

**SIES COLLEGE OF ARTS, SCIENCE AND COMMERCE (AUTONOMOUS),
SION WEST, MUMBAI - 400 022**

DEPARTMENT OF BIOTECHNOLOGY

A. Title of the Seminar/Workshop/Conferences:

BARC technologies for solid waste management through biological route

B. Background:

Proper management of waste is important for building sustainable and liveable cities, but it remains a challenge for many developing countries and cities. Areas with developing economies often experience exhausted waste collection services and inadequately managed and uncontrolled dumpsites. Thus, commemorating 75th Year of India's Independence, "Azadi Ka Amrut Mahotsav", Bhabha Atomic Research Centre (BARC), Mumbai jointly organized a webinar on "BARC technologies for solid waste management through biological route" with SIES College of Arts, Science & Commerce College (Autonomous), Mumbai (Sponsored by Department of Atomic Energy (DAE), Government of India)

C. Aims/Objectives:

The webinar had three eminent speakers enlightening the audience on different waste management topics. The main objective of the webinar series was to introduce the participants to:

1. Biomethanation technologies for processing cow dung to Biomass waste with reference to Nisargruna technology
2. Food Mile/water footprint of food
3. Different composting technologies for biodegradable waste with reference to Rapid composting technology of BARC

D. Location:

The program was conducted using the online platform MS Teams. It was followed by a question-answer session between the resource person and participants.

E. Target audience/participants with expected number:

64 Undergraduate and postgraduate students

F. Details of Sessions:

The session was held on Saturday, 28th August 2021 between 3:00 - 5:00 pm

G. Session and names of Resource Persons:

The webinar had three independent sessions delivered by eminent speakers:

Sr. No.	Title	Speaker & affiliation
1.	Overview of Biomethanation technologies for processing cow dung to Biomass waste with reference to Nisargruna technology	Dr. Sayaji Mehetre, <i>Scientific Officer F, Nuclear Agriculture Biotechnology Division, BARC, Mumbai</i>
2.	Food Mile water footprint of food	Dr. Sachin Mandavgane, <i>Associate Professor, Department of Chemical Engineering, VNIT, Nagpur</i>
3.	Overview of different composting technologies for biodegradable waste with reference to Rapid composting technology of BARC	Dr. Darshana Salaskar, <i>Scientific Officer E, Nuclear Agriculture Biotechnology Division, BARC, Mumbai</i>

H. Expected outcome:

The feedback of participants stated that they found the session to be immensely insightful and informative. The participants were made aware of recent topics like water foot-printing.

The program helped them to understand:

1. Water footprint of various commodities
2. Various biological technologies used for biodegrading wastes and biomass processing
3. Nisarguna Technology and Promoting sustainability and recycling to reduce waste



Dr. Tara Menon
Co-ordinator
Department of Biotechnology

28.08.2021

Annexures 1: Detail of the Resource persons

- Dr. Sayaji Mehetre has been working as a Scientific Officer at the Nuclear Agriculture and Biotechnology Division, BARC, Mumbai since 1999. His education qualification includes a PhD in Microbiology from Mumbai University in the year 2008. He completed his Masters in Agriculture from Mahatma Phule Agriculture University, Rahuri in 1996. He was a visiting Scientist at Northern Illinois University, United States of America (USA) during the year 2011- 2012. Sir, has about 50 research papers published journals of national and international repute and he has authored popular articles in national newspapers. Also, Dr. Mehetre is an editorial board member and reviewer of many scientific Journals. He has 03 patents to his credit and has developed 08 technologies which are widely used by industries and farmers across the country. He has been acknowledged by various awards like Government of India DBT-CREST Award (2011), Department of Atomic Energy (DAE) Group achievement Award (2010 & 2015) as well as Dr. E. J. Wevai Memorial Award (1995) as a university topper.
- Dr Sachin Mandavgane is an Associate Professor and Head of Chemical Engineering Department at the Visvesvaraya National Institute of Technology, Nagpur. He obtained his B. Tech degree in chemical engineering from LIT Nagpur in year 1999 followed by a Ph. D in chemical engineering from the same institute in 2008. His research specialization includes biomass and waste utilization, bio refinery, sustainable engineering and scientific validation of traditional sciences. He has the authored around 125 publications with 2450 citation and h-index 27. He has produced 9 PhDs and has 7 patents to his credit. He has also developed an innovative process of making light weight and thermal insulating construction material using paper mill waste. His technology of making ultra-fine powder neem bio pesticide is purchased by 20+ companies till now. He has designed and commissioned a potato peel biorefinery plant which is the first of its kind globally. His process of on-farm paddy straw digestion to manure has been successfully commercialized in West UP. He also offers consultancy to industries to perform Life Cycle Assessment. Dr. Sachin is an advisor (for Innovation) to corporate houses like Merino Industries Ltd and is a coordinator of Grassroot Innovation Center. He mentors startups like Sus-Tech Solutions working in the area of sustainably issues. He also offers a course ‘*Innovative Design*’ to nurture open and inclusive innovation. He is among the first few in India to develop a credit course on ‘Sustainable Engineering’.
- Dr. Darshana Salaskar joined Bhabha Atomic Research Centre in the year 1996. She completed her Masters in Biochemistry and Ph.D in Microbiology from Mumbai University. She is currently designated as Scientific Officer E in the Nuclear Agriculture and Biotechnology Division. Her area of research includes Environmental Microbiology, Bioremediation of heavy metals and waste management. She has 30 research publications, 2 book chapters and one technology on Rapid bio-composting which is published in the BARC website to her credit. She has received the Department of Atomic Energy, Group Achievement Award in the year 2017, for Excellence in Science, Engineering and Technology.

Annexures 2: List of Participants

Timestamp	Full Name
28/08/2021 17:19:49	Randeep Nain
28/08/2021 17:21:08	Jyothika Murugan
28/08/2021 17:21:23	Bhakti Jadhav
28/08/2021 17:21:24	Jennifer Francis Nadar
28/08/2021 17:21:36	Shweta Vishwakarma
28/08/2021 17:21:45	Makardhwaj Rajendra Narkar
28/08/2021 17:21:50	Jesal Mahendra Vora
28/08/2021 17:21:57	Sharanya Shankar
28/08/2021 17:21:58	Ramsha Shaikh
28/08/2021 17:22:01	MANALI SHAILESH PRADHAN
28/08/2021 17:22:06	Rithik Naidu
28/08/2021 17:22:26	KARISHMA MANOJ ANAM
28/08/2021 17:22:34	Tamanna Timir Mandal
28/08/2021 17:22:48	Aditya Ravi Shetty
28/08/2021 17:22:51	Bushra Khan
28/08/2021 17:23:02	Mansi Rawat
28/08/2021 17:23:41	Pooja Jain
28/08/2021 17:23:53	Jemema Agnes Tripena Raj
28/08/2021 17:24:11	Mahek Jatin Parmar
28/08/2021 17:24:23	Siddharth mudliyar
28/08/2021 17:24:33	Alex Jose
28/08/2021 17:24:35	Sayli Keshav Dabhade
28/08/2021 17:24:41	Krishna Poliseti
28/08/2021 17:25:00	Niveditha Narayanan
28/08/2021 17:25:02	Chirag Mansukh Kothari
28/08/2021 17:25:12	Sheikh Ali Ahmed
28/08/2021 17:25:15	Shilpa Sivadas
28/08/2021 17:25:18	Susan Samuel Martin
28/08/2021 17:25:23	Liza Fernandes
28/08/2021 17:25:23	Kunali Ajay Ambavale
28/08/2021 17:25:23	Omkar Vijay Yadav
28/08/2021 17:25:24	Kajal Chandrajit Yadav
28/08/2021 17:25:24	Sakshi Gupta

28/08/2021 17:25:26	Grishma Pillai
28/08/2021 17:25:27	SHAIKH SIMRAN HUSSAIN
28/08/2021 17:25:30	Harshitha Sunder Shetty
28/08/2021 17:25:35	Manika Sawant
28/08/2021 17:25:45	Harikrishna Rajendr Salla
28/08/2021 17:25:48	Aarathi kurup
28/08/2021 17:25:48	Niharika Milind Rahate
28/08/2021 17:25:53	Neha yadgiri appani
28/08/2021 17:25:59	Reshmi Mukul Das
28/08/2021 17:26:06	Bhagyashree Ramachandra Gubber
28/08/2021 17:26:10	Ayesha Ravindra Shedge
28/08/2021 17:26:13	Amisha Bodke
28/08/2021 17:26:36	Diksha Gajanan Shetti
28/08/2021 17:26:58	Manasa Avanganti
28/08/2021 17:26:58	SAYALI JOSHI
28/08/2021 17:27:00	Sneha Anbalagan Dever
28/08/2021 17:27:07	Riddhi Vikas Mhatre
28/08/2021 17:27:19	Sonali Rajesh Jaiswal
28/08/2021 17:27:27	Shaikh Amaan Ansar
28/08/2021 17:27:30	Nair Haritha Ramesan
28/08/2021 17:27:44	Ankita Tharakan
28/08/2021 17:27:53	Anandita Ghorpade
28/08/2021 17:28:05	Gupta Sheetal Mahesh
28/08/2021 17:28:05	Rukmani Ramsingasan Bhagat
28/08/2021 17:29:02	Khan Yusra Mohammed Asif
28/08/2021 17:29:19	Mamta Sathaiyah Yarukala
28/08/2021 17:29:24	NIKITA LAVKUSH MISHRA
28/08/2021 17:30:30	Omkar Sundeep Wakale
28/08/2021 17:30:34	Shaikh Misba Mohd Farid
28/08/2021 17:30:38	ONKAR HARIPANT KARAJGIKAR
28/08/2021 17:32:29	Manav Patel
28/08/2021 17:37:13	Neha Sandeep Gaonkar
28/08/2021 17:44:33	Vaishnavi Mahalingam

Annexures 3: Photographs of Seminar/Workshop




**COMMEMORATION 75TH YEAR OF INDIA'S INDEPENDENCE
AZADI KA AMRUT MAHOTSAV**

WEBINAR ON
"BARC technologies for solid waste management through biological route"

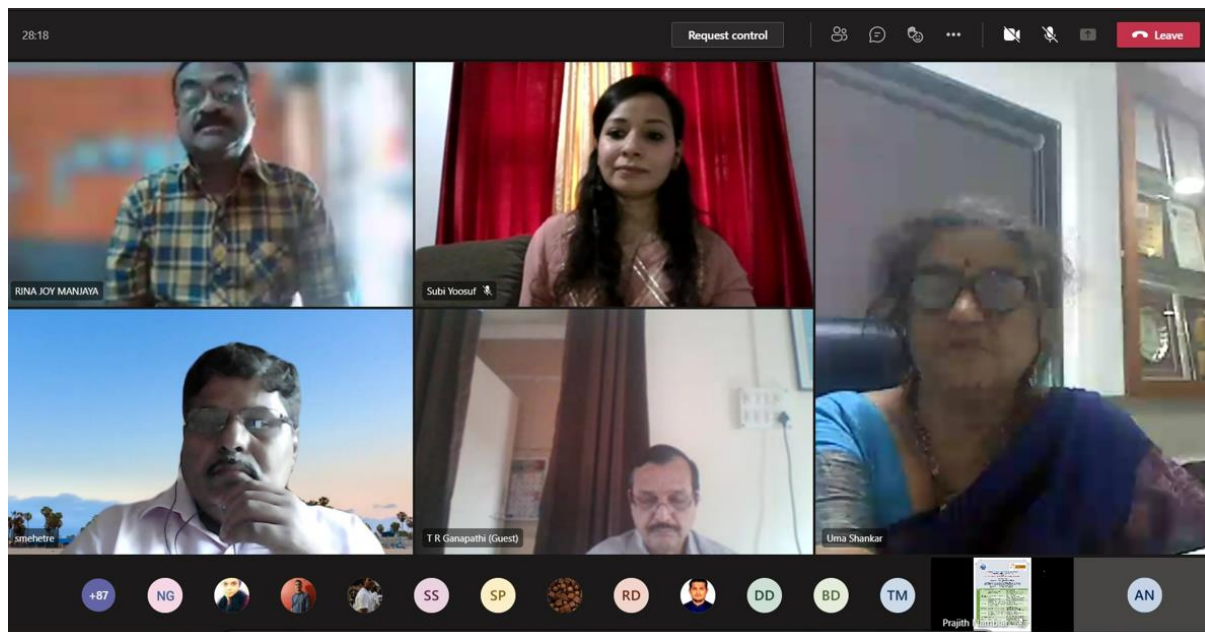
Jointly Organised By
Bhabha Atomic Research Centre (BARC), Mumbai
&
SIES College of Arts, Science & Commerce College (Autonomous), Mumbai
(Sponsored by Department of Atomic Energy (DAE), Government of India)

Participants: Scientists, Professors, Students
Date: 28th August 2021, 3 pm to 5 pm
Venue/Mode: Video Conferencing
Web Link: MS Teams

[Click here/scan to register](#)



Sr No	Time	Agenda/Topic	Speaker
1	3.00-3.15 pm	Brief introduction about the programme (5 min)	Dr. J. G. Manjaya Nuclear Agriculture & Biotechnology Division, BARC, Mumbai, Convenor.
		Welcome address to the Conference (5 min)	Dr. T. R. Ganapathi Head, Nuclear Agriculture & Biotechnology Division, BARC, Mumbai
		Introductory remark (from SIES college) (5 min)	Dr. Uma Shankar/Dr. Tara Menon, Principal/Vice-Principal, SIES College
2	3:15-3:45 pm	Overview of Biomethanation technologies for processing cow dung to Biomass waste with reference to Nisargruna technology	Dr. Sayaji Mehetre Nuclear Agriculture & Biotechnology Division, BARC, Mumbai
3	3.45-4.15 pm	Food Mile / water footprint of food	Dr. Sachin Mandavane, Associate Professor Department of Chemical Engineering, VNIT, Nagpur
4	4.15-4.45 pm	Overview of different composting technologies for biodegradable waste with reference to Rapid composting technology of BARC	Dr. Darshana Salaskar Nuclear Agriculture & Biotechnology Division, BARC, Mumbai
5	4.45- 4.55 pm	Remarks by	Dr. Tapan Kumar Ghanty, Assoc. Director, Bio-Science Group, BARC, Mumbai
6	4.55-5.00 pm	Remarks and thanks	Dr. Uma Shankar/ Dr. Tara Menon Principal/Vice-Principal, SIES College, Mumbai
7	5.00-5.15 pm	Vote of Thanks by	Dr. B. K. Das Nuclear Agriculture & Biotechnology Division, BARC, Mumbai, Co-convenor



BARC technologies for solid waste management through biological route_2020-2021

Request control

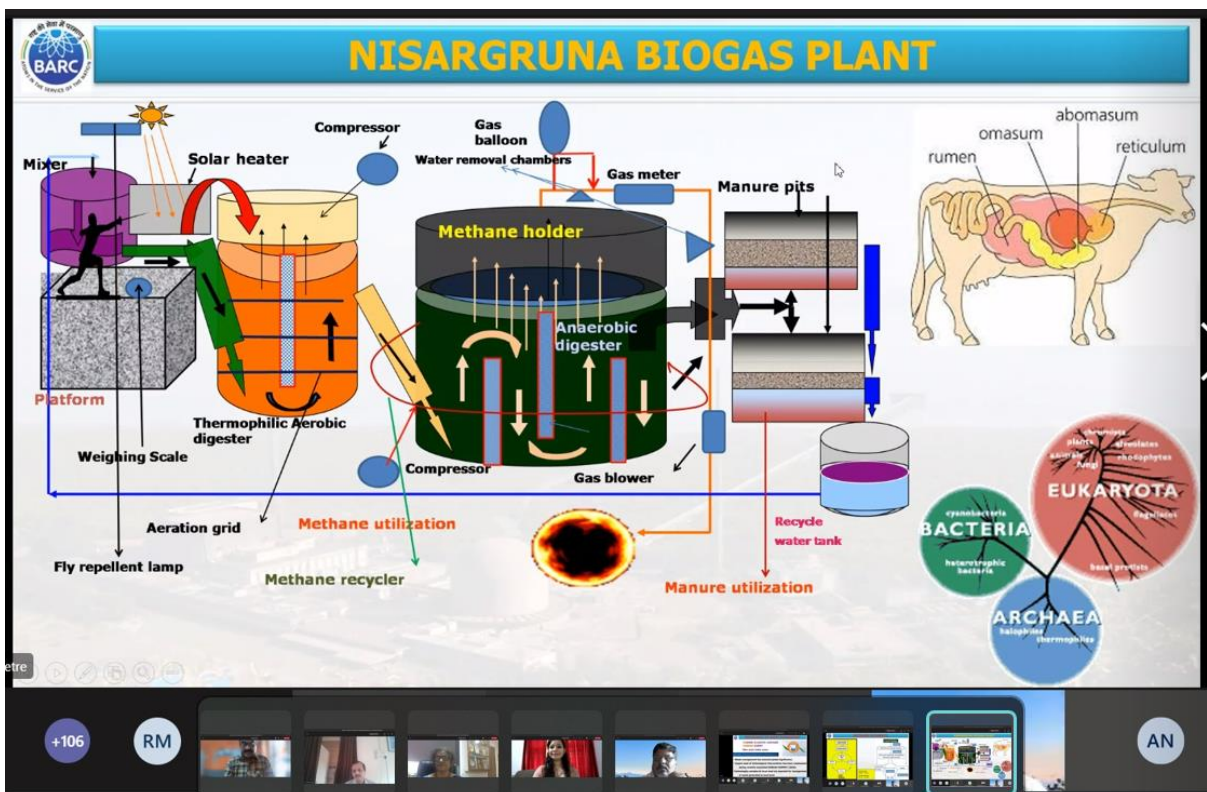
IMPORTANCE OF WASTE MANAGEMENT

VAISHVIK BHARATIYA VAIGYANIK (VAIBHAV) SUMMIT
 वैश्विक भारतीय वैज्ञानिक सम्मेलन

Global Summit of Overseas and Resident Indian Scientists/Academicians



- Waste management has assumed global significance.
- Urgent need of technological interventions has been emphasised during recently concluded VAIBHAV SUMMIT (2020).
- Technologies suitable for local need are essential for management of waste generated at local level.

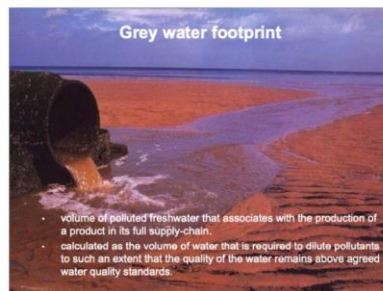




Overview of different composting technologies for biodegradable waste with reference to rapid composting technology of BARC

Darshana Salaskar, Poulomi Mukherjee and
Prasun Mukherjee
NA&BTD, BARC

1



Sachin Mandargane (Guest)

+100

YK

DU

TM

DD

Subi Yousuf

Prajith Nambiar

TG

T R Ganapathi (Guest)

SM

Sachin Mandargane (Guest)

AN

Dr. Tara Menon
Co-ordinator
Department of Biotechnology

28.08.2021