

**GOVERNMENT OF INDIA
ATOMIC ENERGY
LOK SABHA**

UNSTARRED QUESTION NO:3479
ANSWERED ON:18.03.2015
DEVELOPMENT OF TECHNOLOGY FOR RURAL INDIA
Sigrival Shri Janardan Singh

Will the Minister of ATOMIC ENERGY be pleased to state:

- (a) whether the Government has developed any technology in atomic field that is focused on rural India;
- (b) if so, the details thereof including funds allocated for the implementation of such technology/projects;
- (c) the efforts being made to spread public awareness and outreach on such issues;
- (d) whether the Government has tied up with research and development faculty of other countries in order to encourage breakthroughs in the field of nuclear energy; and
- (e) if so, the details thereof?

Answer

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

(a)&(b) Yes, Sir. The Department of Atomic Energy (DAE) has developed and deployed technologies to use atomic energy in the areas of electricity generation, nuclear agriculture, food preservation, healthcare, isotope hydrology etc. Ionizing radiation has been used to induce mutations in plant breeding to develop new crop varieties having better yield, stress resistance and early maturity. Radioisotopes have been used for clinical diagnosis and therapeutic purposes. They are also used for treating cancer and sterilizing medical products. The gamma rays emanating from radioisotopes are also used to increase the shelf life of food products. In addition, Bhabha Atomic Research Centre (BARC), a constituent unit of DAE has also developed several desalination and water purification technologies for application in rural areas. Using Isotope hydrology techniques employing radiotracer, studies are carried out for recharging the underwater resources and improving the ground water levels. An outlay of approximately `1700 crore has been provided under XII Plan for projects under Radiation Technologies and their applications.

(c) The Department has an elaborate public awareness program on the technologies developed with a focus on rural area and society in general. This includes arranging seminars/workshops on nuclear technologies in the schools and colleges across India and conducting exhibitions in various fora. The students from schools and colleges are also invited to visit various facilities of BARC and Senior Scientists have interaction sessions with them during such visits. In addition, interviews with Senior Scientists by the media persons are also arranged for broadcasting through electronic media periodically.

(d)&(e) DAE collaborates with other countries on a mutually beneficial basis to participate in high technology areas like high power accelerators. In this connection, recently, an agreement has been signed between DAE and the US Department of Energy (DOE) to make in-kind contribution to a High Intensity Superconducting Proton Accelerator and using the experience and technology gained to build two similar accelerators within the country.