GOVERNMENT OF INDIA MINISTRY OF SCIENCE & TECHNOLOGY DEPARTMENT OF BIOTECHNOLOGY

RAJYA SABHA

UNSTARRED QUESTION NO. 1728

ANSWERED ON 13/03/2025

Promotion and impact of the BIO-E3 policy on country's bio-economy sector

1728 # Shri Sanjeev Arora:

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

- (a) whether Government has identified specific bio-based industries for promotion under the Bio-E3 Policy;
- (b) the current size of country's bio-economy sector in terms of GDP contribution; and
- (c) the estimated increase in employment opportunities under this Policy?

ANSWER

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

- (a) Yes Sir, under the BioE3 Policy six thematic sectors/subsectors of national importance have been identified. 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 and (vi) Marine and space research. The bio-based industries focusing on these thematic sectors/sub-sectors will be promoted through Public Private Partnership (PPP) for innovative research, scale-up and setting up of BioEnablers (BioArtificial Intelligence Hubs, Biofoundry and Biomanufacturring Hubs) under BioE3 policy.
- (b) As per India Bioeconomy Report 2024, India's Bioeconomy has increased to \$150.97 billion in 2023, which accounts for 4.25% of India's GDP of \$3.55 trillion in 2023.
- (c) The increase in employment opportunities has been estimated based on fostering Bioinnovation and Biomanufacturing in the country, under the Policy. Establishment of Biomanufacturing hubs across the country is anticipated to generate employment opportunities in the interdisciplinary field of Biomanufacturing.
