GOVERNMENT OF INDIA
MINISTRY OF MINES
RAJYA SABHA
UNSTARRED QUESTION NO. 2643
TO BE ANSWERED ON 19.03.2018

R&D IN MINING SECTOR

†2643. SHRI SURENDRA SINGH NAGAR:

Will the Minister of MINES be pleased to state:

(a) whether the Research and Development (R&D) activities are being undertaken by Government and private players in the mining sector;

(b) if so, the details thereof during the last three years and the current year;

(c) the details of funds allocated and expenditure incurred on R&D activities by Government during the said period;

(d) whether Government have formulated any plan to explore the sources of minerals and quality of their exploration in the country;

(e) if so, the details thereof; and

(f) the details of latest technology available in the country as compared to other countries?

ANSWER

THE MINISTER OF STATE FOR MINES AND COAL (SHRI HARIBHAI PARTHIBHAI CHAUDHARY)

(a) to (c): Yes, Sir. With a vision to promote research in applied geosciences, mineral exploration, mining and allied areas, mineral processing, optimum utilization and conservation of the mineral resources of the country, for the benefit of the nation and its people, grant-in-aid is provided to various organisations under the "Science & Technology Programme" Scheme of Ministry of Mines. Further, Geological Survey of India (GSI), an attached office under Ministry of Mines, Government of India, carries out R & D activities on fundamental geoscience including research activity related to mineral exploration. So far as private players are concerned, apart from their own R&D units, many of them also avail the services of various government organisations to undertake R&D activities. However, the Government does not maintain data on Research and Development (R&D) activities undertaken by private entities.

The details of funds allocated / expenditure incurred by the Government on Research and Development activities in mining sector under the "Science & Technology Programme" Scheme of Ministry of Mines and the GSI during the last three years and the current year is given as under:

(figures in ₹ lakhs)

S. N.	Organization/Scheme	Financial Year	2014-15	2015-16	2016-17	2017-18
1	"Science & Technology Programme" Scheme of Ministry of Mines	Funds allocated	660	730	661	725
		Expenditure incurred/ proposed for release	660	730	661	725
2	GSI	Funds allocated	757	866	795	875
		Expenditure incurred	730.66	860.70	789.08	784.92 (upto February 2018)
Total		Funds allocated	1,417	1,596	1,456	1,600
		Expenditure incurred upto February 2018/ proposed for release	1,390.66	1,590.70	1,450.08	1,509.92

(d) and (e): Yes, Sir. Government took up a comprehensive review of its exploration strategy and National Mineral Exploration Policy (NMEP), 2016 has been finalised. The NMEP encompasses diverse issues related to exploration like acquisition and dissemination of pre-competitive baseline geoscientific data of the highest standards, creation of a geoscience data repository, special initiative to probe deep-seated/concealed mineral deposits, attracting private sector participation in exploration etc. In order to accelerate the exploration of minerals, the Ministry has taken an important step by establishing a National Mineral Exploration Trust (NMET) with the primary objective of promoting regional and detailed mineral exploration in the country.

(f): To enhance the augmentation as well as chance of discovering mineral resources, advanced technology is required. A lot of advanced machinery/ equipments are deployed for research & development programme which include LA-MC-ICPMS machine, Laser Raman Spectroscopy system, Electron Probe Micro Analysis (EPMA), Trinocular Polarising Microscope for petrography, Isotope ratio Mass spectrometric (IRMS) study, TL/OSL Dating, LA-Q-ICPMS, Hydrostatic drilling machine, Advanced DGPS, latest RG Geophysical Logger, Magneto Metre, Gravimeter, XRD, XRF, HGI, Proximate Analyser, Bomb Calorimeter, AFT, CHN & Sulphur Analyser, Research Microscope, latest software such as MINEX, SURPAC, GDM, ERADAS – IMAGINE, PCI GEOMATICA etc. These machines are capable of generating high precision quality data at par with other countries.

Advanced technology like Crustal studies by Magneto Telluric method (AMT, BBMT and LPMT) is being applied in the mineral exploration and Deep Seismic Reflection Survey (DSRS) data set is used to understand crustal architecture. These technologies are used in advanced countries like Australia, Canada, China, US etc. In India, these technologies are available with various institutes/ organizations.

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