

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO-4323
ANSWERED ON 02/04/2026

NUCLEAR RESEARCH

4323. SHRI PRADIP KUMAR VARMA

Will the PRIME MINISTER be pleased to state:-

- (a) the number of nuclear research projects undertaken during the last three years;
- (b) the number of projects related to the application of nuclear technology in medicine, agriculture, and industry;
- (c) the central budget released for research and development during those years; and
- (d) the targets set for expansion of research in the coming years?

ANSWER

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS
AND PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH)

- (a) Around one hundred and forty (140) nuclear research projects are undertaken in the Department of Atomic Energy (DAE) in last three years.
- (b) Around twenty three (23) projects related to the application of nuclear technology in medicine, agriculture, and industry pursued by DAE.
- (c) Budget released (Actual Expenditure) for Research and Development is

2023-24	Rs 9305.39 crore
2024-25	Rs 9546.73 crore
2025-26(till February 2026)	Rs 9396.38 crore

- (d) DAE undertakes R&D activities through various sanctioned projects. The focus of research is on new technology development in multidisciplinary areas in line with the departmental mandate to achieve self-reliance. Key focus areas include; flagship programme related to development and deployment of new research reactors for R&D, isotope production reactors with isotope processing facilities for self-reliance in isotope production for cancer treatment. R&D is also being pursued for development of reactor technologies for new reactors including Small Modular Reactors (SMRs) for power and hydrogen production with associated hydrogen production cycles and their front and back-end fuel cycles. Accelerator programme along with development of associated cryogenic and superconducting technologies are being pursued to achieve higher beam energy for societal, medical and scientific applications for Atmanirbharata in these advanced technologies. Development of laser-based technology for medical and engineering applications. Advanced materials and manufacturing technologies are also being developed to support these flagship programme.

Further, focused efforts are directed towards the use of radiation and nuclear technologies for societal applications such as development of new radiopharmaceuticals for cancer care, development of improved crop varieties, based on radiation mutagenesis, with desirable traits such as high yield, early maturity, tolerance to biotic and abiotic stresses etc., and development of technology and protocols for food preservation using radiation technologies for food security, technologies for water desalination and purification. R&D activities in basic and applied sciences and astrophysics are also being pursued.
