

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY
LOK SABHA
ADMITTED/UNSTARRED QUESTION NO. 232
TO BE ANSWERED ON 27/11/2024

“BioE3 Policy”

232: Shri Vijayakumar Alias Vijay Vasanth:

Shri Manickam Tagore B:

Will the **Minister of SCIENCE & TECHNOLOGY**

विज्ञान और प्रौद्योगिकी मंत्री

be pleased to state:

- (a) the manner in which ‘BioE3’ policy will specifically accelerate technology development and commercialization in the biomanufacturing sector and the key performance indicators for measuring its success;
- (b) the steps taken/being taken to establish biomanufacturing and bio-AI hubs, as well as biofoundries, under the ‘BioE3’ policy, the manner in which these initiatives contribute to the expansion of India’s skilled workforce and job creation;
- (c) the manner in which the ‘BioE3’ policy aligns with the Government’s existing initiatives such as the ‘Net Zero’ carbon economy and the ‘Lifestyle for Environment’ program, the synergies that are expected between these policies to promote green growth and a circular bioeconomy; and
- (d) the details of the strategic and thematic sectors prioritized under the ‘BioE3’ policy, and the manner in which the policy will address challenges related to climate-resilient agriculture, carbon capture, marine and space research, and other focus areas?

ANSWER

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

(DR. JITENDRA SINGH)

विज्ञान और प्रौद्योगिकी तथा पृथ्वी विज्ञान मंत्रालय के राज्य मंत्री (स्वतंत्र प्रभार)

(डॉ. जितेन्द्र सिंह)

- (a) The BioE3 Policy aims at accelerating development of technologies for bio-based products and their commercialization by setting up of BioEnablers that include Bio-Artificial (Bio-AI) Intelligence Hubs, Biofoundries and Biomanufacturing Hubs across the country. Bio-AI hubs will be set up to augment research and innovation for the development of technologies for bio-based products across the identified thematic sectors/subsectors of Biomanufacturing, by powering data-driven research and AI informed predictive analytics. The Biofoundries and Biomanufacturing Hubs will aim at setting up of infrastructure/ facilities for augmenting scale up of technologies for bio-based products. The key performance indicators (KPIs) for meaningful success have been identified in terms of setting up of Biofoundries and Biomanufacturing Hubs.
- (b) DBT-BIRAC have issued a joint call for proposals to invite applications for setting up of “**मूलांकुर** BioEnablers – Biofoundries and Biomanufacturing Hubs” in both academia and industry. The Bio-Enablers will also provide training and internship for building human resources with the required interdisciplinary, cross functional technical skills to foster biomanufacturing.
- (c) The BioE3 Policy is aligned with India’s vision of Green Growth (announced in the Union Budget 2023-24) and also with the clarion call of the Hon’ble Prime Minister on ‘Lifestyle for Environment (LiFE)’ which envisions collective approach towards sustainability. The Policy also aligns with the Hon’ble Prime Ministers vision of ‘Net-Zero’ carbon economy of the country. Further, the Biomanufacturing and Biofoundry initiative has been announced as a scheme during Government’s Interim Budget for 2024-25.
- (d) Based on National Consultation meeting and inter-ministerial consultations six thematic sectors along with subsectors of national importance have been prioritized for implementation under the BioE3 Policy. These include (i) Bio-based chemicals and enzymes, (ii) Functional foods and Smart proteins, (iii) Precision biotherapeutics, (iv) Climate resilient agriculture, (v) Carbon capture and its utilization, (vi) Futuristic marine and space research. A series of Sectoral Expert Committee meetings have been conducted across the country and current scenario (both global and national), gaps and challenges as well as existing strengths and opportunities have been identified for each selected sector/ sub-sector. These are currently being addressed.