



Climate Change Mitigation through Technology and Innovations

Climate change has emerged as a defining global and national problem, the response to which needs to be urgently supported through climate services and solutions. India has initiated an ambitious and sustained response at the national level through the National Action Plan on Climate Change (NAPCC) and its eight missions that cover different sectors and systems. Gaps in strategic choices can create industrial and social structures that adversely impact the environment and climate or result in maladaptation to future climate impacts. Physical and statistical modelling of various processes encountered in the climate system are needed to further our process and predict climate variability, trend, and extremes.

The panel will discuss key challenges in developing climate-resilient design, climate services, and innovative solutions through Industry and Academia collaboration. The panel will also discuss how corporates can play a central role in these efforts through CSR. The CSR funding in the area can help India in adapting to climate change and mitigate its impact.

Healthcare and Biosciences: Key Challenges and Technology Solutions

Healthcare initiatives at IIT Bombay span a range of areas including medical devices, digital health, computational biology, immunobiology, systems biology, drug delivery, genomics, neurodegenerative and infectious diseases. The multidisciplinary research is enabled by diverse, world class expertise across biosciences and bioengineering, sensor technology, materials science, robotics, chemistry and chemical engineering, AI/ML and bio-statistics. Panelists representing these areas will discuss the current and emerging challenges in healthcare and how academia is helping solve these challenges. Panelists will also share some examples of significant innovations from IIT Bombay which have had an impact in making healthcare more affordable and accessible across India.

Circular Economy

Circular Economy (CE) is proposed as a new paradigm to achieve sustainable development. The CE is regenerative and restorative in nature and is intimately linked with several sustainable development goals of the United Nations. Successful transition towards CE requires a multi-pronged approach integrating science, engineering, technology, economics, and policy. The panel discussion will bring together experts from diverse fields to initiate a dialogue on challenges and opportunities in the CE domain. Knowledge gaps in problems and methods will be deliberated. Moreover, opportunities for synergy between industry and academia will be discussed, and potential areas where companies can contribute through CSR will be identified.

Tech Entrepreneurship: Driving India's Growth

Over the past decades, IIT Bombay's internationally recognised faculty and researchers have developed advanced technologies across diverse domains such as climate change, health sciences, sustainability, education, agriculture, rural development, and smart cities. Many of these technologies can be adapted to support India's national missions, United Nations' sustainable development goals (UN SDGs), and corporate CSR programs.

The panel will discuss how to create a collaborative framework for IIT Bombay to partner with Industry and support socially relevant entrepreneurs & organizations. Panelists will include senior academicians, CSR experts & entrepreneurs.

Clean Energy Solutions

Background and problem statement (Context) -

- India has committed to cut down the annual CO₂ emission by 30% by 2030
- Developing technology alternatives to conventional coal and petroleum to mitigate the GHG emissions and end-to-end, comprehensive, solutions are critical
- Development of new energy technologies provides technological challenges as well as significant business opportunity
- In the short run, India has to aggressively pursue energy efficiency and Demand Side Management

Key Discussion points -

- Large-scale development and deployment of wide range of clean energy solutions - hydrogen, solar, nuclear, wind, biofuel, etc.
- Facilitating Transition from conventional to Clean energy (role of Tech and policy)

- Current and emerging challenges in clean energy space and how academia is helping solve these challenges.
- Share some examples of significant innovations from IITB which have had an impact in making these solutions more affordable and accessible across India.