

Mission Integrated Bio-refineries

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In news—The Union Minister of State (Independent Charge) Science & Technology launched a major futuristic Public Private Participation (PPP) mode initiative for 'Clean Energy' with the full launch of "Mission Integrated Bio-refineries" to accelerate Clean Energy solutions.

About the Mission-

- **The Mission unites a dynamic and results-oriented partnership of countries**, international organizations, the corporate sector, academic institutions and civil society to accelerate innovation for renewable fuels, chemicals, and materials for a low-carbon future.
- **The goal is to develop innovative solutions to accelerate the commercialization of integrated biorefineries**, with a target of replacing 10% of fossil-based fuels, chemicals and materials **with bio-based alternatives by 2030**.
- **The full launch of "Mission Integrated Bio-refineries" came in the wake of the soft launch by Dr Jitendra Singh in November 2021** at the COP26 side event **at the Mission Innovation Annual Gathering**.
- India, through 'Mission Innovation', is actively engaged in collaborative efforts to catalyze inspiring innovation goals that will lead to affordable and scale-up of clean energy solutions.
- Through Mission Innovation, India with the Netherlands aims to leverage its extensive experience in research and innovation, support for the start-up ecosystem, international collaborations, through the launch of Mission Integrated Biorefineries.

Other initiatives launched-

- **National Funding Opportunity:** Along with the above mission, the ministry has also announced the National Funding Opportunity on Sustainable Aviation Fuels to support and conduct RD&D (Research, Development & Demonstration) to foster biotechnological innovations.
- **Hydrogen Valley:** At the event, Union Minister Dr Jitendra Singh also announced the funding opportunity for the Hydrogen Valley Platform, which is also a global initiative to optimise the hydrogen demand and supply by onsite generation and utilization of renewable resources effectively and water access areas with geographical identity.
- The H2 valleys will aid in achieving cohorts of clean hydrogen valleys to further combine the complete hydrogen value chain (production, storage and transportation) and the Department of Science and Technology (DST) has committed to facilitating the delivery of three clean hydrogen valleys in India by 2030.
- The event also witnessed the launch of three **Material Acceleration Platforms (MAP)**, set up by the DST. The three platforms are –
 - Integrated Clean Energy Material Acceleration Platform on Storage.
 - Integrated Clean Energy Material Acceleration Platform on Materials.
 - Integrated Clean Energy Material Acceleration Platform on Bioenergy & Hydrogen.
- These platforms would leverage emerging capabilities in next-generation computing, artificial intelligence (AI) and machine learning, and robotics to accelerate the pace of materials discovery up to 10 times faster.