India-UK Symposium on Decarbonization and Sustainability: Engaging Academia and Industries for Net- Zero [Sustain-NZ]

Venue: CCE Seminar Room @Outreach IITK, Date:26-27 February 2024, IIT Kanpur, India

About the Symposium

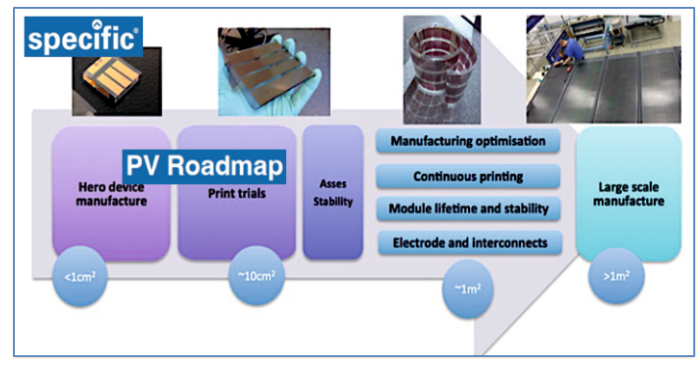
To mitigate the climate crisis, primarily caused by the unabated use of fossil fuels, the future energy transition will need to move towards environment-friendly energy technologies, such as next-generation solar, battery, hydrogen technologies etc. that are made using low cost, abundant, and sustainable materials.

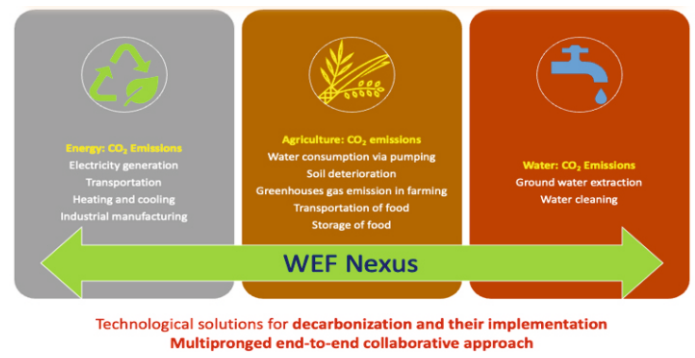
Since 2010, the Indian and UK governments have funded the flagship APEX Consortium and the SUNRISE network <https://www.sunrisenetwork.org/>, which have brought together leading research teams from India and the UK. The groups have demonstrated the development of new materials and devices related to energy generation and storage by turning new materials into commercially viable products and have showcased business potential by installing building-scale demonstrators in Indian villages, particularly one OASIS demonstrator part-supported by Tata CleanTech.

This multi-disciplinary network now aims to take on the challenges related to sustainable energy, explore pathways, and plans for decarbonization and Net Zero, in particular exploring the energy-food-water nexus in India, and the UK. The consortium will engage intensely with rural communities and network of industries. This necessitates the collaboration of multiple stakeholders, including academics, researchers, industries, and decision-makers.

This India-UK symposium will feature thought-provoking sessions on various energy technologies and efficient system integration schemes for decarbonization and Net Zero, as well as their impact on socio-economic indicators. This India-UK collaboration aims to create Joint Indo-UK Virtual Centre on Net-Zero.







Technological solutions for **decarbonization and their implementation**
Multipronged end-to-end collaborative approach

Objectives

To sustain the legacy of UK-India long standing collaboration and relationship amongst several top leading organization across the two nations. We will explore and review the mechanisms to address decarbonization and net-zero targets by bringing together UK and India experts from academia and industry to:

- Discuss fundamental and high TRL technology integrations for relatively mature technologies, system development, and demonstrations.
- Brainstorm on the sustainability solutions in the context of Water-Energy-Food nexus by bringing together Indian and UK experts from different domains leveraging the strengths of a long standing and successful consortium -
- Discuss avenues for capacity building and on-ground social and economic impact derived from the implementation of technical solutions.
- Bring Academic-Industry-NGOs together to translate the technology development into real demonstrations and to develop business models and avenues.

Expected Participants

- >100 participants from India and the UK.
- Academicians, researchers, early career researchers, students and representatives from industry, funding agencies, government bodies and NGOs.

Key Speakers

- Prof. James Durrant, Imperial College & Swansea University
- Prof Trystan Watson Swansea University
- Prof. Matthew Davies Swansea University
- Prof. Satish Patil, IISc Bangalore
- Prof Dinesh Kabra IIT Bombay
- Prof. Laltu Chandra IIT Kanpur
- Prominent speakers from industry, government bodies, NGOs & academia

Expected Outcomes and beneficiaries

Following are the outcomes that will be of interest :

Scientific and Technological (multi-TRL)

- New materials and technologies for decarbonization (TRL 1-3)
- Possible systems schemes, designs, and demonstration opportunities (TRL 4-7)
- Roadmap to achieving NetZero in specific demonstrations

Techno-socio-economic

- Predictions of techno-economic feasibility of solutions
- Generation of ideas for community engagement and empowerment
- Possible schemes for commercialization of specific applications, entrepreneurship, and start-ups

Capacity building

- Students, linkages, collaborations
- Identification of enablers and challenges

Organizers:

- Professor Rajeev Jindal, IIT Kanpur
- Professor Laltu Chandra, IIT Kanpur
- Professor Ashish Garg, IIT Kanpur
- Professor Hari Upadhyaya, London South Bank University
- Dr. Adrian Walters, Swansea University

Sponsorship support:

UKRI India, IIT Kanpur

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