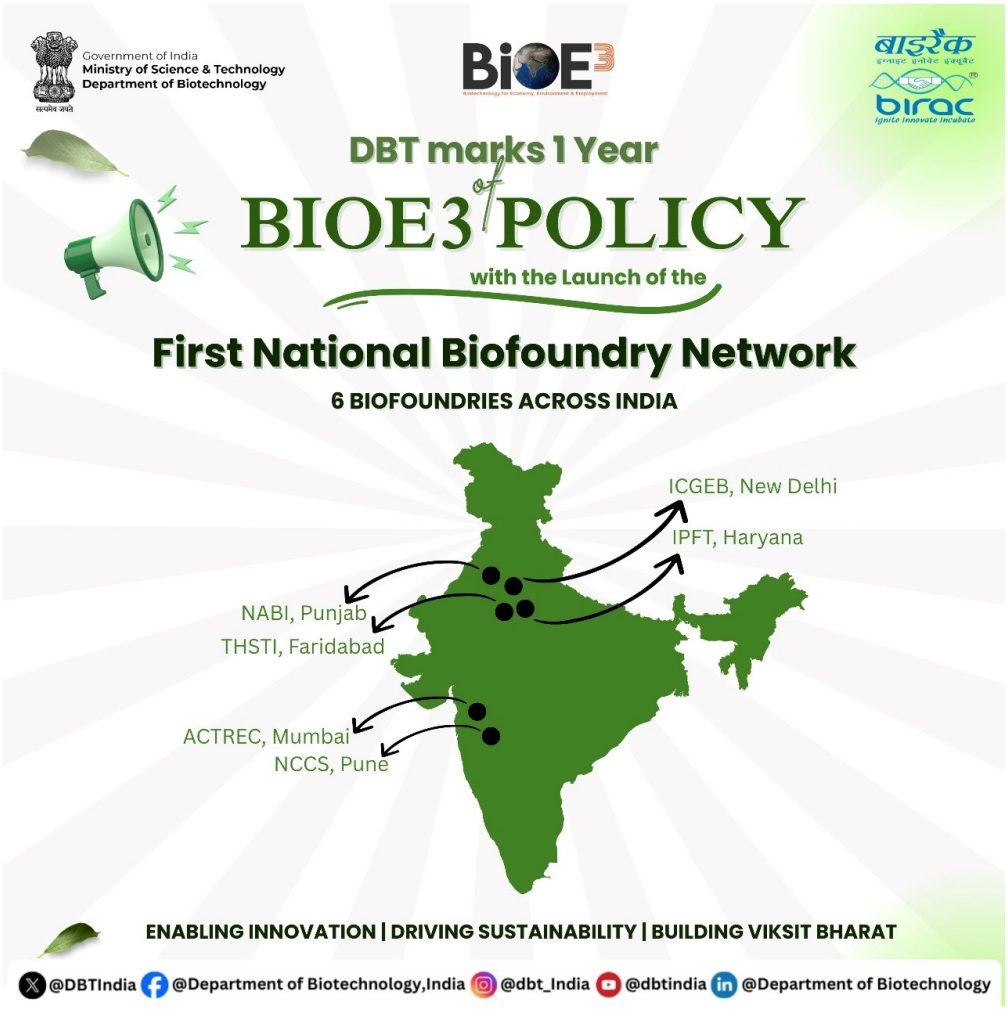
India's First National Biofoundry Network

Prelims – *Current events of National and International importance| Science & Technology.*

Why in News?

Recently, the Union Ministry of Science and Technology (S&T) launched the BioE3 Challenge for Youth and the country's first National Biofoundry Network.

- **Aim -** To accelerate biotechnology innovation, scale up biomanufacturing, and create jobs.
- **Launched in –** August 27, 2025.
- **Nodal Ministry –** Department of Biotechnology (DBT), Ministry of Science & Technology.
- **Objective –** To provide a collaborative platform for advancing research in areas like synthetic biology and sustainable biotech.
- **Institutional Collaboration –** It involves 6 institutions to help scale up opportunities.
    - International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi – ***Microbial Biomanufacturing***
    - National Agri-Food and Biomanufacturing Institute (NABI), Punjab – ***Agri-Food Bio-Mug***
    - National Centre for Cell Science (NCCS), Pune – ***Bioengineering Research Centre***
    - Institute of Pesticide Formulation Technology (IPFT), Haryana – ***Bio-botanical Pesticides***
    - Translational Health Science and Technology Institute (THSTI), Faridabad– ***Bio-Enabler Hub***
    - Advanced Centre for Treatment, Research and Education in Cancer (ACTREC), Mumbai – ***Advanced Cancer Cell Therapy Hub.***



BioE3 Challenge for Youth

- **BioE3 –** Biotechnology for Economy, Environment and Employment.
- **Objective –** To empower grassroots innovators, foster youth-led change, and strengthen India's journey towards a sustainable and self-reliant bioeconomy.
- **Theme –** "***Design Microbes, Molecules & More".***
- **Participation –** It is open to ***school students (Classes 6–12),*** university students, researchers, faculty, startups and Indian nationals.
- Designing safe-by-default biological solutions addressing challenges in health, agriculture, environment and industry.
- **Awards –** The top 10 winning solutions each receive a cash award of ***Rs 1 lakh*** along with recognition and mentoring support.
- Funding of up to ***Rs 25 lakh*** will be provided to 100 selected awardees through the Biotechnology Industry Research Assistance Council (BIRAC).
- **Design framework –** It guides participants to define real needs,
  - Build Evidence-first solutions
  - Ensure Sustainability by design
  - Pursue Integration with other technologies and policies

    - Develop strategies to Go-to-market.
- It creates a Net-positive impact through measurable outcomes in jobs, inclusion, and equitable access.

Quick Facts

• **The BioE3 Policy** promotes innovation in R&D and entrepreneurship by setting up Biomanufacturing hubs, Bio-AI hubs, and Biofoundries to accelerate technology development and commercialisation.
• It focuses on Bio-based chemicals, biopolymers & enzymes, smart proteins & functional foods, precision biotherapeutics, climate resilient agriculture, carbon capture & its utilisation, marine and space research.

References

1. The Hindu| India's first National Biofoundry Network
2. PIB| BioE3 Challenge for Youth
3. PIB| BioE3 Policy

Related News – India Bio-Economy Report

