

# PCERP Seminar Proceedings Book 21 National Conference on

# ENVIRONMENTAL RE-ENGINEERING: SERIES 12 MITIGATING PLASTIC POLLUTION



Organized by
Mahatma Education Society's
Pillai College of Education & Research
Sector 8, Khanda Colony, New Panvel

In Collaboration with

**Soroptomist Welfare Association** 



#### **OUR MENTORS**

Dr. K. M. Vasudevan Pillai

Chairman & CEO Mahatma Education Society

Dr. Priam Pillai

COO, Mahatma Education Society

Dr. Daphne Pillai

Secretary Mahatma Education Society

Mr. Franav Pillai

Dep. CEO, Mahatma Education Society

### **EDITORIAL BOARD**

**EDITOR** 

**Dr. Sally Enos** 

Principal

Pillai College of Education & Research

New Panvel

ASSOCIATE EDITORS

Ms. Shruti Nair & Ms. Manju Vinish

Asst. Professors,

Pillai College of Education & Research,

New Panvel

#### **PUBLICATION OFFICE**

**Mahatma Education Society** 

Chembur Naka, Mumbai 400 071

PUBLISHED BY

Dr. Sally Enos, Principal

Pillai College of Education & Research, Khanda Colony, New Panvel(W)-410206

First Published: November 23

Edition: 1

Price: Rs. 450/-

ISBN 978-81-964882-6-0

#### Copyright:

The facts and figures stated, conclusions reached and views expressed in different contributions are of the contributors' concern and should not be attributed to the Editor of the Book or to Pillai College of Education & Research, Panvel.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means without the prior permission in writing of MES' Pillai College of Education & Research, Panvel.

#### **Vision & Mission of the Institution**

# Vision

"To foster positive attitudes
and ideals to be socially
responsible and competent
teacher with individual
identities in order to enable
the student teachers to
translate great ideas into
good actions"

#### **Mission**

"To promote purposive
education through
globalization of mind and
society and using
education for value
transmission in order to
enable the student teacher
to perform effectively
different roles as a teacher
in the present society."

#### **Objectives of the Institution**

- *To prepare humane professionals by enhancement of the heart and soul.*
- To prepare the Student teachers to perform effectively different roles expected in changing global Scenario.
- To empower Student teachers with competencies required for professional growth.
- To develop attitude of Professionalism by inculcating Dedication, Commitment, Accountability and Professional Ethics.
- To foster virtues like Sincerity, Sympathy, Gentleness, Modesty, Humility, Compassion, Courtesy, Co-Operation, Fair play, Self Esteem Self-Control and Truthfulness.
- To develop Sensitivity towards Society related issues and concerns.
- To encourage student teachers to apply the knowledge creatively to relevant situation.
- To develop Leadership Competencies to plan, organize and conduct various Educational activities.
- To prepare humane professionals by enhancement of the heart and soul.
- To develop an appreciation of the role of the teachers in the prevailing socio cultural and political context in educational system.
- To provide avenues to the student teachers for exchanging ideas, raising issues and discussing themes and problems.
- To create environmental consciousness and concern among the student teachers.

# **Core Practices of the Institution**

- Social commitment
- Global mindedness
- Value transmission
- Environmental consciousness
- Reflective Approach
- *Integrating Technology*
- Professionalism

# **Our Patrons**



D<sub>R.</sub> K.M. Vasudevan Pillai

Chairman and CEO

Mahatma Education Society



 $D_R$ . Daphne Pillai Secretary Mahatma Education Society



 $D_{R.}$  Priam Pillai COO Mahatma Education Society



 $D_R$ . Franav Pillai  $\begin{tabular}{ll} $Deputy\ COO$ \end{tabular}$  Mahatma Education Society

# **ADVISOR**



D<sub>R</sub>. Sally Enos

Principal, PCER- Panvel

#### **CONVENORS**

Asst. Prof. Ms. Shruti Nair PCER, Panvel Asst. Prof. Ms. Manju Vinish
PCER, Panvel

# **Co-ordinating Committee**

Asst. Prof. DR Bhavna Dave

Asst. Prof. DR Geeta Thakur

Associate. Prof. DR Saraamma Mathew

Asst. Prof. DR Jiji Sahaya

Lecturer. Ms. Bhanu Yadav

Asst. Prof. Ms. Darshana Jadhav

Lecturer. Ms. Isha Dhody

Asst. Prof. Ms. Pradnya Jadhav

Asst. Prof. Ms. Namrata Saxena

Asst. Prof. Mr. Gyanendrapratap Singh

# **Table of Content**

Preface	1
Our Institution	2
Inaugural Session	3
Key Note Address	5
<ul><li>Speaker 1: Dr. Roshan Rai</li><li>Speaker 2: Lisbon Ferrao</li></ul>	<i>5</i> 8
Institutional Social Responsibility as an Avenue to Create Awareness about Mitigating Plastic Pollution in Higher Education Institutions	11
DR. Vidhya Satish and Ms. Kavitha Krishnamurthy	
Womb Intruders: A Case Study on Microplastics' Influence on Human Placenta Ways to Mitigate	and 19
• Asst. Prof. DR. Jiji Sahaya and Ms. Umaima Rafique Dhature	
Awareness on Plastic Waste Disposal among Middle Stage Students	24
• Lecturer Ms. Bhanu Yadav and Ms. Sophiya Begum	
From Trash to Treasure: Analysing the Impact of Project Mumbai on Plastic Pollution Mitigation	31
• Asst. Prof. Ms. Darshana Jadhav and Ms. Shikha Shahu	
A Step towards Mitigating Plastic Waste- Project Baala: A Case Study	35
• Lecturer Ms. Bhanu Yadav and Ms. Seemran Sahaani	
Role of technology in developing sustainable plastic alternatives	46
Asst. Prof. DR. Jiji Sahaya and Ms Rutuja Lad	
Transforming Plastic Waste into Opportunity: The Indian Tribal Communities	50
Asst. Prof. DR Jiji Sahaya and Ms. Ruchita kadu	
A Case Study on Bisleri- 'Bottles for Change' an initiative by Bisleri Trust.	55
• Asst. Prof. Ms. Shruti Nair and Ms. Niyati Naresh Takle	
An Investigation of Students' Awareness Regarding Strategies for Mitigating Pla Waste	istic 59

• Asst. Prof. DR Jiji Sahaya and Ms. Neha Maurya

Awareness about Plastic Waste Reduction through Policies and Government Legislation	65
Asst. Prof. Ms. Darshana Jadhav and Ms. Madhuri Mishra	
A study of perception on plastic free alternatives of middle school students.	72
• Asst. Prof. Ms. Darshana Jadhav and Ms Komal Mane	
Plastic Pollution: The Silent Destroyer of Nature	<b>7</b> 9
Asst Prof Vineeta Rai & Asst Prof Kinkini Dutta	
Advanced Recycling – Pros and Cons	84
• Lecturer Ms. Bhanu Yadav and Ms Gayatri Roy	
Comparative Study of Plastic waste Upcycling practices by Adults in Rural at Urban Areas of Navi Mumbai.	nd 89
• Asst. Prof. Ms. Shruti Nair, Ms. Divya Samota and Ms Sandhya Sutar.	
A Case Study on ''Give Plastic and Take Gold''- An Environment Friendly In of Jammu & Kashmir Gram Panchayat	nitiative 96
• Lecturer Ms. Bhanu Yadav and Ms. Bhumija Das	
Techniques and ideas for the management of plastic waste for a sustainable environment	102
• Asst. Prof. Asmita Wewhare	
Gamification in Promoting Pro-Environmental Behaviors: A Case Study of 'C Heroes' by Dropledge	Ocean 110
• Asst.Prof. Ms. Manju Vinish and Ms Priya Menon	
Awareness of Plastic Additives, With Emphasis on Bisphenol a (BPA) in Cons Products among Student teachers	sumer 115
• Asst. Prof. Ms. Shruti Nair and Ms. Prajakta More	
Analysing the Strategies employed by adults to Minimize Plastic Usage	121
• Asst. Prof. Ms. Manju Vinish and Ms. Nikita Jadhav,	

#### **Preface**

In today's rapidly evolving world, our environment faces a critical challenge—plastic pollution. The need to address this global concern prompted the convening of the National Conference on Environmental Re-engineering: Mitigating Plastic Pollution. This pivotal gathering brought together experts; environmental enthusiasts passionate about crafting innovative solutions to combat the devastating effects of plastic pollution on our planet.

The conference served as a nexus for dynamic discussions, where a diverse array of voices and perspectives converged. It was a forum not only for raising awareness but also for fostering a collective commitment towards re-engineering our environmental practices.

This book stands as a testament to the invaluable insights and robust discourse that unfolded during the conference. Within these pages lie a treasure trove of ideas, strategies, and research findings presented by esteemed speakers and dedicated participants. From examining the multifaceted impact of plastic pollution on ecosystems to exploring groundbreaking technological advancements and policy frameworks, this compilation encapsulates the comprehensive scope of discussions that took place. It serves as a reservoir of knowledge, aiming to inspire action and ignite a wave of transformative change.

We extend our deepest gratitude to all the contributors, attendees, and organizers whose passion and dedication made this conference a resounding success. It is our hope that the wisdom shared within this book will serve as a catalyst for collective efforts worldwide to mitigate plastic pollution and safeguard the environment for generations to come. As we navigate the complex landscape of environmental challenges, may these insights spark conversations, collaborations, and initiatives that extend beyond these pages, resonating in actions that contribute to a healthier, more sustainable world. Together, let us embark on this journey of environmental re-engineering, armed with knowledge, collaboration, and an unwavering commitment to creating a sustainable future.