

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

RAJYA SABHA
UNSTARRED QUESTION NO. 1732
ANSWERED ON 13/03/2025
BioE3 Policy

1732 # Dr. Kalpana Saini:

Will the **Minister of SCIENCE & TECHNOLOGY** be pleased to state:

- (a) the steps taken by Government so far to promote the bio-manufacturing sector under the BioE3 (Biotechnology for Economy, Environment and Employment) Policy;
- (b) the provisions made by Government related to environmental and bio-diversity conservation under the BioE3 policy; and
- (c) whether Government has planned to set up new bio-manufacturing hubs in the country under this policy, if so, the details thereof, State-wise?

ANSWER

MINISTER OF STATE (INDEPENDENT CHARGE) FOR THE MINISTRY OF SCIENCE
AND TECHNOLOGY & EARTH SCIENCES
(DR. JITENDRA SINGH)

- (a) Following steps have been taken by the Government, to promote the biomanufacturing sector under the BioE3 Policy.
 - Thematic Sectors/subsectors under BioE3 Policy: Through extensive national consultations and sectoral expert meetings, six thematic sectors/subsectors have been identified for the Biomanufacturing Initiative. These include: i) Bio-based chemicals and enzymes, ii) Smart Proteins and Functional Foods, iii) Precision biotherapeutics, iv) Climate-resilient agriculture, v) Carbon capture and utilization; vi) Futuristic Marine and Space research. A '*Strategic Roadmap for the Biomanufacturing initiative*' has been formulated to implement these thematic sectors/subsectors. The DBT-BIRAC Joint Call for Proposals on (i) 'Precision Biotherapeutics-Cell and Gene Therapy'; (ii) 'Smart Proteins' and (iii) 'Carbon Capture and its Utilization' for Fostering High Performance Biomanufacturing under the BioE3 Policy have been announced.
 - BioEnablers: The DBT-BIRAC joint call for proposals, "मूलांकुर BioEnablers—Biofoundries and Biomanufacturing Hubs", has been issued. The proposals recommended by the Committees are under implementation.

- **Building Regulatory Framework:** The first DBT-BIRAC joint regulatory conclave was organized for the ‘Smart Proteins’ sector on 30th April 2024.
 - **India’s first Biomanufacturing Institute:** The National Agri-Food and Biomanufacturing Institute in Mohali, has been inaugurated and dedicated to the nation on 31st October 2024.
 - **Inter-ministerial Collaborations:** The Memorandum of Understanding (MoU) has been signed between DBT and ISRO and a joint working group has been set up between DBT and ISRO to identify areas of mutual interest for support under “Space Biomanufacturing”.
 - **International Collaboration:** Department of Biotechnology (DBT), Government of India and National Science Foundation (NSF) of U.S.A. have signed an Implementation Agreement (IA) on research Cooperation and a joint Call for inviting proposal has been issued.
 - **Outreach of BioE3 Policy:** A Biomanufacturing Website has been launched. Outreach activities for the BioE3 Policy are being carried out extensively through press meets, social media platforms, editorials, and school campaigns to highlight its significance. DBT in partnership with BIRAC have launched Webinar Series on Biomanufacturing and Biofoundry Initiative on 14th November 2024. Since then, nine Webinars have been conducted.
 - **Centre-State Partnership:** A Centre-State Partnership Conclave on BioE3 Policy has been organised on 7th February 2025 under the Chairmanship of the Hon’ble Minister of Science & Technology. During the Conclave, the Hon’ble Minister has released a Booklet on *‘Establishment of the BioE3 Cells for Biomanufacturing Implementation: Catalyzing Centre-State Partnerships to Drive Biotech Innovations’*.
- (b) The Biomanufacturing initiative is focussing on environmental and bio-diversity conservation by ushering a new wave of innovation that supports development of sustainable bio-based products, from biomass and waste resources. The BioE3 Policy is aligned with India’s vision of Green Growth (announced in the Union Budget 2023-24) and also aligned with the clarion call of the Hon’ble Prime Minister on ‘Lifestyle for Environment (LiFE)’ which envisions collective approach towards sustainability.
- (c) In order to set up Biomanufacturing Hubs across the country, the DBT-BIRAC joint call for proposals “**मूलांकुर** BioEnablers—Biofoundries and Biomanufacturing Hubs”, has been issued. The recommended Biofoundries and Biomanufacturing Hubs are in the States of Delhi, Maharashtra, Punjab, Haryana, Chennai, Karnataka, Odisha, Telangana, and Gujarat.