GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1208

ANSWERED ON 10.03.2025

GOVERNMENT STRATEGY TO TACKLE THE PROBLEM OF SALT INGRESS IN COASTAL STATES

1208. SHRI PARIMAL NATHWANI

Will the Minister of Jal Shakti be pleased to state:

(a) the details of the regions in coastal States of Gujarat and Andhra Pradesh severely impacted by salt ingress and the extent of the problem in each State;

(b) whether Government has conducted or commissioned any studies to assess the longterm environmental, economic, and social impacts of salt ingress;

(c) the specific measures and strategies being implemented or proposed by Government to mitigate salt ingress; and

(d) whether Government is providing financial or technical assistance to Gujarat, Andhra Pradesh and other affected States for addressing this problem?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) to (d) The Gujarat coast can be divided into five regions: The Rann of Kachchh, the Gulf of Kachchh, the Saurashtra coast, the Gulf of Khambat, and the South Gujarat coast. Salinity ingression in Gujarat is a significant concern due to various factors such as the inherent salinity of geological formations, tidal water incursion through creeks, and irrigation with saline water. The Rann of Kachchh is a saline desert for most of the year and turns marshy during the monsoon season. Specific regions such as the Bhavnagar-Una section, the Una-Madhavpur section, and the Maliya-Lakhpat section exhibit groundwater salinity. The Gulf of Khambat region is characterized by high salinity levels due to marine influences and the inherent salinity of formations.

The coastal tract of Andhra Pradesh also faces salt ingress issues, particularly in the East and West Godavari districts, where a complex interplay of geology and hydrology affects both shallow and deep aquifers. The geogenic nature of sediment deposition further contributes to this salinity.

CGWB generates groundwater quality data on a regional scale for the entire country including the coastal areas. Under the National Aquifer Mapping and Management programme (NAQUIM), management

plans have been prepared for the entire mappable area including the coastal areas and the reports have been shared with the State Governments. Two detailed studies have been conducted in 2023-24 in coastal areas of Gujarat and Odisha. CGWB, under National Hydrology Project, has established a network of 60 piezometers and installed Digital Water Level Recorders with Water Quality Probes along the coastal aquifers of Tamil Nadu and the Union Territory of Puducherry to evaluate and address the potential risk of saline water intrusion into freshwater aquifers.

CGWB in collaboration with Ground Water and Water Audit Department, Government of Andhra Pradesh. Conducts periodic assessments of dynamic groundwater resources annually. National Aquifer Mapping (NAQUIM) studies from 2012 – 2023 were undertaken in Andhra Pradesh State.

In Gujarat various measures are being adopted by the state government for mitigating salinity, such as construction of Tidal Regulators, Bandharas, Check Dams, Recharge reservoirs, Recharge Tanks, Recharge Wells, and long Spreading & Connecting Channels. CGWB has carried out Aquifer mapping under National Aquifer Mapping and Management Programme (NAQUIM) and reports of all the coastal districts have been prepared and shared with state for implementation of management plans.

CGWB provides technical assistance by sharing various reports/scientific data such as NAQUIM reports, Dynamic Ground Water Resources reports, Ground Water Yearbooks, Ground water Quality Year books, etc. regularly which are also presented during various meetings such as, State Level committee for assessment of ground Water resources, State Ground Water Coordination Committee, Quarterly Dialogues with state Ground water departments etc. Various States/ UTs have been taking measures to tackle the issue of salinity ingression into coastal areas as per their requirement & necessity either through their own source of funds or various schemes of Government of India.
