



# **3<sup>rd</sup> International Conference on Higher Education Institute Challenges Solutions for Sustainable Development Goals 2024**

## **SDG 16 Report - Clean Water and sanitation**



Organized by

**Centre for Research in Environment, Sustainability Advocacy and Climate  
CHange (REACH),**

Directorate of Research, Directorate of Research, SRMIST

In Association with

**National institution for Ocean Technology,**

Chennai



<b>S.no</b>	<b>Convener and co convener category</b>	<b>Name and affiliation</b>
1	Convener	<b>Dr. Paromita Chakraborty</b> Professor & Head, Centre for Research in Environment, Sustainability Advocacy and Climate CHange (REACH), Directorate of Research, SRMIST.
2	Convener	<b>Dr. Purnima Jalihal</b> Scientist G & Head, Energy and Fresh Water National Institute of Ocean Technology, Chennai.
3	Co-Convener	<b>Dr. S. Prabhakar</b> Adjunct Faculty, Department of Chemical Engineering, SRMIST.
4	Co-Convener	<b>Dr. Vishali S</b> Associate professor & Head, Department of Chemical Engineering, SRMIST.
5	Co-Convener	<b>Dr. Prasanna K</b> Associate Professor, Department of Civil Engineering, SRMIST
6	Co-Convener	<b>Dr. Muthamilselvi P</b> Assistant Professor, Department of Chemical Engineering, SRMIST
7	Co-Convener	<b>Dr.G.Vanthana Sree</b> Scientist, REACH, Directorate of research, SRMIST
8	Coordinator	<b>Dr. Sachikanta Nanda</b> Associate Professor, Department of Civil Engineering, SRMIST



## 3RD INTERNATIONAL CONFERENCE

INTERNATIONAL CONFERENCE ON  
INNOVATIONS IN WATER TREATMENT AND DESALINATION  
SUSTAINABLE SOLUTIONS FOR SEAWATER UTILIZATION

*Organized by*

CENTER FOR RESEARCH IN ENVIRONMENT, SUSTAINABILITY ADVOCACY  
AND CLIMATE CHANGE (REACH)

03 - 05 DECEMBER 2024

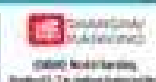
SDG 6: CLEAN WATER AND SANITATION



### ABOUT THE DEPARTMENT

The Center for Research in Environment, Sustainability Advocacy, and Climate Change (REACH) at SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, fosters interdisciplinary research in environmental sustainability, climate change, and social development. Aligned with the UN's Sustainable Development Goals, REACH focuses on four key areas: Environment: Air pollution, waste management, GIS, water and land resources, and environmental health; Sustainable Development: Policy frameworks, outreach programs, and waste recycling; Advocacy: Community service, environmental ethics, conferences, and advisory services; Climate Change: Addressing drought, climate adaptation, and atmospheric transport. REACH promotes innovative solutions to global environmental challenges, translating research into tangible societal benefits.

The National Institute of Ocean Technology (NIOT) is an autonomous body under the Ministry of Earth Sciences, Government of India. Established in 1993, NIOT focuses on the development of ocean technology and research to harness ocean resources in an environmentally sustainable manner. Its activities span across diverse areas such as deep-sea exploration, renewable ocean energy, desalination, coastal protection, and marine pollution control. SDG 6 – Clean Water and Sanitation: NIOT's work in seawater desalination helps provide clean drinking water to coastal and arid regions, particularly addressing water scarcity.



## ORGANIZING COMMITTEE



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Professor & Head,  
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## STUDENT REPRESENTATIVES



Ms. Sakshi Sonar  
Research Scholar



Mr. Akshay K  
Research Scholar

## CO-CONVENOR & CONTACT

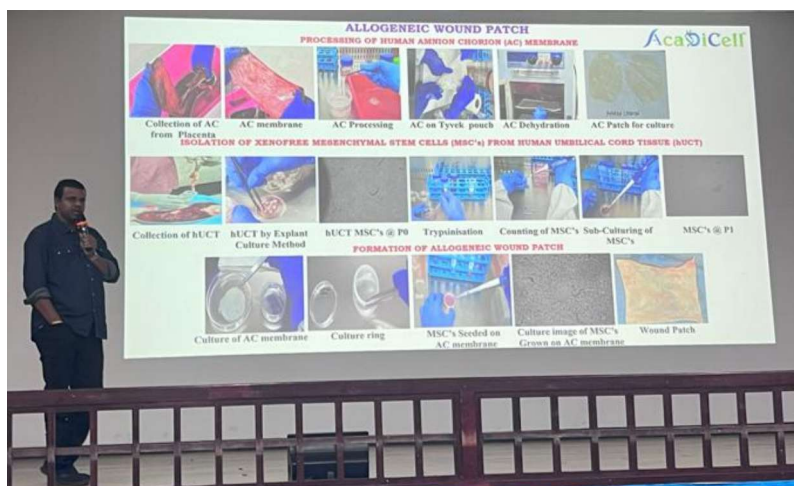
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The SDG-6 sessions, part of the 3rd International Conference on Higher Education Institutes' Challenges & Solutions for Sustainable Development Goals 2023, took place from November 3rd to 5th, 2023, in a hybrid mode under the title "**Innovations in Water Treatment and Desalination: Sustainable Solutions for Seawater Utilization**"

The SDG-6 activities included three key sessions, which featured invited talks, a panel discussion (held on December 4th), and additional invited talks (on December 5th). These sessions were conducted at the Dr. T P Ganesan Auditorium, Mini Hall 1. The event schedule was as follows:

#### **Invited Talks - Morning Session, 4<sup>th</sup> December 2024**

**Prof. Paromita Chakraborty**, Professor and Head of the Centre for Research in Environment, Sustainability Advocacy, and Climate Change (REACH) at SRM Institute of Science and Technology, commenced the session by welcoming the participants. The plenary session was led by **Dr. Daniel Snow**, Professor and Director at the University of Nebraska, USA, followed by a series of invited lectures. Speakers included **Dr. G. Arthanareeswaran**, Professor of Chemical Engineering at NIT Trichy; **Dr. S. R. Marigoudar**, Scientist E at the National Centre for Coastal Research; **Dr. Elango Lakshmanan** and **Dr. Pawan Kumar Labhshetwar**, Professors of Civil Engineering at IIT Madras; **Dr. Magdalena Urbaniak**, Associate Professor at the University of Lodz, Poland; **Dr. A. K. Ghosh**, Senior Scientist in the Desalination & Membrane Technology Division at Bhabha Atomic Research Centre; and **Mr. Pankaj Kumar**, National Project Coordinator at UNIDO Regional Office in India. Their presentations provided insights into various international water treatment techniques, emphasizing how effective purification not only improves public health but also protects the environment by reducing pollution and conserving water resources, essential for sustainable water management.



Collective images for SDG 6 events

### Panel Discussion - "Balancing Life Above and Below the Sea"

The second session featured a panel discussion titled “**Balancing Life Above and Below the Sea**” focusing on the interconnection between terrestrial and marine ecosystems. This discussion explored the intersection of **SDG 6 (Clean Water and Sanitation)** and **SDG 14 (Life Below Water)**, addressing issues such as marine biodiversity, sustainable fisheries, marine protected areas, and the blue economy. The panelists also discussed the impact of terrestrial activities on marine ecosystems and highlighted innovative technologies and community engagement strategies for sustainable ocean and water resource management. The session, moderated by **Dr. Purnima Jalihal**, Scientist G & Head of Energy and Fresh Water at NIOT, and coordinated by **Dr. Dharani**, Scientist G & Group Head of Marine Biotechnology



Division at NIOT, featured a distinguished panel: **Dr. Phani Kumar** (Scientist G, NIOT), **Dr. P. Sriyutha Murthy** (Scientist E, IGCAR), **Dr. R. Jeyabaskaran** (Senior Principal Scientist, CMFRI), **Dr. Deepak Samuel V** (Scientist E, NCSCM), **Dr. R. Jayakumar** (Principal Scientist, ICAR-CIBA), **Dr. K. Sri Bala Kameswari** (Senior Principal Scientist, CSIR-CLRI), **Dr. Raghu Babu** (Acadmicell Innovations Pvt Ltd), **Dr. D. Ravi Shankaran** (University of Madras), and **Dr. S. Renganathan** (Professor, Anna University). The session provided valuable insights on fostering the convergence of SDG 6 and SDG 14.



Panel discussion on “ Balancing life-above and under the sea ” moderated by **Dr. Purnima Jalihal**

Key points covered: 1). Ocean Pollution and its Ripple Effects, 2). Sustainable Fisheries and Aquaculture, 3). The Role of Marine Protected Areas (MPAs), 4). Climate Change and Ocean Health, 5). Marine Biodiversity: Challenges and Opportunities, 6). Blue Economy: Sustainable Development at Sea, 7). Community Engagement in Ocean Conservation, 8). Technology and Innovation for Ocean Sustainability, 9). Interconnection between Terrestrial and Marine Ecosystems, and 10). Youth and Policy Advocacy for Ocean Health.

## **Day 2 - Session 3 on 5<sup>th</sup> December 2024**

Session 3 commenced with a welcome address by **Dr. Paromita Chakraborty**, Professor and Head at REACH, followed by a plenary talk by **Dr. Atul Narayan Vaidya**, Director of CSIR-National Environmental Engineering Research Institute. The session featured invited lectures from several distinguished experts, including **Dr. G. Venkatesan**, Scientist G at NIOT's Energy and Fresh Water Division; **Dr. R. Nagaraj**, Head of EIS & MMS NDDP/BARC, Kalpakkam; **Dr. G. Saravanan**, Senior Scientist at CSIR-NEERI; **Dr. S. Meenakshi**, Senior Professor at Gandhigram Rural Institute; and **Dr. Vladimir Beskoski**, Professor at the University of Belgrade. These presentations provided a platform for discussing government and industrial-level water management initiatives, highlighting the need for responsible, sustainable, and equitable water use to ensure environmental protection and long-term social and economic stability.

### **Poster and Oral Presentation Competition**

A key highlight of the SDG-6 events was the Poster and Oral Presentation competition held on December 3rd and 4th, 2024, from 5:30 PM to 7:00 PM in an online format. Out of 35 participants, 18 oral and 5 poster presentations showcased innovative research in clean water and sanitation. These competitions were instrumental in raising awareness and stimulating discourse on water-related challenges, reinforcing the broader goals of sustainable development.

Followed by overall valedictory program were conducted in which all the convenors, co-convenor, organiser team and prize awardees were facilitated with mementos. Then overall event report was read, followed by vote of thanks to appreciate the effort taken by team for successful completion of this event.