

## **BeST forms Karnataka Hydrogen Valley Consortium**



The Bengaluru Science and Technology (BeST) Cluster, an initiative of the Office of the Principal Scientific Adviser to the Government of India, formed a consortium of stakeholders of the green hydrogen value chain in and around Bengaluru interested in the DST's call for proposal to set up hydrogen valley. The consortium meeting held on 14<sup>th</sup> April 2023 in the IISc campus was attended by 40+ physical participants and 50+ online participants representing 50+ organizations. The event started with the welcome address by the BeST Cluster leadership. Dr. Ranjith Krishna Pai, Scientist 'E'/Director at Technology Mission Division, Department of Science and Technology, GoI, explained DST's vision for India's green hydrogen economy by supporting India's progress towards Green Hydrogen and transforming India into an energy-independent nation by 2047 where green hydrogen will play an active role as an alternate fuel to the petroleum/ fossil-based products. Mr. Rahul Kulreshtha, Strategic Alliance Division, Office of the Principal Scientific Adviser to GoI, shared his perspectives about the National Green Hydrogen Mission and the current status of research and development in India. Smt. Gunjan Krishna IAS, Commissioner, Department of Industries & Commerce, GoK, spoke about the Green Hydrogen Ecosystem in Karnataka and highlighted how Karnataka is well positioned in to meet the key requirements of green hydrogen players with respect to land, water and energy infrastructure, favourable energy policies and government incentive support.

Mr. Amarnath from Karnataka Renewable Energy Development Limited explained the state government policies and opportunities related to the green hydrogen value chain in the state. The event had Speaker sessions and Open discussions on Global perspectives of green hydrogen, Leveraging the cost of hydrogen by 2030, Green hydrogen research overview, Storage and transportation to non-grid areas followed by a workshop that collected challenges and problem statements from the participants.



From left to right, Mr. Rahul Office of Principal Kulreshtha, Scientific Adviser, Dr. Ranjith Krishna Pai, Department of Science and Technology, Mr. Amarnath, Karnataka Renewable Energy Development Limited, Ms. Gunjan Krishna, IAS, Department Industries of and Commerce



The event had active representations from industries such as Volvo, Reliance industries, Grassroots energy, Newtrace, Swagelok, India Energy Storage Alliance, 1H1 labs, Ayana renewables, Autometers Energitec, Syscon instruments. The list of all member organizations from academic and research institutions, companies in the sector of hydrogen generation, renewable energy generation, hydrogen storage and transport, hydrogen aggregation, OEMs, EPCs, off-takers, knowledge partners, consultants, think tanks, NGOs and start-ups engaged with the brainstorming sessions and consortium formation are as follows.



## Awareness session about the Manthan Platform

The BeST Cluster organized an online session to promote awareness of the Manthan Platform on April 25th 2023. Manthan is a digital platform developed by the Office of Principal Scientific Adviser to empower various stakeholders to scale up their interactions with researchers/ innovators and facilitate R&D/innovations, share opportunities in various emerging technologies and scientific interventions as well as those that make a Social Impact. It aims to foster innovation and collaboration in the field of science and technology to address the challenges faced by India and contribute towards achieving the United Nations' Sustainable Development Goals (SDGs). The session brought together diverse stakeholders from academia, industry, government, and nonprofit organizations to understand and explore the Manthan platform.





Mr. Rahul Kulshreshtha from Strategic Alliance Division, Office of the Principal Scientific Adviser, Government of India presented an interactive talk on 'Multistakeholder Collaboration Opportunities over Manthan Platform for Research & Innovation Aligned with Social Impact'. To explore related opportunities, proposals, events, exhibitions, and various national resources in science and technology, visit <u>https://manthan.gov.in/</u>.

## **One Health Bengaluru City Consortium updates**



The One Health Bengaluru City Consortium gathered for an online meeting on 13<sup>th</sup> April 2023 to discuss the topics prioritized by the consortium members:

- Effective collaboration platform
- Champions and community building within the consortium
- Identify disciplinary areas of interest
- Data management
- Cross-sector opportunities for intervention
- ✤ Outreach

## **BeST** explores collaborative opportunities with Thales



The BeST Cluster facilitated a dialogue between the Quantum Technology, Active matter, and microrobotics teams from the Indian Institute of Science (IISc) Bangalore and The Thales Group, a global technology leader in 'Deep Tech Innovations' on the 25th of April 2023. Thales has been doing business in India for more than 70 years and has continually supported the Indian government in areas of defense and security, aerospace and space, digital identity and security, and transportation. Representatives from the Thales R&D center in France accompanied their Indian counterpart and interacted with various eminent researchers from the quantum and active matter & micro-robotics community of IISc Bangalore. The interactions resulted in identifying key areas of collaboration aligning with their business outlay for India, especially post-quantum cryptography, SQUID magnetometry, quantum sensing, RISC V - open standard instruction set architecture, quantum random number generation, micro-robotics for certification and optimization along with a willingness to explore other various deep tech innovations going on within the Bangalore scientific community. Dr. Cédric Jean-Jacques Demeure, VP R&T, Daniel Glazman, VP, Software Technologies from Thales France, and Dr. Subhra Kanti Das, Head, R&T Thales ECC, Banglore India represented the Thales Group. Prof. Ambarish Ghosh and Prof. Prosenjit Sen from Active Matter & Microrobotics team, and member faculties from IISc Quantum Technology Initiative, Dr. Utsav Banerjee, Prof. Sanjit Chatterjee, Prof. Kausik Majumdar, Dr. Srividya Kumar (Technology Manager, IQTI) participated in the discussion.

The Union Cabinet recently approved the National Quantum Mission (NQM) at a total cost of Rs.6003.65 crore from 2023-24 to 2030-31, aiming to seed, nurture and scale up scientific and industrial R&D and create a vibrant & innovative ecosystem in Quantum Technology. This will accelerate QT-led economic growth, nurture the ecosystem in the country and make India one of the leading nations in the development of Quantum Technologies & Applications. The Mission will also provide a huge boost to National priorities like Digital India, Make in India, Skill India and Stand-up India, Start-up India, Self-reliant India, and Sustainable Development Goals (SDG).

# Cross-Sectoral panel discussion on Interdependence of Climate, Monsoon and Agriculture

BeST Cluster organized an online cross-sectoral panel different backgrounds monsoon, and agriculture on 10<sup>th</sup> April 2023. Topics together and exchange ideas. discussed were impact of changing ocean weather systems on climate, climate-smart agriculture, cloud and rain patterns over the subcontinent, harnessing technology and data towards predictive agriculture. It was an insightful and engaging event, featuring experts from various fields who shared their perspectives on the crucial link between these three factors. The panelists provided in-depth analyses of how climate change impacts monsoon patterns, which in turn affects agricultural production. They also discussed potential solutions to mitigate these Prof. Spenta Wadia, TIFR-ICTS, Prof. Debasis provided a unique opportunity for individuals from Zero2Positive and ICA were in the panel.

such industries, as discussion on the interdependence of climate, policymakers, researchers, and farmers to come



effects and highlighted the need for cross-sectoral Sengupta, IISc, Prof. Rama Govindarajan, TIFR-ICTS, collaboration to address these issues. The event Dr. Praveen Pankajakshan, Cropin, Mr. Jai Warrier,

#### YOUNG SOCIAL ENREPRENEUR SAYS...

I am inspired by the impressive range of climate action and sustainability innovations being developed and implemented in Bengaluru. However, there remains a critical need for more designed spaces and opportunities for collaborations between academia, startups, civil society organisations, resident welfare associations, and government initiatives. The BeST cluster is uniquely positioned to serve as a facilitator for these collaborations.



Jai Warrier, Co-founder, Initiative for Climate Action Zero2Positive Consulting

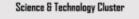


## **BeST announces student internship opportunities**





Office of the Principal Scientific Adviser to the Government of India



# Summer Internship





# SCIENCE COMMUNICATION AND POLICY

- Where: Bengaluru Science and Technology Cluster, IISc Campus
- When : Summer 2023 (Dates negotiable)
- Who : Students interested to explore cross-sectoral opportunities in science and technology

- Draft communication to researchers, industry and policy makers
- Create scientific
  content for newsletter
- Participate in stakeholder meetings
- Identify funding opportunties

### APPLY NOW

office@bestkc.in



- Preference given to those with interdisciplinary experience and experience in working outside of science.
- We encourage students to apply under Sugam Parivahan and Swasthya Rakshan topics.

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