

GOVERNMENT OF INDIA
MINISTRY OF MINES
LOK SABHA
UNSTARRED QUESTION NO. 2552
ANSWERED ON 11.12.2024

CRITICAL MINERAL RESERVES

2552 SHRI SRIBHARAT MATHUKUMILLI

Will the Minister of MINES be pleased to state:

- (a) the details of critical mineral reserves including Cobalt, Lithium and Nickel, State-wise;
- (b) whether any exploration efforts have been undertaken by the Geological Survey of India (GSI) or other agencies to identify critical mineral reserves;
- (c) if so, the details of the findings of such exploration initiatives, State-wise including Andhra Pradesh and the estimated timeline for the commencement of domestic production;
- (d) the details of the steps taken by the Government to reduce India's import dependency on critical minerals including strategies to diversify imports and develop domestic refining and processing capabilities;
- (e) whether the Government has initiated any bilateral or multilateral partnerships with mineral-rich countries and if so, the details thereof; and
- (f) the current status of auctions and planned mining initiatives under the Critical Minerals Mission along with the details of financial or technological support being provided to promote domestic production?

ANSWER

THE MINISTER OF COAL AND MINES
(SHRI G. KISHAN REDDY)

(a): The details of critical mineral reserves including Cobalt, Lithium and Nickel, State-wise, is given at Annexure I.

(b) & (c): Yes, Sir. Geological Survey of India (GSI) had taken up 433 exploration projects in field seasons (FS) 2020-21 to 2023-24, and has taken up another 195 projects in FS 2024-25 to assess the potential of various critical minerals. Further, GSI has taken an initiative for assessment of secondary enrichment zones for Critical Minerals in nationwide scale through its Critical Mineral Assessment Program (CMAP). In FS 2024-25, 16 CMAP projects have been taken up in the States of Madhya Pradesh, Maharashtra, Jharkhand, Odisha, Andhra Pradesh, Karnataka, Kerala, Telangana, Manipur and Meghalaya.

The State-wise details of resource augmented for various critical minerals by GSI is placed at Annexure-II. 59 resource bearing Geological Reports (GRs) and 65 Geological Memorandums (GM) of GSI on critical mineral commodities have been handed over to the concerned State/Central Governments for auctioning. In respect of Andhra Pradesh, 4 GRs and 2 GMs on critical mineral commodities have been handed over, the details of which are at Annexure-III.

Further, funding for 54 critical mineral exploration projects by Mineral Exploration & Consultancy Ltd. (MECL) and for 29 critical mineral exploration projects by 9 notified private exploration agencies have been approved so far from the National Mineral Exploration Trust (NMET).

(d): The Government has, *inter-alia*, taken the following steps to reduce India's import dependency and build supply chain resilience in critical minerals, including strategies to diversify imports and develop domestic refining and processing capabilities.

- Central Government has been empowered to exclusively auction mining lease and composite license for 24 critical minerals, with an aim to increase exploration and mining of critical minerals and ensure self-sufficiency in their supply. 24 blocks have been successfully auctioned so far. Moreover, royalty rates of critical minerals have been rationalized to encourage greater participation in auctions.
- A new mineral concession namely, Exploration License has been introduced for 29 deep-seated minerals such as Cobalt, Lithium and Nickel, which are difficult to explore and mine.
- NMET has been funding critical mineral exploration projects through various exploration agencies.
- The Government has announced in the Union Budget 2024-25 the setting up of a Critical Mineral Mission for a harmonized approach in areas including domestic production, recycling, overseas acquisition of critical mineral assets, and research & development (R&D).
- A framework is being designed to encourage the Indian industry to develop recycling capacity in the country for the separation and production of critical minerals from secondary sources through recycling.
- As part of the Union Budget 2024-25 announcements, import duties have been eliminated for 25 critical minerals to diversify import source and support their easy evacuation to the country, and to encourage domestic refining and processing.

(e): Yes, Sir. The Government has been working to build bilateral or multilateral partnerships with mineral-rich countries, the details of which are as under:

- The Government has entered into bilateral Memoranda of Understanding (MoUs) with the Governments of a number of countries such as Australia, Argentina, Zambia, Peru, Zimbabwe, Bolivia, Morocco, Mali, Colombia, Chile,

Mozambique, Malawi, Cote D'Ivoire and also international organizations such as International Energy Agency (IEA).

- The Government is engaging in various multilateral and bilateral platforms such as Minerals Security Partnership (MSP), the Indo-Pacific Economic Framework (IPEF), and initiative on Critical and Emerging Technologies (iCET) for strengthening the critical minerals value chain.
- Under the aegis of Ministry of Mines, a joint venture company named Khanij Bidesh India Ltd. (KABIL) has been incorporated to acquire critical mineral assets overseas. KABIL has signed an Exploration and Development Agreement with M/s CAMYEN, a State-owned enterprise of Catamarca province of Argentina, for exploration and mining of five Lithium blocks in Argentina.

(f): The Central Government has put up 48 critical and strategic mineral blocks for auction in four tranches so far, of which 24 blocks have been successfully auctioned.

Further, the Government has been promoting R&D and technological innovation in mining and metallurgy sector through its Science and Technology Programme. Due to increased emphasis on critical minerals, focus on critical mineral extraction has been added as a thrust area of the Programme. A total of 11 projects amounting to ₹5.79 crore which are related to Critical Minerals have been sanctioned under the said Programme during 2024-25 (till 05.12.2024).

ANNEXURE I

Annexure I referred to in reply to part (a) of LS USQ No. 2552 answered on 11.12.2024 regarding CRITICAL MINERAL RESERVES

Table: State-wise Reserves of Critical Minerals in India

#	Mineral	State	Unit	Reserves
1	Cobalt	All India	Tonnes	0
2	Graphite	Chhattisgarh	Tonnes	5,282
		Jharkhand		26,04,079
		Kerala		15,443
		Odisha		28,38,414
		Tamil Nadu		31,00,193
		All India		85,63,411
3	Molybdenum	All India	Tonnes	0
4	Nickel	All India	Million Tonnes	0
5	Phosphorous (Rock Phosphate)	Madhya Pradesh	Tonnes	90,31,093
		Rajasthan		2,18,45,000
		All India		3,08,76,093
6	Platinum Group Of Metals (PGMs)	All India	Tonnes of metal content	0
7	Potash	All India	Million Tonnes	0
8	Rare Earth Elements (REE)	All India	Tonnes	0
9	Tin			
	Ore	Chhattisgarh	Tonnes	2,101
		All India		2,101
	Metal	Chhattisgarh	Tonnes	974
All India		974		
10	Titanium	Kerala	Tonnes	23,70,712
		Maharashtra		3,03,551
		Odisha		1,26,54,141
		Tamil Nadu		6,70,221
		All India		1,59,98,625
11	Tungsten	All India	Tonnes	0
12	Vanadium	All India	Tonnes	0
13	Zirconium	Kerala	Tonnes	1,56,509
		Odisha		4,76,672
		Tamil Nadu		36,285
		All India		6,69,466

ANNEXURE II

Annexure II referred to in reply to parts (b) & (c) of LS USQ No. 2552 answered on 11.12.2024 regarding CRITICAL MINERAL RESERVES

State-wise details of cumulative resource augmented by GSI (State-wise) at various cut-off and grades since MMDR Amendment Act, 2015 for various critical and strategic mineral commodities

State	Mineral Commodity (in million tonne)														
	REE-RM	Niobium	PGE	Graphite	Glauconite/ Potash	Phosphorite	Titanium	Gallium	Vanadium	Molybdenum	Tungsten	Lithium	Nickel	Cobalt (in tonne)	Tin
Assam	30.51														
Andhra Pradesh				0.43											
Arunachal Pradesh				13.6					0.38						
Bihar	5.84				300										
Chhattisgarh					4.14	20		30.5	11.6						
Gujarat	192.67	282													
Haryana											1.35				3
Jharkhand	0.009				138.27		28.7	12.9	17.73						
Jammu & Kashmir											5.9				
Karnataka	0.75												2.4	275	
Kerala			0.3										0.2		
Maharashtra	0.046														
Madhya Pradesh				15	23.91			28.7	38.67						
Odisha				0.99									2.1		
Rajasthan					354.02						20.12	6.4			
Uttar Pradesh	0.342				9.66		12.6	2.5	2.72						
Tamil Nadu			0.7	2.02						1.7	0.07				
West Bengal	0.67														
Total	230	282	1	32	830	20	41	74	71	1.7	21.5	12.3	4.7	275	3

ANNEXURE III

Annexure III referred to in reply to parts (b) & (c) of LS USQ No. 2552 answered on 11.12.2024 regarding CRITICAL MINERAL RESERVES

Details of resource bearing critical minerals Geological Reports of GSI handed over since amendment of MMDR Act, 2015

SI No.	District	Title of the Geological Report	Commodity	UNFC Stage	FSP Year
1	East Godavari	Preliminary exploration for tungsten and graphite mineralization at Chinnagalikonda-Potavaram in Rampachodavaramtaluk, East Godavari district, Andhra Pradesh.	Graphite	G3	2016-17
2	Vizianagaram	General Exploration for Manganese And Cobalt in Gumpamkonda Block, Vizianagaram District, Andhra Pradesh	Manganese, Cobalt	G2	2022-23
3	East Godavari	General Exploration for Graphite And Associated elements In Burugubanda Block, East Godavari District, Andhra Pradesh	Graphite	G2	2021-22
4	Anantapur	Preliminary Exploration for Tungsten and associated Mineralization Near Balepalyam Area in Ramagiri-Penakacherla Schist Belt in Anantapur District, Andhra Pradesh	Tungsten	G3	2022-23

Details of Geological Memorandums of GSI handed over

Sl. No.	District	Title of the Geological Memorandum	FS year	No of Blocks	Commodity
1	Kadapa	Lithium mineralization in Tatireddipalle block, Kadapa district, Andhra Pradesh	2021-22	1	Lithium
2	Vizianagaram	Reconnaissance survey for graphite, manganese and associated mineralization in Parasam-Garudabilli area, Vizianagaram District, Andhra Pradesh (G4)	2022-23	1	Graphite