

GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
**LOK SABHA**  
**UNSTARRED QUESTION No.2377**  
TO BE ANSWERED ON 30.11.2016

**RESERVES OF URANIUM AND THORIUM**

2377. SHRI RAOSAHEB DANVE PATIL:

Will the PRIME MINISTER be pleased to state:

- (a) Whether there are large reserves of uranium and thorium in the country which have not been utilised;
- (b) if so, the State-wise details thereof; and
- (c) the action taken/being taken by the Government to extract and utilize these vast reserves?

**ANSWER**

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

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- (a) Yes, Sir.
- (b) The Atomic Minerals Directorate for Exploration and Research (AMD), a constituent unit of Department of Atomic Energy (DAE), has a mandate to identify and evaluate resources of atomic minerals including that of uranium and thorium in the country. During the last six and half decades, AMD has carried out survey and exploration for uranium and thorium resources in different states of the country and identified substantial resources. AMD has so far established 2,44,947 tonne (t) *in situ* U<sub>3</sub>O<sub>8</sub> (2,07,715 t U) and about 1.07 million tonne (Mt) ThO<sub>2</sub> contained in 11.935 Mt monazite (mineral containing thorium and rare earths) as on October, 2016. State-wise details of the uranium resource are given below:

State	Uranium reserves	
	U <sub>3</sub> O <sub>8</sub> (t)	U (t)
Andhra Pradesh	1,18,852	1,00,786
Telangana	18,550	15,731
Jharkhand	64,392	54,604
Meghalaya	23,040	19,538
Rajasthan	9,421	7,989

Karnataka	4,682	3,970
Chhattisgarh	3,986	3,380
Uttar Pradesh	785	666
Uttarakhand	100	85
Himachal Pradesh	784	665
Maharashtra	355	301
<b>Total</b>	<b>2,44,947</b>	<b>2,07,715</b>

[1 t U<sub>3</sub>O<sub>8</sub> = 0.848 t uranium metal (U)]

The total resource of monazite is contained in 128 deposits. State-wise details of *in situ* monazite resource is given below:

State	No. of deposits	Resource (Mt)
Odisha	10	2.41
Andhra Pradesh	26	3.72
Tamil Nadu	51	2.46
Kerala	35	1.90
West Bengal	1	1.22
Jharkhand	1	0.22
Maharashtra	3	0.002
Gujarat	1	0.003
<b>Total</b>	<b>128</b>	<b>11.935</b>

Monazite from these placer sands contains about 9-10% ThO<sub>2</sub>.

- (c) The uranium deposits established by AMD are mined and processed for recovery of uranium by Uranium Corporation of India Limited (UCIL), a Public Sector Undertaking (PSU) of Department of Atomic Energy (DAE). The deposits at Jaduguda, Narwapahar, Bagjata, Bhatin, Banduhurang, Turamdih and Mohuldih in Jharkhand and Tummalapalle in Andhra Pradesh are currently under commercial exploitation by UCIL. Mining at Gogi, Karnataka and Rohil, Rajasthan are at exploratory stage. Efforts are being made to initiate exploitation of deposits at Lambapur-Peddagattu, Telangana and KPM (Domiasiat) and Wahkyn, Meghalaya.

Indian Rare Earths Limited (IREL), a PSU under DAE has been producing monazite, a mineral containing thorium, from its mining and mineral separation plants located at Chavara, Kerala, Manavalakurichi, Tamil Nadu and Orissa Sand Complex, Odisha. Indigenous efforts towards development and demonstration of Thorium-based reactor technology are in experimental stage.

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