

GOVERNMENT OF INDIA

MINISTRY OF SCIENCE & TECHNOLOGY

DEPARTMENT OF BIOTECHNOLOGY

LOK SABHA

UNSTARRED QUESTION NO. 5264

ANSWERED ON 02.04.2025

“BioE3 Policy”

5264: Dr. Sambit Patra

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

- (a) whether the Government has launched an initiative named as BioE3, if so, the objectives and details thereof;
- (b) whether there is any proposal under the consideration of Government to develop climate resilient food sources such as smart proteins under BioE3 policy, if so, the details thereof;
- (c) the details of the quantum of budget earmarked for the implementation of BioE3 policy; and
- (d) the details of the quantum of budget earmarked to support the funding for the development of smart proteins to achieve protein sufficiency in the country under BioE3 policy ?

ANSWER

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

(DR. JITENDRA SINGH)

- (a) Yes Sir, the Department of Biotechnology, has launched the **BioE3 (Biotechnology for Economy, Environment, and Employment) Policy** for ‘*Fostering High-Performance Biomanufacturing*’ subsequent to the Union Cabinet approval, on 24th August 2024. The objective of the BioE3 Policy is to lay down the framework for high-performance Biomanufacturing, to accelerate the development and scale up of sustainable Bio-based products in the country. The Policy will play a pivotal role promoting in ‘Green Growth’

while driving country's Bioeconomy, by fundamentally transforming the India's economy from today's consumptive manufacturing paradigm to the one based on regenerative principles.

The Policy focuses on six thematic sectors of national importance (i) Bio-based chemicals and enzymes, (ii) Smart proteins and functional foods, (iii) Precision biotherapeutics, (iv) Climate resilient agriculture, (v) Carbon-capture and its utilization and (vi) Marine and space research. BioEnablers including Bio-Artificial Intelligence (AI) Hubs, Biofoundries and Biomanufacturing Hubs will be set up to support research, innovation and scale-up across the thematic verticals through Public Private Partnership (PPP).

- (b) Yes, Sir. Under the BioE3 Policy 'Smart Proteins' has been identified as a thematic sector for the development of climate-resilient food sources, to address food and nutrition security as well as environmental challenges by supporting the development and scale up of smart proteins including fermentation-derived, plant-based, and cell culture-based proteins. Joint DBT and BIRAC Call for Proposals on "Smart Proteins" for fostering high-performance biomanufacturing under BioE3 Policy has been announced. This aims to foster an innovative ecosystem for enabling the development of a sustainable biomanufacturing ecosystem that delivers high-quality, affordable 'Smart Proteins' to meet India's nutritional and economic aspirations.
- (c) & (d) A budgetary outlay of Rs 1500 Crores for 3 years (from 2023-24 to 2025-26) has been approved under the 'Biotechnology Research Innovation and Entrepreneurship Development (Bio-RIDE)' scheme of DBT for the Biomanufacturing and Biofoundry Initiative. This also includes funding of research & innovation, scaleup and for setting up of Biofoundries and Biomanufacturing Hubs for the biomanufacturing of smart proteins.
