

GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 1228**  
TO BE ANSWERED ON 07.05.2015

**PRODUCTION OF RARE EARTH ELEMENT**

1228. SHRI AVINASH PANDE:

Will the PRIME MINISTER be pleased to state:

- (a) the total volume of production of each type of Rare Earth Element (REE) in India over the past three years;
- (b) the proportion of this production that has been exported by India over the last three years; and
- (c) the country-wise breakup of REEs thus exported and the share of Japan in the total exports of REEs from India?

**ANSWER**

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

- (a) There are a total of 17 Rare Earth Elements in Nature. These are: Cerium, Lanthanum, Praeseodymium, and Neodymium (4, which are commonly referred to as "lighter rare earth elements"); and Scandium, Yttrium, Gadolinium, Samarium, Europium, Promethium, Terbium, Ytterbium, Erbium, Holmium, Lutetium, Dysprosium, and Thulium (13, referred to as 'heavier rare earth elements'). Monazite is the only commercial mineral source of extraction and production of rare earths in India. Countries such as China, USA and Indonesia which are major rare earths producing countries now, produce Rare Earths from mineral sources such as bastnaesite, xenotime, and ion-absorption clay. While production of rare earths from Monazite, which is the only source of rare earths in India, yields materials such as Uranium and Thorium (which are radioactive) in the process of separation of Rare Earths, the mineral sources for Rare Earths in China, USA, and Indonesia, i.e bastnaesite, xenotime and ion-absorption clay are non radioactive. These minerals are not available in India in commercially exploitable quantities. Further, since separation of Rare Earths from Monazite (which is abundantly

available in certain coastal areas of India) yields Uranium and Thorium which are “prescribed substances” under the Atomic Energy Act, 1962, only the Department of Atomic Energy PSU, Indian Rare Earths Limited (IREL) has been entrusted with the responsibility of production of Rare Earths in the country through processing of Monazite. The details of production of Rare Earths by IREL over the past three years (Qty in metric tons) are as follows:

| Type of Rare Earths          | 2012-13       | 2013-14      | 2014-15       | Total for 3 Years |
|------------------------------|---------------|--------------|---------------|-------------------|
| Lanthanum Compounds          | 65.662        | 0.438        | 16.723        | 82.823            |
| Other Rare Earth Compounds** | 0.000         | 0.000        | 17.479        | 17.479            |
| <b>Total</b>                 | <b>65.662</b> | <b>0.438</b> | <b>34.202</b> | <b>100.302</b>    |

**\*\*Other Rare Earth Compounds include** (i) Cerium Compounds – 8.447 tons (ii) Samarium Compounds – 9.032 tons

(b)&(c) There was no export of Rare Earth Elements by IREL, the only domestic producer of Rare Earths using Indian mineral resources over the last three years.

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