

GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
**LOK SABHA**  
**UNSTARRED QUESTION NO. 1788**  
TO BE ANSWERED ON 13.12.2023

**Rare Earth Minerals**

1788. SHRI T.R.V.S. RAMESH:

Will the PRIME MINISTER be pleased to state that:

- (a) whether the Government has taken any steps in terms of exploration and production of rare earth minerals, if so, the details thereof and if not, the reasons therefor; and
- (b) the details of India's import and domestically produced rare earth minerals?

**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. Atomic Minerals Directorate for Exploration and Research (AMD), a Constituent Unit of Department of Atomic Energy (DAE) is carrying out exploration to augment resources of Rare Earth Elements (REE) along the coastal / inland / riverine placer sands of the country for augmentation of Heavy Minerals resource, which includes monazite (a mineral of REE and thorium) and xenotime (a mineral of REE and yttrium) as well as in several potential geological domains (hard rocks) of the country.

As on date, Atomic Minerals Directorate for Exploration and Research has established;

- i. 13.07 million tonnes in-situ monazite (containing ~55-60% total Rare Earth Elements oxide) resource occurring in the coastal beach placer sands in parts of Kerala, Tamil Nadu, Odisha, Andhra Pradesh, Maharashtra and Gujarat and in the inland placers in parts of Jharkhand, West Bengal and Tamil Nadu.
- ii. 11,20,201 tonne Rare Earth Elements Oxide (REO) in Ambadungar area, Chhota Udepur district, Gujarat.
- iii. 36,945 tonnes REO in Bhatikhera area, Barmer district, Rajasthan.
- iv. 2,000 tonne of heavy mineral concentrate containing ~2% xenotime (a phosphate mineral of yttrium and rare earth elements) in the riverine placer deposits of Chhattisgarh and Jharkhand. Presently, AMD is carrying out collection of xenotime bearing heavy mineral concentrate incidental to prospecting operation in Chhattisgarh and has a stockpile of 107.313 tonnes xenotime bearing heavy mineral concentrate.

AMD is presently carrying out exploration to identify additional resources of monazite (a mineral of REE and thorium) in the beach sand deposits along coastal tracts in parts of Sattankulam – Kudraimoli, Tirunelveli and Thoothukudi districts in Tamil Nadu; Nuagaon – Brahmapur and parts of Mahanadi Delta region, Puri district in Odisha and Kapaskuddi – Kaviti, Srikakulam district and KP Palem – Turputtalu, West Godavari district in Andhra Pradesh.

Further, AMD is carrying out survey and prospecting operations to augment rare earths resources in hard rock terrains in Phulan - Nal - Gugrot - Saiji Ki Beri - Rebariyon ki Dhani - Buriwara - Dantala - Bhatikhera - Kuship, Barmer district in Rajasthan; Aratiya – Ghantol - Ambadungar, Chhota Udepur district in Gujarat; Pakkanadu - Mulakadu - Idapadi - Sankaridurg, Salem district in Tamil Nadu and Kanyaluka - Bhalki, East Singhbhum district in Jharkhand.

Further, the known source of rare earth mineral in India is radioactive. IREL(India) Limited (IREL) a PSU under DAE has been mandated to produce rare earth minerals in India. IREL has been operating in three locations having the facility for integrated mining and processing of mineral sands and these leases as per Statutory clearances can produce upto 4100 tons of RE mineral (Monazite). IREL has the capacity to process 10000 tons of monazite at its facility in Odisha. IREL has been granted Letter of Intent (LoI) for three more deposits in different geographies to augment the balance requirement of RE mineral for IREL plant.

- (b) As such no import of Rare Earth mineral is reported. The Indian source of rare earth mineral being radioactive, its import is regulated through licensing by the Government. The domestic production of RE mineral (Monazite) is around 4100 tons as stated above.

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