IAHR Southern-India Young Professionals Network (IAHR SI YPN)

Our vision and mission

The vision of the IAHR Southern-India Young Professional Network (IAHR SI YPN) is to establish a dynamic, inclusive, and forward-thinking platform that empowers young professionals and students to address critical global challenges in water resources and environmental sustainability through innovation, collaboration, and impactful practices. The network seeks to promote interdisciplinary collaboration by creating avenues for professionals from diverse fields, such as hydrology, ocean engineering, and environmental sciences, to come together, share knowledge, and develop integrated solutions for sustainable water management and environmental stewardship. Recognizing the importance of continuous growth, IAHR SI YPN is dedicated to supporting professional development by organizing workshops, training sessions, webinars, and technical competitions to enhance technical expertise, leadership capabilities, and career readiness among its members.

In addition, the network prioritizes fostering a culture of knowledge sharing by providing a platform for members to present their research findings, engage in meaningful discussions, and gain valuable feedback from seasoned experts, thereby encouraging continuous learning and improvement. IAHR SI YPN is committed to building a robust and supportive network by connecting young professionals with peers, mentors, industry leaders, and academicians, cultivating opportunities for collaboration, mentorship, and long-term professional relationships. By inspiring innovation and promoting research excellence, the network encourages its members to engage in groundbreaking research, adopt best practices, and contribute significantly to advancements in hydro-environmental sciences and related fields.

Furthermore, IAHR SI YPN actively raises awareness about the importance of sustainability by advocating for environmentally responsible practices, sustainable water management solutions, and

the preservation of ecosystems through outreach programs, public engagement initiatives, and awareness campaigns. Through its collective efforts, the network envisions empowering the next generation of professionals and leaders to make meaningful contributions to address pressing water-related and environmental challenges while promoting a sustainable and resilient future for global communities.

Committee members

Prof. S A Sannasiraj

Mr. K Sridhar
(President)

Dr. Hari Ram N
(Vice President)

Mr. Rushikesh Kamble
(Secretary)

Mr. Vasanthakumar
(Treasurer)

Main goals and key objectives

1. **Promote Interdisciplinary Collaboration**

   Facilitate the exchange of ideas and knowledge among professionals from diverse fields such as hydrology, ocean engineering, environmental and data sciences to develop integrated solutions for sustainable water and environmental management.

2. **Support Professional Development**

   Organize workshops, training sessions, webinars, and technical competitions to enhance the technical and professional skills of young professionals and students.

3. **Encourage Knowledge Sharing**

   Provide opportunities for members to present their research, participate in discussions, and receive feedback from experts to foster continuous learning and improvement.

4. **Build a Strong Network**

   Connect young professionals with peers, mentors, industry leaders, and academicians to promote collaboration and mentorship opportunities.

5. **Foster Innovation and Research Excellence**

   Encourage members to engage in cutting-edge research, share best practices, and contribute to advancements in hydro-environmental sciences.

6. **Raise Awareness for Sustainability**

   Promote public awareness and advocacy for sustainable water management and environmental practices through outreach programs and campaigns

Activities during this year

IAHR SI YPN Members in the 6th IAHR Young Professionals Congress 2025

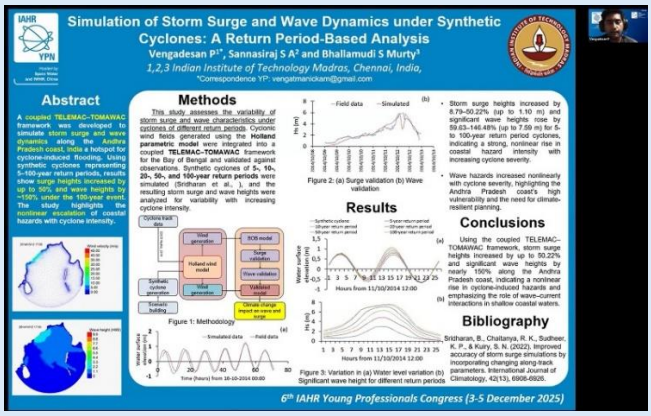
3 – 5 December 2025

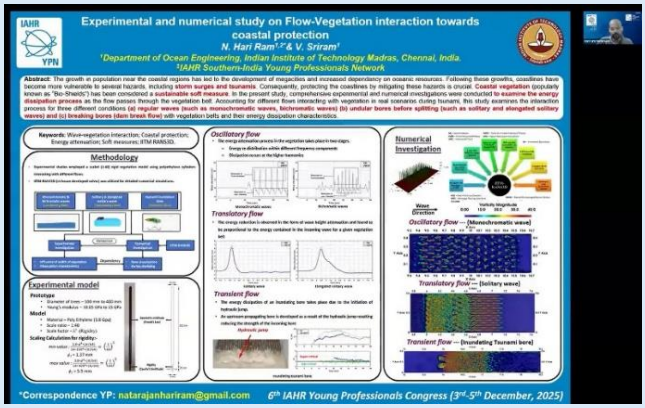
Online

Objectives: To participate and support IAHR YPN activities and contribute to the research dissemination in coastal, hydraulic, and environmental engineering while strengthening engagement between IAHR, IAHR-YPN, and regional YPN chapters

Description:

The IAHR YP congress provided a global platform for young professionals to exchange knowledge across three major themes and nineteen sub-themes covering hydraulics, water resources, river engineering, coastal engineering, and environmental engineering. Members of IAHR-SI-YPN from the Indian Institute of Technology Madras actively participated and delivered high-quality technical presentations. Dr. Vengadesan Palanimanickam presented his research on the simulation of storm surge and wave dynamics under synthetic cyclones using a return-period-based analysis and Dr. Hari Ram N presented his work on experimental and numerical studies on flow–vegetation interaction for coastal protection.





IAHR YPN Session at HYDRO International 2025

18th December 2025

NIT Rourkela, Odisha, India

Objectives/Theme: To provide a platform for young professionals to discuss the futuristic needs, emerging challenges, and evolving skill requirements of the water sector and promote interdisciplinary collaboration, mentorship, and active engagement of young professionals in shaping the future of water engineering

- **Description:**

This event is the second consecutive session organized following the YPN session from Hydro 2024. A dedicated Young Professionals Network (YPN) session at HYDRO International 2025, held from 18–20 December 2025 at NIT Rourkela, Odisha. The session, under the theme "***Understanding the Futuristic Needs of the Water Sector***," provided an engaging platform to discuss emerging challenges, evolving skill requirements, interdisciplinary collaboration, and the critical role of young professionals in shaping the future of the water sector.

The session was chaired by Prof. Soumendra Nath Kuiry (IIT Madras) and moderated by Dr. V. K.

Srineash (IIT Bombay), with a special talk delivered by Prof. P. K. Suresh (MSEC). The session was chaired by Prof. Soumendra Nath Kuiry (IIT Madras) and moderated by Dr. V. K. Srineash (IIT Bombay), with a special talk delivered by Prof. P. K. Suresh (MSEC). The panel featured insightful contributions from Dr. Naresh Lakku Kumar Goud (IAHR WI YPN), Dr. Ashutosh Sharma (IAHR India YPN), Mr. Elanchezhiyan D. (IAHR SI YPN), Dr. Bandita Barman (IAHR EI YPN) and Dr. Vengadesan Palanimanickam P. (IAHR SI YPN).

The session witnessed active participation and meaningful discussions, highlighting the importance of mentorship, capacity building, and cross-sectoral engagement to address future water challenges.

Inauguration of IAHR YPN Hackathon

13th September 2025

IC&SR Building, Indian Institute of Technology Madras, Chennai, India

Objectives: To provide mentorship and technical guidance to participants of the IAHR YPN Hackathon 2026 on real-world challenges in hydro-environmental and ocean engineering

Description:

The IAHR YPN Hackathon 2026 is a initiative taken jointly with IAHR, IAHR SI YPN and IIT Madras, along with ABCD – Centre aimed at fostering innovation among young professionals in hydro-environmental and ocean engineering. The hackathon focuses on developing sustainable, climate-resilient solutions for challenges such as coastal protection under cyclonic loading and advances in ocean technology.

The inaugural mentoring session was held on 13 September 2025 at IIT Madras to guide participants on the hackathon objectives, challenges, and expected outcomes. Expert talks by Mr. Sridhar Krishnamoorthy on IAHR's mission and Mr. Rushikesh Kamble on the hackathon process provided valuable insights. The event was further enriched by the presence of Dr. Ramana Murthy V. Mallavarapu, Prof. Abdus Samad, Prof. Sannasiraj S.A., and a recorded message from Prof. Philippe Gourbesville, President of IAHR.

Young Professional Lecture Series - 6

10th September 2025

Institute for Ocean Management (IOM), Anna University, Chennai, India

Objectives: To promote interaction between Senior research scholars with undergraduate students and encourage engagement in ocean and coastal engineering research and innovation.

Description: The event focused on key ocean engineering topics, including tsunami mitigation, cyclones and storm surges, and offshore structures, bringing together experts and students to discuss current challenges and research advancements in the field.

Mr. Sakthi Vasanth, Research Scholar from the Department of Ocean Engineering, IIT Madras, delivered a presentation on tsunami mitigation measures, discussing the causes, propagation, and impacts of tsunamis, along with strategies to enhance coastal resilience and protect vulnerable communities. Ms. Sree Nandhini Elayaperumal, PMRF Research Scholar at IIT Madras, presented on cyclones and storm surges, explaining storm surge dynamics and sharing insights from her ongoing research on storm surge modelling for risk assessment and disaster preparedness. Dr. Sarvalogapathi S., Project Scientist at IIT Madras, introduced offshore structures, covering their classification, applications, and the challenges associated with their design and installation.

Young Professional Lecture Series - 5

10th July 2025

SRM Valliammai Engineering College (VEC), Chennai, India

Objectives: To share practical research applications in numerical modelling, flood forecasting, and mitigation measures with undergraduate students and inspire careers in water-related engineering fields.

Description:

The outreach programme was led by Mr. Sandana Socrates S, PhD Scholar, Department of Ocean Engineering, IIT Madras, and a distinguished alumnus of VEC, who introduced students to the International Association for Hydro-Environment Engineering and Research (IAHR) and its global Young Professionals Network. His session motivated students to explore careers in water-related disciplines.

The event featured technical sessions by IIT Madras research scholars. Ms. Srimathy Krishnan (PhD Scholar, Ocean Engineering) presented on *"Numerical Modelling: The Digital Laboratory,"* highlighting simulation as a key engineering tool.

Mr. Elanchezhiyan D. (PhD Scholar, Civil Engineering) introduced the Real-Time Flood Forecasting System for Chennai, developed in collaboration with the Government of Tamil Nadu. Mr. Sree Sai Prasad Bodapati (PhD Scholar, Civil Engineering) delivered an insightful talk on bridge safety and scour prediction, discussing foundation protection methods.

The event successfully connected academic learning with real-world engineering applications and strengthened student interest in interdisciplinary research, innovation, and sustainability in the water sector.

IAHR India Meet-up session at IAHR World Congress 2025

Singapore

Objectives: To build a strong connection and network within the IAHR India regional zone.

Description:

IAHR Southern India Young Professionals Network took the lead initiative in organizing this session to bring together all the active members of IAHR from the Indian community as a whole and discuss the aspects of empowering the research in the field of water sector through IAHR.

The session brought together academicians, researchers, and industry professionals from premier institutions, including IITs, NITs, and leading universities, as well as representatives from IAHR India YPN, IAHR Western India YPN, and IAHR Eastern India YPN.

The session was graced by an address from Prof. Philippe Gourbesville, President of IAHR, who highlighted the growing potential for hydro-environment research in India and reaffirmed IAHR's commitment to supporting capacity building and global opportunities for young professionals.

Key announcements included the launch of the IAHR YPN Hackathon 2026, scheduled for 13th September 2025 at IIT Madras, and the upcoming CoastLab 2026 conference, IAHR's flagship event in experimental hydraulics.

The session strengthened collaboration among India's IAHR Young Professional networks and encouraged continued engagement in IAHR-led initiatives aimed at addressing water and hydro-environmental challenges.

IAHR & IAHR YPN (India) Special Session: *"Building a Global Hydro-Environmental Ntwork"* at AWaRe 2025

11th June 2025

Maulana Azad National Institute of Technology (MANIT), Bhopal, India.

Objectives: To strengthen collaboration among IAHR Young Professionals Networks across India and build a global hydro-environmental community and initiate future collaborative activities.

Description:

The IAHR Southern India Young Professionals Network (IAHR–SI–YPN) successfully participated in the IAHR & IAHR YPN (India) activity titled "Building a Global Hydro-Environmental Network" during the 1st International Conference on Advanced Water Resources (AWaRe 2025).

The session featured inspiring addresses by Prof. Sannasiraj S. A. (Advisor, IAHR–SI–YPN, IIT Madras), Prof. Eldho T. I. (Advisor, IAHR–WI–YPN, IIT Bombay), and Prof. Zulfequar Ahmad (Advisor, IAHR India YPN, IIT Roorkee), who emphasized the

importance of networking, collaboration, and capacity building within the IAHR community.

The session successfully strengthened inter-regional YPN collaboration and reinforced IAHR's vision of building a connected, global hydro-environmental network

World Environment Day 2025 Outreach Programme – *"Towards a Sustainable and Pollution-Free Future"*

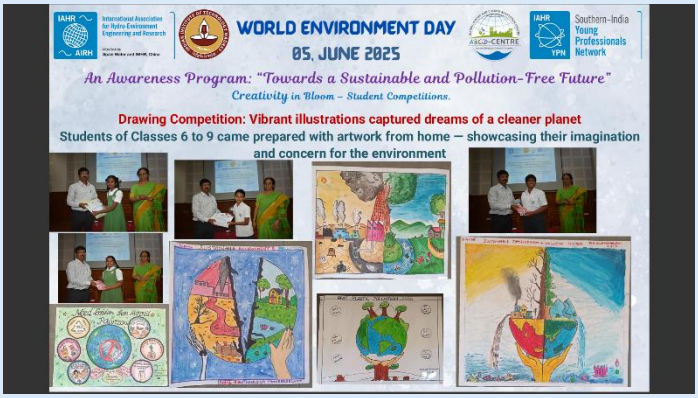
5th June 2025

Vanavani Matriculation Higher Secondary School, Indian Institute of Technology Madras, Chennai, India.

Objectives: To create environmental awareness among school students and encourage sustainable practices such as reducing plastic use and promoting recycling.

Description: On World Environment Day 2025, the IAHR Southern India Young Professionals Network (IAHR SI YPN), in collaboration with the International Association for Hydro-Environment Engineering and Research (IAHR) – IIT Madras Institute Chapter and the ABCD Centre, organized a meaningful outreach programme at Vanavani Matriculation Higher Secondary School, located within the IIT Madras campus. The event, held under the theme "Towards a Sustainable and

Pollution-Free Future," engaged students from Classes 6 to 9 through interactive discussions and creative activities.



The programme began with a welcome address by Prof. Sannasiraj S. A., Advisor of IAHR SI YPN, who emphasized the importance of reducing plastic consumption and promoting recycling. Mrs. Princy Tom, Principal of Vanavani MHSS, delivered the opening remarks and encouraged students to become responsible stewards of the environment.

The highlight of the event was a guest talk by Prof. Shiva Nagendra from the Department of Civil Engineering, IIT Madras, who addressed environmental awareness while also motivating students to pursue academic excellence.

Students actively participated in drawing and slogan writing competitions, expressing their understanding of environmental issues and showcasing creative ideas for a greener future. Their enthusiasm and thoughtful contributions reflected a strong awareness of sustainability and environmental responsibility.

The outreach programme effectively strengthened environmental awareness among young students and reinforced the importance of empowering the next generation to build a sustainable and pollution-free future.

IAHR AIRH International Association for Hydro-Environment Engineering and Research Hosted by Spain Water and IWHR, China

IAHR YPN Southern-India Young Professionals Network

IAHR YPN Young Professionals Network Hosted by Spain Water and IWHR, China

Beach Cleaning Awareness Drive on World Environment Day 2025

5 June 2025

Elliot's Beach, Chennai, India

Objectives: To promote environmental responsibility and awareness on coastal pollution and encourage active community participation in protecting and preserving coastal environments.

Description: The initiative aligned with the UN World Environment Day theme *"Land Restoration, Desertification, and Drought Resilience,"* emphasizing the importance of personal responsibility in environmental conservation.

The drive focused not only on removing litter from the shoreline but also on restoring dignity to nature and inspiring accountability among participants. It highlighted the impact of human activities on coastal ecosystems and reinforced the need for sustainable practices.

Student volunteers from various departments of IIT Madras actively participated, contributing their time and energy to make the initiative impactful. The Beach Cleaning Awareness Drive strengthened environmental awareness, encouraged civic responsibility, and reaffirmed the role of young professionals in leading sustainable and balanced development initiatives.

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Panel Discussion on *"Deep Learning for Deep Seas: AI in Ocean Science & Sustainable Development"*

17th April 2025

SRM Institute of Science and Technology (SRM IST), Chennai, India

Objectives: To explore the role of artificial intelligence and deep learning in advancing ocean science and promote interdisciplinary dialogue among young professionals, researchers, and industry experts in marine technology and AI-driven solutions.

Description: The session was initiated and led by Mr. Sridhar Krishnamoorthy, President of IAHR SI YPN, who delivered the opening address and introduced the panelists and moderator. The discussion was expertly moderated by Dr. Abhilash Somayajula, Assistant Professor at IIT Madras. The panel featured distinguished speakers Dr. Rajeswari Krishnan, Mr. Kesava Kumar B., and Mrs. Pradhiksha R. S., who shared valuable insights on marine technology, offshore systems, and AI-driven solutions for ocean science.

The session concluded with a Vote of Thanks by Mr. Hari Ram N., Vice President of IAHR SI YPN. Active participation from the audience enriched the discussion and reflected a strong interest in the application of AI for sustainable marine development.

The session successfully highlighted the growing role of artificial intelligence in ocean science and reinforced IAHR–SI–YPN's commitment to promoting innovation, sustainability, and interdisciplinary collaboration

Young Professionals Lecture Series - 4

14th March 2025

Vel Tech HighTech Dr. Rangarajan Dr. Sakunthala Engineering College, Chennai, India

Objectives: To strengthen academic–professional engagement and inspire young minds to pursue careers in research, engineering, and innovation.

Description: Mr. Sridhar Krishnamoorthy, as a Special Guest and Jury Member at the *Aavishkaar 2025 Project Expo* held on 14 March 2025 at Vel Tech HighTech Dr. Rangarajan Dr. Sakunthala Engineering College, Chennai. The expo showcased innovative student projects across multiple engineering disciplines. Mr. Krishnamoorthy served as a Jury Member for the Civil Engineering Project Expo, offering expert feedback and guidance to students, and also participated in the Souvenir Release Ceremony.

Young Professional Lecture Series - 3

14th March 2025

Department of Naval Architecture and Offshore Engineering, AMET University, Chennai, India

Objectives: To inspire engineering students to explore opportunities in ocean, coastal, and offshore engineering through expert guidance and evaluation of student research and poster presentation.

Description: Vice President, Mr. Hari Ram N, as a Guest Keynote Speaker and Jury Member at the National Level Tech Symposium MEREDITH 2K25, hosted by AMET University, Chennai. His keynote lecture on "IITM-RANS3D and its Applications in Ocean Engineering" encouraged students to explore research opportunities in ocean, coastal, and offshore engineering. As a jury member, he evaluated poster presentations and guided students in improving their technical and presentation skills.

IAHR SI YPN appreciates AMET University and Prof. Siva Balan for organizing the event and fostering collaboration that supports knowledge exchange and inspires future engineers

IAHR AIRH International Association for Hydro-Environment Engineering and Research Hosted by Spain Water and IWHR, China

IAHR YPN Southern-India Young Professionals Network

IAHR YPN Young Professionals Network Hosted by Spain Water and IWHR, China

MTS Ideathon 2025 & IEEE OES AqUaVision AUV Challenge 2025

28th Feb 2025 & 1st March 2025

National Institute of Technology Madras (NIOT) & IIT Madras

Objectives: To inspire engineering students to explore opportunities in ocean, coastal, and offshore engineering through expert guidance and evaluation of student research and poster presentation.

Description: Ideathon 2025 was organized as a part of MTS TechSym 2025 and AqUaVision AUV Challenge 2025 was organized with IEEE OES to promote innovation, technical excellence, and hands-on learning in ocean technology and autonomous systems. The Ideathon was held on 28 February 2025 at the National Institute of Ocean Technology (NIOT), Chennai, followed by the AqUaVision AUV Challenge on 1 March 2025 at the Indian Institute of Technology Madras.

The events offered participants an opportunity to showcase their technical skills, compete for exciting prizes, and interact with experts from academia, research institutions, and industry. The competitions focused on problem-solving, innovation, and practical applications in marine and autonomous technologies.

Support for the events was provided by the IEEE Computer Society Madras Section, MAV Lab, SCORE, and Oceana. Sponsorship was received from NTCPWC, ABCD, and Xsenor, whose contributions helped ensure the successful conduct of the programs.

The events created a vibrant platform for collaboration, learning, and innovation, strengthening engagement in ocean technology and autonomous systems among young professionals and students.

Partnerships and collaboration

During 2024–2025, the IAHR Southern-India Young Professionals Network (IAHR SI YPN) collaborated and partnered with the following organisations for various impactful events:

- Indian Institute of Technology Madras (IIT Madras), India.
- IAHR IIT Madras Institute Chapter.
- IAHR India YPN.
- The Global Water and Climate Adaptation Centre - ABCD Centre, IIT Madras.
- National Institute of Ocean Technology (NIOT), India.
- National Centre for Coastal Research (NCCR), India.
- Anna University, Chennai, India.
- The Central Water and Power Research Station (CWPRS), Pune, India.
- The Indian Society for Hydraulics (ISH), India.
- Indian Institute of Technology, Roorkee (IIT Roorkee), India.
- Indian Institute of Technology, Kharagpur (IIT Kharagpur), India.
- Indian Institute of Technology, Bombay (IIT Bombay), India.
- Maulana Azad National Institute of Technology (MANIT), India.
- National Institute of Technology Tiruchirappalli (NITT), India.
- Marine Technology Society (MTS) IIT Madras Student Section.

- Marine Technology Society (MTS) India Section.
- IEEE Oceanic Engineering Society (OES) Madras Chapter.
- IEEE Oceanic Engineering Society (OES) IIT Madras Student Branch Chapter.
- IEEE IIT Madras Student Branch.
- Scholars Communion of Ocean Research (SCORE), IIT Madras, India.

Communication channels

Linked In | **IAHR Southern-India Young Professionals Network (IAHR SI YPN)**

Website | https://www.iahr.org/index/committe/146

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