GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 3
TO BE ANSWERED ON 02.02.2023

Exploration and production of rare earth mineral

3 Smt. Mausam Noor:

Will the PRIME MINISTER be pleased to state:

(a) whether India is reliant on China when it comes to accessing rare earth minerals and if so, the details thereof;

(b) whether Government has taken any step to develop its own rare earth value chain and if so, the details thereof;

(c) the steps taken by Government in terms of exploration and production of rare earth minerals; and

(d) the details of India's import and domestically produced rare earth minerals?

ANSWER

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

(a) No, India is not reliant on China for accessing rare earth minerals.

(b) In India, capacity and capabilities in terms of mining, processing, extraction, refining and production of high pure RE oxides is adequately available. RE in the form of oxides/ compounds, duly liberated from radioactivity is available for all including the private sector since 1950. Rare earth value chain is available in India upto RE oxide, further a facility is being set up to produce RE metal titled 'Rare Earth Theme Park' wherein pilot plants will be set up by upscaling the scientific principles proven at laboratory scale to demonstrate the same to aspiring Industries willing to set up commercial operations. Besides, the Theme Park will also undertake skill development activities to develop the workforce of future.

(c) Atomic Minerals Directorate for Exploration and Research (AMD), a constituent unit of 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 December, 2022; Atomic Minerals Directorate for Exploration and Research (AMD) has established

- 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.
- 7,37,283 tonne Rare Earth Elements Oxide (REO) in Ambadungar area, Chhota Udepur district, Gujarat
- 36,945 tonnes REO in Bhatikhera area, Barmer district, Rajasthan
- 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 in the unit established in Chhattisgarh and has a stockpile of 100.038 tonnes xenotime bearing heavy mineral concentrate.

Further, Geological Survey of India (GSI) carries out mapping and exploration activities for various mineral commodities including Rare Earth Element (REE) and Rare Metal (RM) in different parts of the country with an aim to find out potential mineralized locales as well as to augment mineral resource.

As regards production, capacity and capabilities in terms of mining, processing, extraction, refining and production of high pure RE oxides is adequately available in India. RE in the form of oxides/ compounds, duly liberated from radioactivity is available for all including the private sector since 1950. Recently, Govt. has issued

LoI for initiating the process of statutory clearance to increase the production of rare earth minerals.

(d) Details of import of rare earth elements (ITCHS: 28461010, 28469010, 28469020, 28469030, 28469090) during FY 2019-2020 to 2022-23 (up to September 2022) and in terms of quantity is enclosed as **(Annexure- I).**

Production of RE Mineral in India as on date is 4100 MT per annum based on available leases.

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ANNEXURE – I

India's import of Rare Earth Elements (ITCHS: 28461010, 28469010, 28469020, 28469030, 28469090) during last 3 FYs (2019-20 to 2021-22) and current FY 2022-23 (April-Sep.)

Value in USD Million.

ITCHS	COMMODITY	UNIT	2019-20		2020-21		2021-22		2022-23 (TILL SEP'22)	
			QTY	VALUE	QTY	VALUE	QTY	VALUE	QTY	VALUE
28461010	CERIUM OXIDES	KGS	102495	0.52	184250	2.04	112639	1.16	138432	1.30
28469010	RARE EARTH OXIDES NES	KGS	10848	0.20	15176	0.20	17638	0.29	5136	0.13
28469020	RARE EARTH FLUORIDES NES	KGS	3	0.01	102	0.01	3025	0.01	0	0.00
28469030	RARE EARTH CHLORIDES NES	KGS	15004	0.02	20000	0.03	30002	0.05	10000	0.02
28469090	OTHER COMPOUNDS INORGANIC/ORGANIC OF RARE EARTH MATERIALS	KGS	832370	11.35	510167	7.31	557031	7.66	273614	2.95
Grand Total			**960720**	**12.10**	**729695**	**9.59**	**720335**	**9.17**	**427182**	**4.40**

Source: DGCIS
Figures of FY2022-23 are Provisional and Subject to Change.