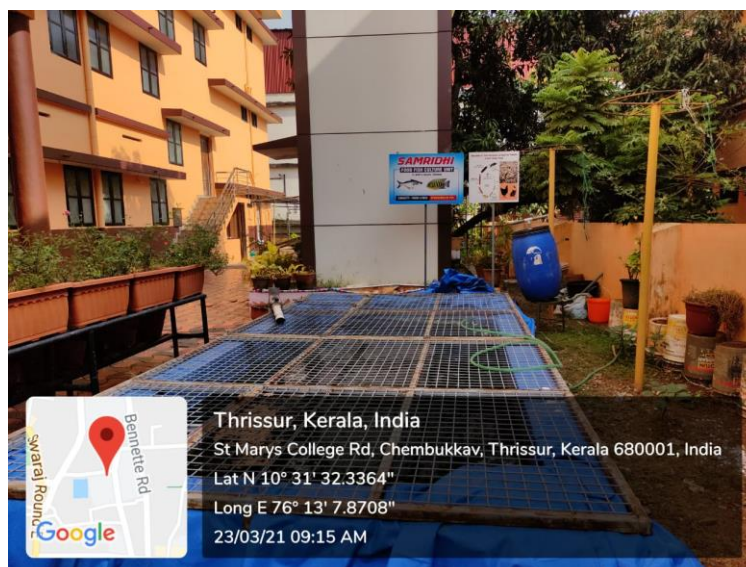
### Solid Waste Management- Vermi compost Unit



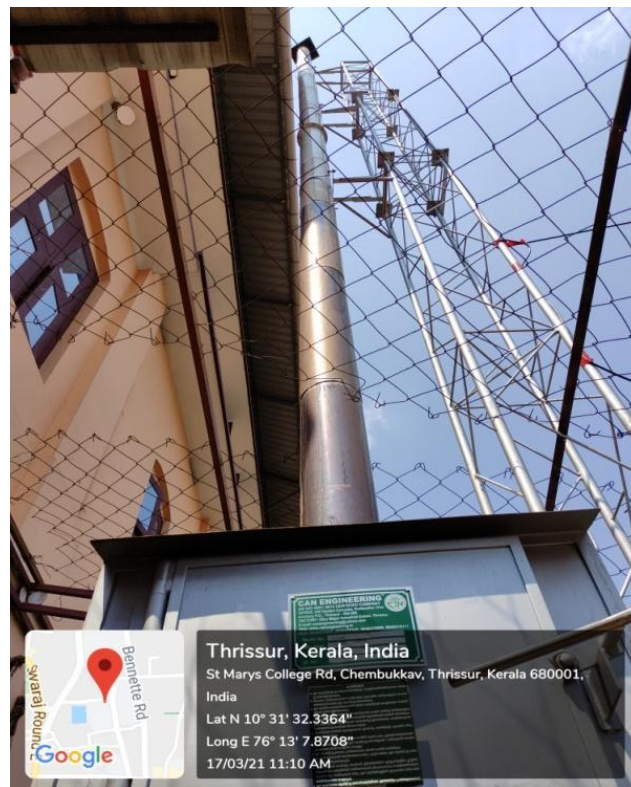




## Samridhi Fish Culture and Black soldier fly larva Waste management

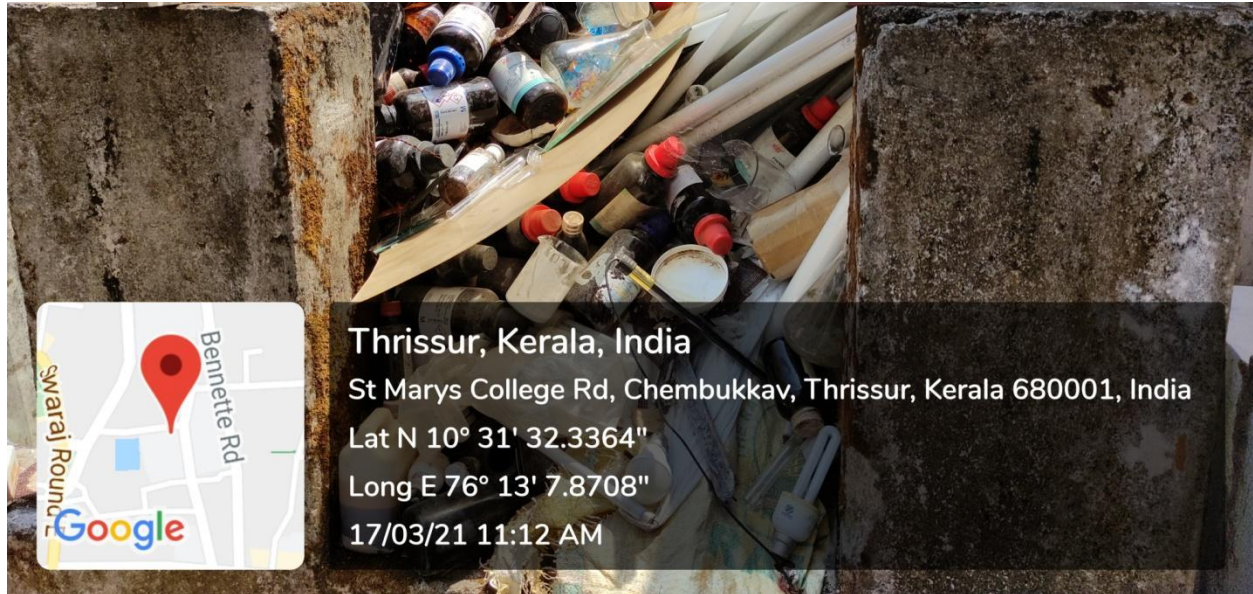


## Incinerator for solid waste disposal





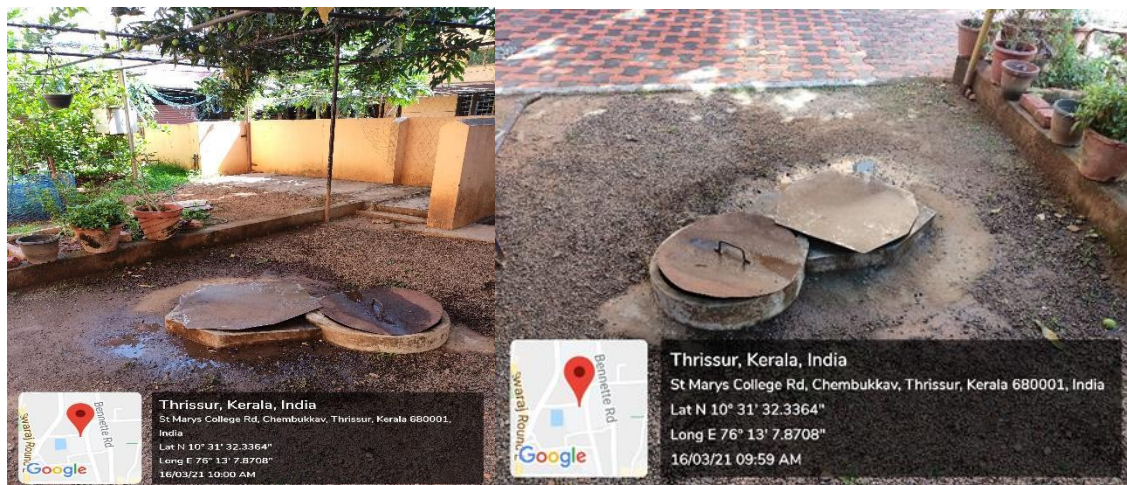
## Hazardous waste management



## Glass Pit

## Liquid waste management

### Biogas plant College Hostel



## Bio Medical waste

### Decontaminating Bacteria

### From Microbiology



### Decontaminating unit Biotechnology





## E Waste Management

### Students at the e-waste exhibition



### Students learning from experts on how to handle and dispose of the Common 'Plastic' and 'Electronic' wastes in daily life





## Re use of other waste materials

