

GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1516

ANSWERED ON 09.12.2024

AQUIFER MAPPING IN NCR OF HARYANA

1516. SMT. KIRAN CHOUDHRY

Will the Minister of **JAL SHAKTI** be pleased to state:

- (a) whether it is a fact that high resolution aquifer mapping has been initiated in various States in the country;
- (b) if so, the details of blocks included for the mapping particularly in NCR area of Haryana i.e. Faridabad, Gurugram and Bhiwani etc;
- (c) whether the mapping has been completed; and
- (d) if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) & (b) The High-Resolution Aquifer Mapping using Heliborne Transient Electro-Magnetic (TEM) survey has been taken up and completed in parts of the states of Rajasthan, Gujrat, and Haryana. Further, in Haryana 9 blocks in the Districts of Kurukshetra and Yamuna Nagar have been covered. However, the areas falling within the NCR region, including districts such as Faridabad, Gurugram, and Bhiwani, have not been covered.

(c) & (d) The High-Resolution Aquifer Mapping has been completed for an area of around 1 lakh sq. km. in the above mentioned water stressed areas of Northwest India, including 2,644 Sq. Km in Haryana. Under the survey, the advanced helicopter-borne TEM technology was employed for regional scale rapid coverage in almost continuous mode for obtaining 3D geophysical maps. These results were further corroborated by ground based geophysical methods, drilling, geophysical logging and pumping tests. The heliborne data was processed and interpreted to derive the following outcomes:

- Sub-surface disposition of various litho-units/fracture zones down to the depth up to 500 m in normal hydrogeological conditions has been deciphered.
- Demarcated saline/freshwater-bearing zones in the study area.
- Delineated saturated/unsaturated zones within the identified aquifers.
- 3D geophysical model, geophysical thematic maps at horizontal and vertical plains have been prepared.
- 1296 potential sites for ground water development (158 in Haryana) as well as 1029 sites for managed aquifer recharge (122 in Haryana) have been identified.
