



IAHR WEBINAR

Blue Resilience: Reimagining Coasts for a Changing Planet

April 22, 2026, WEDNESDAY



Ms. Falguni Tailor

**Coasts, Communities, and Change:
Rethinking Resilience for Sustainable Futures**

**Optimizing early mangrove restoration:
Portable reef solutions for enhanced coastal stability**



Dr. Sindhu Sreeranga

Concept Note for Webinar on “Coastal Resilience for Sustainable Futures”

Overview

The webinar “**Coastal Resilience for Sustainable Futures**” highlights the growing need for sustainable approaches in coastal and ocean engineering, particularly in the context of climate change and increasing pressures on coastal systems. With rising sea levels, extreme weather events, and ecological degradation, the need for resilient and adaptive coastal solutions has become increasingly critical.

This session will bring together diverse perspectives on **coastal resilience, community-based adaptation, and nature-based solutions**, while maintaining the distinction between different thematic areas. It will feature expert insights on both **broad resilience frameworks involving communities and climate adaptation**, as well as **focused engineering approaches such as mangrove restoration and hybrid coastal protection strategies**.

The webinar aims to demonstrate how integrating engineering practices with ecological understanding can support **shoreline stability, ecosystem restoration, and sustainable coastal development**, ultimately contributing to more resilient coastal futures.

Objectives

1. Enhance Understanding of Coastal Resilience

Explore the role of communities, climate adaptation strategies, and sustainable planning in building resilient coastal systems.

2. Highlight Nature-Based and Hybrid Solutions

Present innovative approaches such as mangrove restoration and reef-based interventions for coastal protection and ecosystem support.

3. Bridge Engineering and Ecology

Demonstrate how interdisciplinary methods combining ocean engineering and environmental science can address real-world coastal challenges.

4. Encourage Knowledge Exchange and Capacity Building

Provide a platform for students, researchers, and professionals to engage with emerging ideas and practical solutions in sustainable coastal engineering.



Key Topics

1. Coastal Resilience, Communities, and Climate Change:

- **Community and Climate Perspectives:** Explore the role of communities, climate change impacts, and adaptive strategies in achieving sustainable coastal futures.
- **Resilience-Oriented Coastal Planning:** Discuss approaches for integrating social, environmental, and planning aspects into coastal resilience.

2. Mangrove Restoration and Nature-Based Coastal Solutions:

- **Mangrove-Based Coastal Protection:** Understand the role of mangroves in wave attenuation, shoreline stabilization, and ecosystem support.
- **Hybrid Engineering Approaches:** Examine innovative solutions such as portable reef systems to enhance early-stage mangrove restoration and coastal stability.

Details of the Webinar

This session is proposed under the webinar series of the International Association for Hydro-Environment Engineering and Research, hosted by the **IAHR Southern-India Young Professionals Network** in collaboration with the **Department of Ocean Engineering IIT Madras**.

The webinar will be conducted on an online platform as a one-day event, scheduled on **22 April 2026 at 03:00 PM (IST)**, in observance of World Earth Day, with a duration of approximately 2 to 3 hours.

This session will feature two distinct expert talks, each addressing different but complementary aspects of coastal resilience and sustainable coastal engineering.

Format

The webinar will include keynote presentations followed by an interactive Q&A session, allowing participants to engage with speakers and gain insights into real-world coastal challenges and solutions.



Target Audience

The webinar is designed for engineering students, researchers, water and ocean resource professionals, environmental consultants, and policy advocates interested in sustainable solutions for water and ocean systems.

Expected Outcomes

- Understanding of coastal resilience and climate adaptation
- Insights into community perspectives and sustainable planning
- Knowledge of mangrove restoration and hybrid coastal protection solutions
- Exposure to interdisciplinary approaches in coastal engineering

Details of the Speakers and Talks

- **Speaker 1: Ms. Falguni Tailor** (*Assistant Scientific Officer, Indian Institute of Technology Gandhinagar*)
Talk Title: *Coasts, Communities, and Change: Rethinking Resilience for Sustainable Futures*
(Focus: Community perspectives, climate change, and coastal resilience planning)
- **Speaker 2: Dr. Sindhu Sreeranga** (*Coastal Engineer & Scientist*)
Talk Title: *Optimizing Early Mangrove Restoration: Portable Reef Solutions for Enhanced Coastal Stability*
(Focus: Mangrove restoration and innovative hybrid coastal protection techniques)