



**RIS**  
Research and Information System  
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विकासशील देशों की अनुसंधान एवं सूचना प्रणाली



## Technology enablers for ocean sustainability - Policy, Coastal community and Citizen science - 22 April 2025 (Casuarina Hall 7 P.M)

### Brief Report

The fourth talk under the RIS-IHC Maritime Knowledge Lecture Series was conducted on 22 April 2025. The talk was given by noted expert Dr R Venkatesan, Former Scientist, NIOT and Former consultant UNESCO, on the topic, 'Technology enablers for ocean sustainability - Policy, Coastal community and Citizen science'.

The talk was curated to message the theme of Earth Day (22 April), **'Our Power, Our Planet'**, signifying the collective power to chart a path towards an equitable and sustainable future.

The session was chaired by Professor Rajendra Bahl, Emeritus Professor, CARE, IIT Delhi, who was invited after a brief introduction by Dr Shishir Shrotriya, Head CMEC. The Chair gave a comprehensive account of the technology initiatives by CARE, IIT Delhi, over the last 50 years and brought to focus, a large number of unsung heroes who have contributed to the maritime technologies in India.



This public lecture, which was streamed live on YouTube, explored the transformative role of technology enablers in advancing ocean sustainability, focusing on policy frameworks, coastal community participation, and citizen science. From satellite-based monitoring and AI-driven analytics to low-cost sensors and mobile applications, emerging tools are reshaping our capacity to understand, monitor, and manage marine ecosystems. The speaker also brought to focus that marine plastic pollution remains a critical environmental threat, affecting biodiversity, food security, and ocean health. Addressing this issue requires high-resolution monitoring and grassroots involvement. Innovations such as ocean cleanup robots, remote sensing, and citizen science platforms, play a vital role in tracking and mitigating pollution while fostering public awareness and collective responsibility.

The speaker highlighted that India has emerged as a proactive leader, advancing her Blue Economy strategy with a strong emphasis on science, technology, and sustainable development. The speaker also highlighted the related global frameworks and institutions, notably the UN Decade of Ocean Science for Sustainable Development (2021–2030) and the Sustainable Development Goal SDG-14 (Life Below Water).

This lecture, explained the critical role of tools such as **Marine Spatial Planning (MSP)** and Ocean Accounting, which could enable transparent, data-driven, and ecosystem-based decision-making. **The key takeaway of the talk** was learnings from the global and national case studies and how technology enablers play a pivotal role in transforming ocean sustainability efforts, when combined with multi-stakeholder collaboration, youth and community level engagement, industry participation, and grassroot level innovation. **The lecture highlighted the strength of collective citizen power and technology, to achieve sustainable growth and utilisation of the oceans and marine resources.**