

PROGRAMME REPORT

2018-2019

**Department of Biotechnology
Mar Ivanios College (Autonomous)**



Theme

‘Go-Green-Save Nature Save Future

The recent alterations in global climate are attributed primarily to the escalating anthropogenic greenhouse gas emissions, with a portion of these alterations traceable to solid waste disposal. The excessive load placed on natural ecosystems due to the intricate nature and volume of solid waste generated and discarded within municipalities, stemming from domestic activities of citizens and residents, poses significant adverse impacts on both ecosystems and human health. Implementing strategies for waste prevention and recycling stands as tangible methods to help alleviate the effects of climate change.

In alignment with the 'Go Green - Save Nature and Save Future' initiative, the Department of Biotechnology at Mar Ivanios College orchestrated various programs aimed at raising awareness regarding drinking water quality, public health concerns, and emphasizing the critical importance of solid waste management and environmental protection. These programs encompassed lectures, exhibitions, and training sessions specifically tailored around these thematic areas.

‘Due Drops’ - Drinking water analysis in Ambalathara, Poonthura on 19th

December 2018

Coordinator –Dr. Lini.N

Dr.Sheela A.M

Sponsored by the Pollution Control Board

Number of participant-100

The severe floods that struck Kerala on August 8th, 2018, impacting over 2.5 lakh individuals, represent one of the most significant natural calamities in the region's history. Such catastrophic events have enduring consequences on the natural environment and ecological equilibrium. Post-flood scenarios often lead to the contamination of private drinking water wells with bacteria and various pollutants, stemming from the influx of contaminants from inundated sewage systems. To address these concerns, a comprehensive well water analysis campaign was organized on December 19th, 2018, at Cordova Public School, Ambalathara, Poothura, in collaboration with the Pollution Control Board. The campaign involved the collection of water samples from diverse locations, subsequently subjected to rigorous analysis encompassing physical, chemical, and biological parameters.

The findings revealed a significant presence of faecal coliforms in a majority of the collected samples, indicating the extent of microbial contamination post-flood. Additionally, elevated levels of nitrate and nitrite were observed in several well water samples, highlighting potential health hazards associated with chemical pollutants. Participants were duly informed about the water quality standards for potable consumption, and those samples failing to meet these standards were flagged, accompanied by recommendations for alternative water sources. Public water supply was strongly advocated as a safer alternative, given its adherence to established drinking water purity guidelines. This initiative underscores the critical importance of post-disaster water quality monitoring and public awareness campaigns, aimed at safeguarding human health and promoting sustainable water management practices in flood-affected regions.

ORGANISING COMMITTEE

Patron and Manager

HIS BEATITUDE Moran Mor Baselios Cardinal Cleemis Catholicos
Major Archbishop-Catholicos of the Malankara Catholic Church

Chairman

Dr. K. I Georgee
Principal, Mar Ivanios College

Organising secretaries

Dr. Lini N.
Assistant professor, Department of Biotechnology, Mar Ivanios college

Dr. Sheela A.M.
Senior Environmental Engineer, Kerala State Pollution Control Board

Organizing Committee

Dr. Deepthy Alex
Assistant professor, Department of Biotechnology, Mar Ivanios College

Mr. T Sajeesh
Assistant professor, Department of Biotechnology, Mar Ivanios College

Dr. Hema Vipin
Guest Faculty, Department of Biotechnology, Mar Ivanios College

Mr. Abdul Kalam
Manager, Cordova school

Ms. Shakeela Beegam
Principal-Cordova Higher Secondary School

Mr. Vijayakumar P. S.
Principal-Cordova Public School



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Dew Drops

Drinking water quality monitoring camp

On 19 December 2018

Organised by

Department of Biotechnology
Mar Ivanios College, Trivandrum

In association with

Kerala State Pollution Control Board, Trivandrum
Cordova school, Ambalathara, Poonthura

Venue: Cordova public school

Time: 10:00 A.M.



**Training on Higher secondary students on drinking water analysis- at
Cordova public school on 19th December 2018**

Coordinator –Dr. Lini.N

Number of participant-30 Plus Two students

As an integral component of the skill development initiative, students from the Department of Biotechnology conducted a specialized training program on water analysis for higher secondary students at Cordova Public School, Poothura. The training encompassed hands-on instruction in the analysis of key parameters such as pH, alkalinity, turbidity, and the quantification of dissolved salts within water samples. Moreover, emphasis was placed on the significance of bacteriological analysis in water assessment, underlining the critical role of this aspect in ensuring water safety and quality. Through this program, participants gained practical insights and valuable skills essential for understanding and evaluating the various components of water quality assessment.



Public awareness campaign on waste management & environmental protection at Cordova public school, Ambalatha, Poonthura -5th January 2019-

Coordinator –Dr.Lini. N,

Dr.Sheela A.M (Scientist ,Pollution control Board)

Sponsored by the Pollution Control Board

Number of participant-200

In response to the identified presence of faecal coliforms, ammonia, and nitrate in water samples, an awareness program focusing on solid waste management was organized in the Poothura area. The program commenced with an inauguration by Mr. Abdul Kalam, Manager of Cordova Public School, and featured a presidential address delivered by Mr. Vijayakumar, also from Cordova Public School. The overarching theme emphasized throughout the event was the critical need to preserve nature for the sake of our collective future.

Key speakers included Dr. Siju N.S., an Assistant Professor from the Department of Community Medicine at the Medical College, who delved into the health implications of various pollutants, specifically stressing the importance of preventing the introduction of fecal coliforms into water sources to mitigate waterborne diseases. Mr. Jomon Joseph, Project Manager, shed light on the operational aspects of the solid waste management facility at Technopark Trivandrum, underlining its pivotal role in pollution prevention.

Practical insights were provided by Mr. Murugan, District Secretary of the Scrap Merchant's Association, and his team, who conducted a session on household waste segregation and advocated for the use of non-plastic and environmentally friendly alternatives. Dr. Sheela A.M., a Senior Engineer from the Pollution Control Board, led an interactive session highlighting the detrimental effects of environmental pollution, particularly showcasing the polluted conditions in the Poonthura area, and stressing the necessity of reducing plastic usage in daily life.

Additionally, Dr. Lini discussed the adoption of eco-friendly practices in everyday life. A noteworthy outcome of the program was the collective pledge taken by participants—comprising parents and school students—to adhere to the principles of Reduce, Reuse, and Recycle (3Rs) in their daily activities, thus contributing to sustainable environmental practices.

Programme Schedule

Inaugural Function

9.00AM to 10.30AM

Welcome Address - **Dr. Lini N, Assistant Professor**
Department of Biotechnology, Mar Ivanios College

Presidential Address- **Mr. Vijayakumar P. S.**
Principal, Cordova Public School

Inaugural Address - **Mr. Abdul Kalam**
Manager, Cordova Public School

Key note Address - **Dr. Sheela A.M.**
Senior Environmental Engineer,
Kerala State Pollution Control Board

Felicitation - **Ms. Shakeela Beegam**
Principal, Cordova Higher Secondary School
Mr. Sujith Sudhakar
Health Inspector, Poonthura

Mr. Murugan
Scrap merchant Association District Secretary,
Trivandrum

Vote of thanks - **Dr. Deepthy Alex**
Assistant Professor, Department of Biotechnology,
Mar Ivanios College

Lecture 1
10.30AM -11.00AM **"Water pollution and human health"**
Dr. Siju N.S.
Assistant professor, Department of community
medicine, Medical college Trivandrum

Tea break
11.00AM - 11.15AM

Lecture 2
11.15AM - 11.45AM **"Solid waste management"**
Mr. Jomon Joseph, Project manager,
Hitech Biofertilizers India, Technopark, Trivandrum

Practical session
11.45AM - 12.30AM **"Effective segregation of house hold waste
and plastic to make it more eco- friendly"**
Mr. Murugan,
Scrap Merchant Association District Secretary,
Trivandrum

Interactive session
12.30 -12.45PM **Prevention of Environmental Pollution.**
Dr. Sheela A.M.
Senior Environmental Engineer, PCB, Trivandrum

Valedictory function
12.45PM - 1.00PM



Public awareness campaign on
Waste management & Environmental protection
On 5th January 2019

Organised by
Department of Biotechnology

In association with
Kerala State Pollution control board, Trivandrum
Cordova school , Ambalathara ,Poonthura

Venue: Cordova public school
Time: 9.00 AM to 12.30 PM



**Training on ‘Solid waste management ‘at Technopark, Trivandrum on
25th January 2019**

Coordinator –Dr.Lini.N

Dr.Deepthy Alex

Number of participant-40

Department of Biotechnology in association with N.S.S and environmental club organised a one-day training programme on solid waste management at Technopark Trivandrum. The programme was to study the solid waste management and zero garbage plan in Technopark. Forty students representing were participated in this programme. The training curriculum primarily centred around the efficient segregation of biodegradable and non-biodegradable waste, alongside education on the concepts of reuse and recycling, particularly concerning plastic waste. Biodegradable waste underwent processes for biogas production and composting, contributing to sustainable waste management practices. Non-biodegradable waste was systematically collected for recycling purposes. An integral part of the training involved hands-on exposure for students to a plastic shredding unit, providing practical insights into waste processing techniques. This experiential learning opportunity served to enlighten participants about the critical importance of waste management, fostering a sense of responsibility and commitment towards environmental conservation. Encouraged and inspired by the training, the students pledged to initiate positive changes within their community. They took the initiative to monitor waste management practices within the campus and embarked on a mission to transform the Mar Ivanios campus into a model of excellence in waste management, setting a precedent for societal reform.

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Assistant professor, Department of Biotechnology, Marivanios College, Trivandrum

Dr. Hema Vipln,
Guest Faculty, Department of Biotechnology, Mar Ivanios College, Trivandrum

Dr. C. Suju Skaria,
Assistant professor&Head, Department of Botany, Mar Ivanios College, Trivandrum

Dr. Suboj Babykutty,
Assistant professor, Department of Zoology, Mar Ivanios College, Trivandrum

Dr. Daisy Samuel,
Assistant professor, Department of Commerce, Mar Ivanios College, Trivandrum



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*Save nature
Save future*

Training on Solid Waste Management

On 25th January 2019

Organised by

Department of Biotechnology

In association with

NSS Marivanios Unit

Nature club Marivanios Unit

Environmental Club Marivanios Unit

Venue : Solid Waste Management Facility

Techno Park

Time: 10.00 AM to 12.30 PM

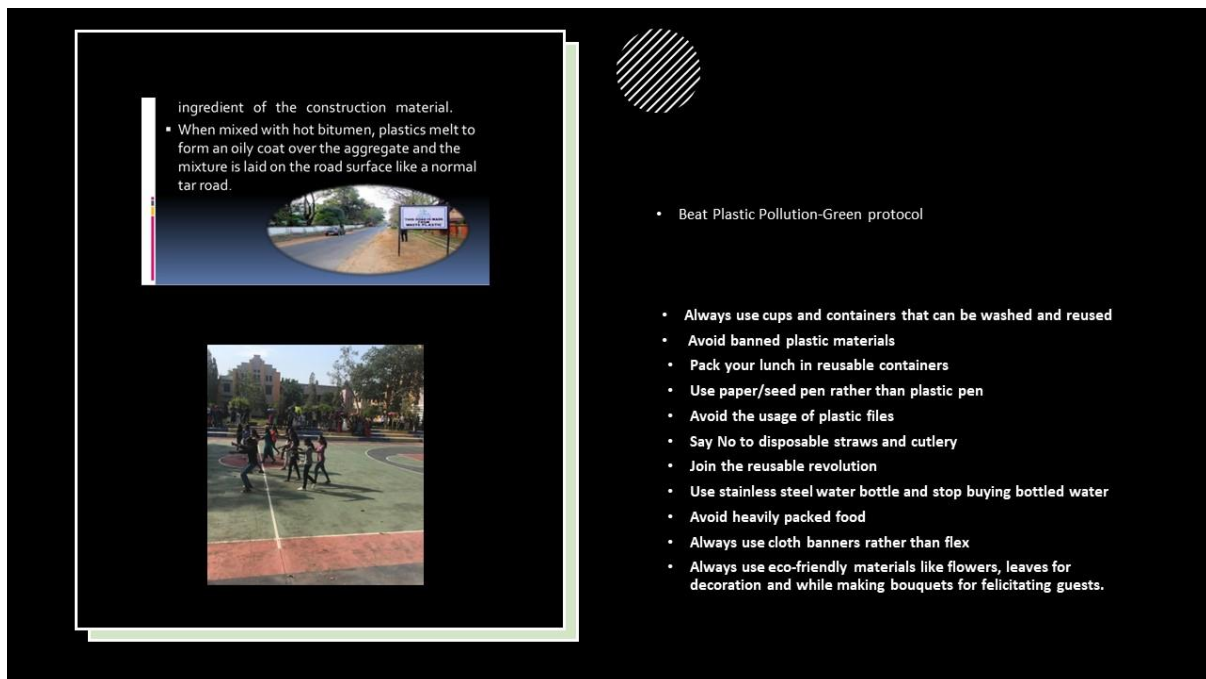


Flag Mog on creating awareness of the importance of a clean campus.

14th February 2019



Coordinator –Dr. Lini.N

To raise awareness about plastic pollution and promote a green campus environment, students from the Department of Biotechnology initiated a campaign across every class at Mar Ivanios College. The primary aim was to emphasize the significance of using eco-friendly products and adopting sustainable practices. To effectively engage with fellow students, the Department of Biotechnology organized a flag march and awareness program centered around the importance of creating a green campus.



ingredient of the construction material.

- When mixed with hot bitumen, plastics melt to form an oily coat over the aggregate and the mixture is laid on the road surface like a normal tar road.



- Beat Plastic Pollution-Green protocol
- Always use cups and containers that can be washed and reused
- Avoid banned plastic materials
- Pack your lunch in reusable containers
- Use paper/seed pen rather than plastic pen
- Avoid the usage of plastic files
- Say No to disposable straws and cutlery
- Join the reusable revolution
- Use stainless steel water bottle and stop buying bottled water
- Avoid heavily packed food
- Always use cloth banners rather than flex
- Always use eco-friendly materials like flowers, leaves for decoration and while making bouquets for felicitating guests.

State level seminar on ‘Solid Waste Management and Environmental Protection’ on 15th February 2019- Sponsored by Kerala State Council for Science Technology and Environment

Coordinator –Dr. Lini.N

Number of participant-180

The State Level Seminar on 'Solid Waste Management and Environmental Protection,' sponsored by the Kerala State Council for Science Technology and Environment, was held on February 15th, 2019. The seminar aimed to address critical issues surrounding waste management and environmental conservation, with a focus on fostering sustainable practices.

Inaugural Session:

Dr. T.N. Seema, Vice Chairman and CEO of Haritha Mission, Kerala, graced the inaugural session. Dr. Seema emphasized the importance of cultivating a green campus and leading a clean life to preserve the environment. Her insightful address set the tone for the seminar, highlighting the urgency of addressing waste management challenges.

Key Sessions:

Mr. Jose Moondley: Director of Hitech Biofertilizer and Consultant to Suchitwa Mission. Mr. Moondley's session delved into innovative strategies for waste management, emphasizing the need for sustainable solutions.

Dr. Sheela AM: Senior Engineer at the Pollution Control Board. Dr. Sheela's session focused on the regulatory aspects of waste management and highlighted best practices for environmental conservation.

Mr. Murugan: District Secretary of the Scrap Merchant Association. Mr. Murugan conducted a practical demonstration showcasing the segregation of recyclable plastic, underlining the importance of responsible waste disposal

practices. The seminar attracted active participation from 180 attendees, including students from various colleges, research institutions, and different departments within Mar Ivanios College. Both students and faculty members from diverse backgrounds joined in, providing valuable insights and contributing to enriching discussions. The positive feedback from attendees underscored the seminar's success in fostering awareness and knowledge exchange.

Poster Session and Awards: A poster session was held during the seminar, showcasing innovative research and initiatives in waste management and environmental protection. Dr. Rachithamol from Jawaharlal Nehru Tropical Botanical Research Institute, Palode, received the prestigious first prize in the Best Poster Award, sponsored by the Department of Biotechnology, for her outstanding contribution to the field.



**Envirosafe 2019 -In association with Entrepreneurship club -Sponsored by
Haritha Mission Keralam on 15th February 2019.**

Coordinators –Dr.Lini.N Dr.Sarin Kumar (Convener ,ED club)

Number of participant-250

To conserve the beauty, resources, and habitability of the planet, it is important that our everyday decisions positively affect the planet. That is where eco-friendly products come in. They are both good for families and for the planet, and eco-friendly products provide consumers with the option to choose responsibility over frivolity. Envirosafe 2019, held on February 15th, 2019, was organized by the Department of Biotechnology at Mar Ivanios College in collaboration with the Entrepreneurship Club and sponsored by Haritha Mission Kerala. The event aimed to raise awareness about eco-friendly practices among 250 participants. Dr. Lini.N and Dr. Sarin Kumar coordinated the event. The main goal of Envirosafe 2019 was to emphasize the importance of protecting the environment through everyday decisions. Eco-friendly products were highlighted as key solutions that benefit both families and the planet, offering consumers responsible choices. The exhibition showcased various eco-friendly products and innovations.

The event also included an awards ceremony to recognize outstanding contributions:

Best Eco-friendly Product Award: Adarsh, Akshay, Edvin, Mridul, and Sanjay from S6 Biotechnology, for their innovative eco-friendly product.

Best Poster Award: Kesia Raj, Akhil A, and Anoop received prizes for their informative and visually appealing posters.

Best Presenter Award: Sabari Raj was acknowledged for his excellent presentation skills.

Haritha Mission Kerala presented the awards, highlighting their support for environmental initiatives. Envirosafe 2019 celebrated achievements in promoting eco-friendly practices and encouraged continued efforts in sustainability.



Best Eco-friendly product award to Sanjay et al. S6 Biotechnology by Dr.George, Principal,MIC.



Envirosafe 2019



Best Poster award, First price ,sponsored by Harithamission, Kerala is giving to Kasia Raj , 11 PG zoology by Mr.Janjeevan, Harithamission Consultant.



Poster award, second prize, sponsored by Haritha mission, Kerala is giving to Amal ,S4 Biotechnology by Mr.Janjeevan, Harithamission Consultant.



Best Presenter award to Sabari Raj, S4 B.com by Dr. Sarin Thomas, ED club Convener.

INQUIZITORS 2019- Interschool quiz competition on 19th January 2019 in memory of Dr. Thomson Kuruvila, Former Head, Department of Biotechnology- Sponsored by Ignite SSB academy.

Coordinator –Dr. Deepthy Alex

Number of participant-100

INQUIZITORS 2019 was an interschool quiz competition held on January 19th, 2019, in honor of Dr. Thomson Kuruvila, Former Head of the Department of Biotechnology. The event was generously sponsored by Ignite SSB Academy. Dr. Deepthy Alex served as the coordinator, overseeing the participation of 100 students. The competition saw 30 teams from various schools showcasing their knowledge and skills. Anoop A S and Nandan M.S. from GHHS Kulathummal, Kattakada, emerged as the winners, securing the first prize in this intellectually stimulating event.



Institute Visit

1. On February 12th, 2018, a visit was made to the DRDO Centre of Life Sciences in Coimbatore.
2. The Botanical Survey of India in Tamil Nadu was visited on February 13th, 2018.
3. A visit to the Milma Dairy in Ambalathara took place on November 26th, 2019.



Interdepartmental activity.

National workshop on animal cell culture

Date: November 27th, 2018

Participants: 15

Organized by: Department of Botany, Biotechnology, and Zoology.

The National Workshop on Advances in Cell Culture Techniques was held on November 27th, 2018, organized by the Department of Botany, Biotechnology, and Zoology at Mar Gregorios Hall, Mar Ivanios College in association with Kerala State Higher Education Council. The seminar was Funded by the DBT-STAR scheme. . The workshop aimed to provide a platform for researchers, academicians, and students to exchange knowledge, share insights, and discuss advancements in cell culture technologies.

REGISTRATION FORM

Name.....
Designation.....
Address.....
.....
Phone No.....
Email address.....

REGISTRATION INFORMATION

Registration Fees:
RESEARCH SCHOLAR - ₹ 7,500/-
FACULTY MEMBERS - ₹ 10,000/-

Accommodation will be arranged on payment basis.

Last date of registration -- 25 October 2019

Selection will be limited to the first 15 applications.

Contact Us

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PATRON AND MANAGER

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Cardinal Cleemis Catholicos**
Major Archbishop of Trivandrum

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National Workshop on Mammalian Cell Culture

(18 - 22, November 2019)



Department of Zoology, Botany and Biotechnology



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&

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