

**GOVERNMENT OF INDIA  
SCIENCE AND TECHNOLOGY  
LOK SABHA**

UNSTARRED QUESTION NO:567  
ANSWERED ON:24.02.2011  
SETTING UP OF NEUTRINO RESEARCH CENTRE  
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**Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:**

- (a) whether the Government is planning to set up a neutrino research centre in Theny, Tamil Nadu;
- (b) if so, the details thereof;
- (c) whether there is any environmental concerns for setting up of the centre;and
- (d) if so, the measures taken by the Government to protect it?

**Answer**

MINISTER OF THE STATE IN THE MINISTRY OF PLANNING MINISTER OF THE STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS MINISTER OF THE STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF THE STATE IN THE MINISTRY OF EARTH SCIENCES (ASHWANI KUMAR)

(a) Yes, Madam. There is now a proposal to establish The India-based Neutrino Observatory (INO) jointly by the Department of Atomic Energy and Department of Science and Technology. A site in Bodi West Hills near T. Pudukottai village of Theni district, Tamilnadu has been identified as a suitable location.

(b) The project includes construction of a world-class underground laboratory under a rock cover of 1200 metre from all directions. The underground laboratory will be accessed by 7.5 metre wide tunnel of approximately 2 km in length. The primary goal of INO is to study neutrino properties. Determination of neutrino properties is one of the most significant open problems in physics today. Such studies will help us to understand the interactions among subatomic particles at a very small scale. In this underground laboratory, a massive 50 kton particle detector will be installed to study the cosmic ray produced neutrinos.

(c) & (d): Most of the construction work of the proposed project will be carried out deep underneath the earth's surface. The activities such as blasting and muck dumping will have some impact on the local environment. However, noting that wildlife is rarely reported from this area, the impact of the activities on them will be effectively negligible. The Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore, Tamilnadu, which has prepared the Environmental Impact Assessment (EIA) report for the project, has opined that the environmental impact will be low considering the ecological setup of the area. In addition, it has been suggested that by adopting proper planning and management measures, the impact could be reduced to a considerable extent. During the operation phase, the impact of the project on environment will be effectively negligible.

In order to minimize the impact on the environment, howsoever small, it is proposed to setup an Environment Monitoring Cell to oversee the implementation of the environmental management plan of INO. Some of the measures that will be implemented are:

- (i) control blasting and use of new vehicles to reduce the noise level during construction phase;
- (ii) disposal of rock debris as and when generated;
- (iii) planting local species and greening;
- (iv) waste disposal and sanitation etc.