GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

LOK SABHA

UNSTARRED QUESTION NO. 1974

ANSWERED ON 31.07.2025

NATIONAL AQUIFER MAPPING AND MANAGEMENT PROGRAMME IN ODISHA

1974. SHRI PRADEEP PUROHIT

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

(a) whether the Central Ground Water Board (CGWB) has conducted National Aquifer Mapping and Management (NAQUIM) Programme in Jharsuguda district of Odisha particularly focusing on industrial zones;

(b) if so, the details thereof indicating the key findings and recommendations made in this regard;

(c) the steps taken/to be taken by the Government to implement these recommendations including the measures to regulate over-extraction of groundwater by industries; and

(d) the action taken/being taken by the Government for sustainable groundwater recharge and long-term groundwater security in Jharsuguda?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) & **(b)** Central Ground Water Board (CGWB) has completed a study titled "Aquifer Management Plan in parts of Jharsuguda and Sambalpur Districts, Odisha" under NAQUIM 2.0, which particularly focuses on the industrial zones of the districts. The key findings and recommendations of the study are summarized in **Annexure.**

(c) Water is a state subject and sustainable management of water/ground water resources falls in the purview of state governments, including the responsibility of preventing and mitigating the effects of water pollution. Accordingly, the above said NAQUIM study report has been shared with the state government of Odisha and discussions have been held with the state authorities and line Departments for guiding them regarding the implementation of the recommendations/suggestions.

Also ministry is implementing Jal Jeevan Mission –Har Ghar Jal scheme in co-ordination with states, since 2019, with the objective to ensure provision of safe drinking water in adequate quantity to every rural household of the country including those of Jharsuguda, Odisha.

For regulating the extraction of ground water for industrial and other commercial purposes, the Ministry has established the Central Ground Water Authority(CGWA), which is enforcing regulations in 19 states and UTs, including Odisha, in accordance with the provisions of its Guidelines dated 24.09.2020. The Guidelines stipulate that all industries extracting ground water should compulsorily obtain No

Objection Certificate (NOC) from CGWA. Additionally, the following stringent measures have been mandated by the Guidelines to regulate over extraction :

- NOC shall not be granted to new industries in over-exploited areas, except for MSMEs.
- NOC shall be granted only in case of non-availability of sufficient quantity of local government water supply.
- Industries shall adopt water efficient practices to reduce dependence on ground water and those industries extracting more than 100 Kilo Litres/Day (KLD) of ground water shall undertake biennial water audit.
- All industries must install water flow meters and ground water extraction data should be regularly shared with CGWA for monitoring and ensuring compliance.
- Hefty Environmental Compensation (EC) charges for unlawful extraction and penalties for non-compliance with NOC conditions are being imposed as deterrent measures.

(d) The following are the some of the important measures being taken by the Union Government for improved ground water recharge and management in the country, including Jharsuguda area of Odisha :

i. The Government is implementing Jal Shakti Abhiyan (JSA) in the country since 2019 which is a mission mode and time bound programme for harvesting the rainfall and taking up water conservation activities. Currently, JSA 2025 is being implemented in the country with special focus on over-exploited and critical districts. JSA is an umbrella campaign under which various ground water recharge and conservation related works are being taken up in convergence with various central and state schemes. As per the available information under JSA, a total of around 4.35 lakh water conservation and rainwater harvesting structures have been constructed/renovated in Odisha and 8,800 in Jharsuguda district in the last 4 years.

ii. Master Plan for Artificial Recharge to Groundwater - 2020 has been prepared by the CGWB for the entire country including Jharsuguda, Odisha and shared with States/UTs providing a broad outline for construction of around 1.42 crore rain water harvesting and artificial recharge structures in the country to harness 185 BCM (Billion cubic meter) of water. For Jharsuguda, a total number of 321 artificial recharge structures have been recommended.

iii. Department of Agriculture & Farmers' Welfare (DA & FW), GoI, is implementing Per Drop More Crop (PDMC) Scheme in the country including Odisha, since 2015-16, which focuses on enhancing water use efficiency at farm level through Micro Irrigation and better on-farm water management practices to optimize the use of available water resources.

iv. Mission Amrit Sarovar was launched by the Government of India which aimed at developing and rejuvenating at least 75 water bodies in each district of the country including Jharsuguda, Odisha. As an outcome nearly 69,000 Amrit Sarovars have been constructed/rejuvenated in the country with 80 in Jharsuguda.

v. Ministry has circulated a Model Bill to all the States/UTs to enable them to enact suitable ground water legislation for regulation of its development, which also includes provision of rain water harvesting. So far, 21 States/UTs including Odisha have adopted it.

vi. Ministry of Housing & Urban Affairs has circulated Model Building Bye-laws, 2016 which recommends Rainwater Harvesting for all types of Building with plot size 100 sq.m or more. So far, 35 States / UTs, including Odisha have incorporated the provisions in their respective building bye laws.

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) & (b) OF UNSTARRED QUESTION NO. 1974 TO BE ANSWERED IN LOK SABHA ON 31.07.2025 REGARDING "NATIONAL AQUIFER MAPPING AND MANAGEMENT PROGRAMME IN ODISHA".

Key findings and recommendations given in "Aquifer Management Plan in parts of Jharsuguda and Sambalpur Districts, Odisha" under NAQUIM 2.0 are given below:

i. Industrial cluster area of around 456 sq.km area comprising of part of Jharsuguda Block and part of Kolabira block of Jharsuguda district and part of Rengali block of Sambalpur district has been covered under the study.

ii. Major industries are metal and thermal power plant based and their operation solely depends on surface water supply from the State Government Department.

iii. In the study area, average pre and post monsoon depth to water level in dug well is 6.08 mbgl& 2.77 mbgl respectively.

iv. Occurrence of Nitrate and Fluoride above permissible limits has been found in some dug well/hand pump samples. However, water samples collected from ash pond, nalla, river etc. show much higher levels of Fluoride contamination.

v. Samples from Bheden river and Ib river indicate contamination from industrial and municipal wastes. Regular checking of river water quality is recommended to prevent pollution in irrigation water.

vi. It is recommended to test water samples from all bore wells/handpumps/dug wells used by public for drinking water purposes and seal the ones tapping contaminated aquifers.

vii. Fly ash disposal sites by all thermal power plants near the river Bheden, Ib and all tributaries should be stopped.

viii. On the basis of post monsoon depth to water level map of hand pump/ bore wells more than 5 mbgl water level area which corresponds to 112.17 sq. km is demarcated as recharge area.

ix. Artificial recharge structure is proposed in 18 sq. km area with 20 RWH in 3 sq.km area and 300 farm pond in 3 sq.km. area in Jharsuguda Municipality on the basis of post-monsoon decadal trend and mean water level analysis.

x. Ground water supply in rural areas can be managed by construction of 427 number of farm ponds in agricultural field.

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