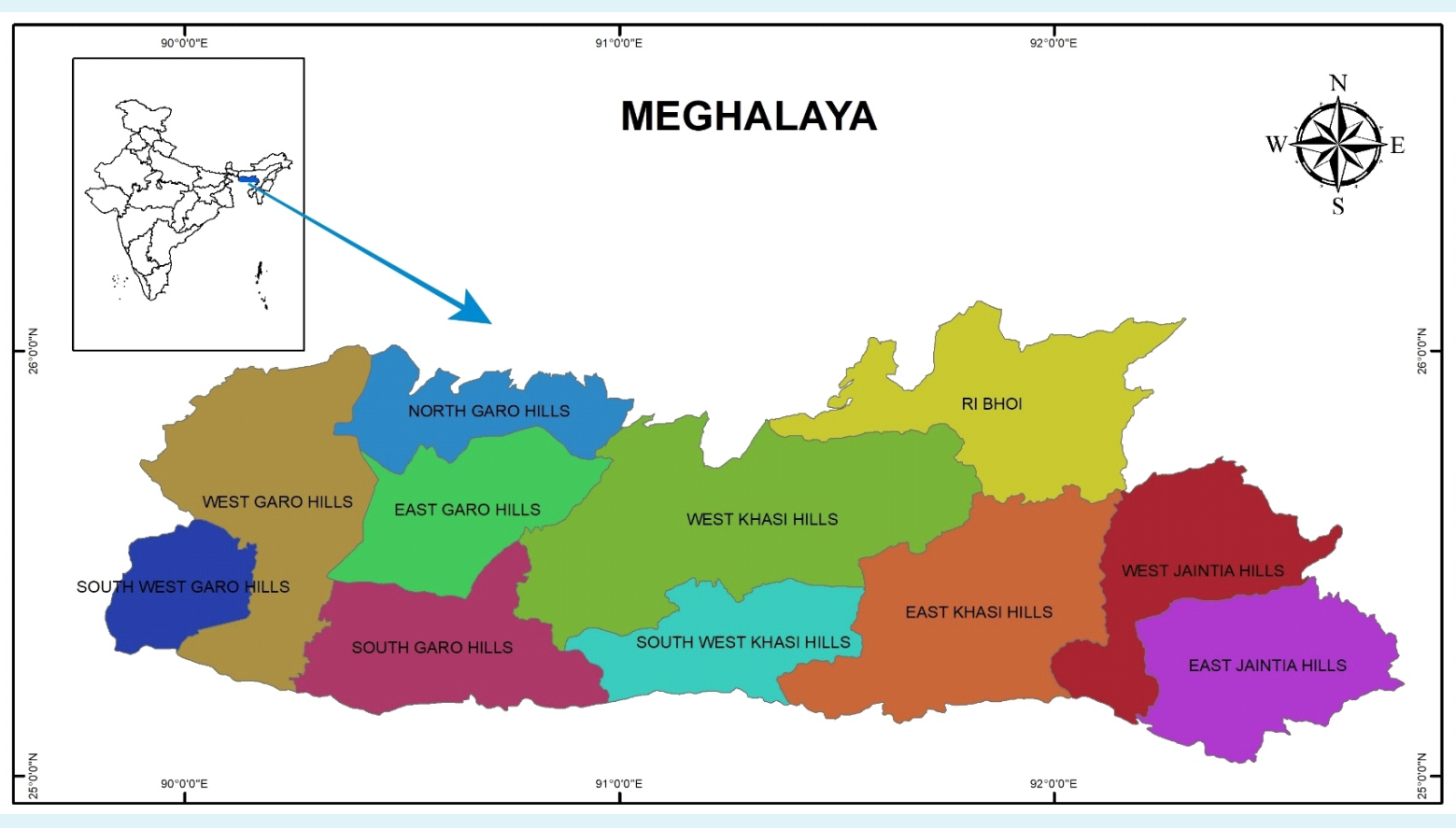
सत्यमेव जयते
Government of India

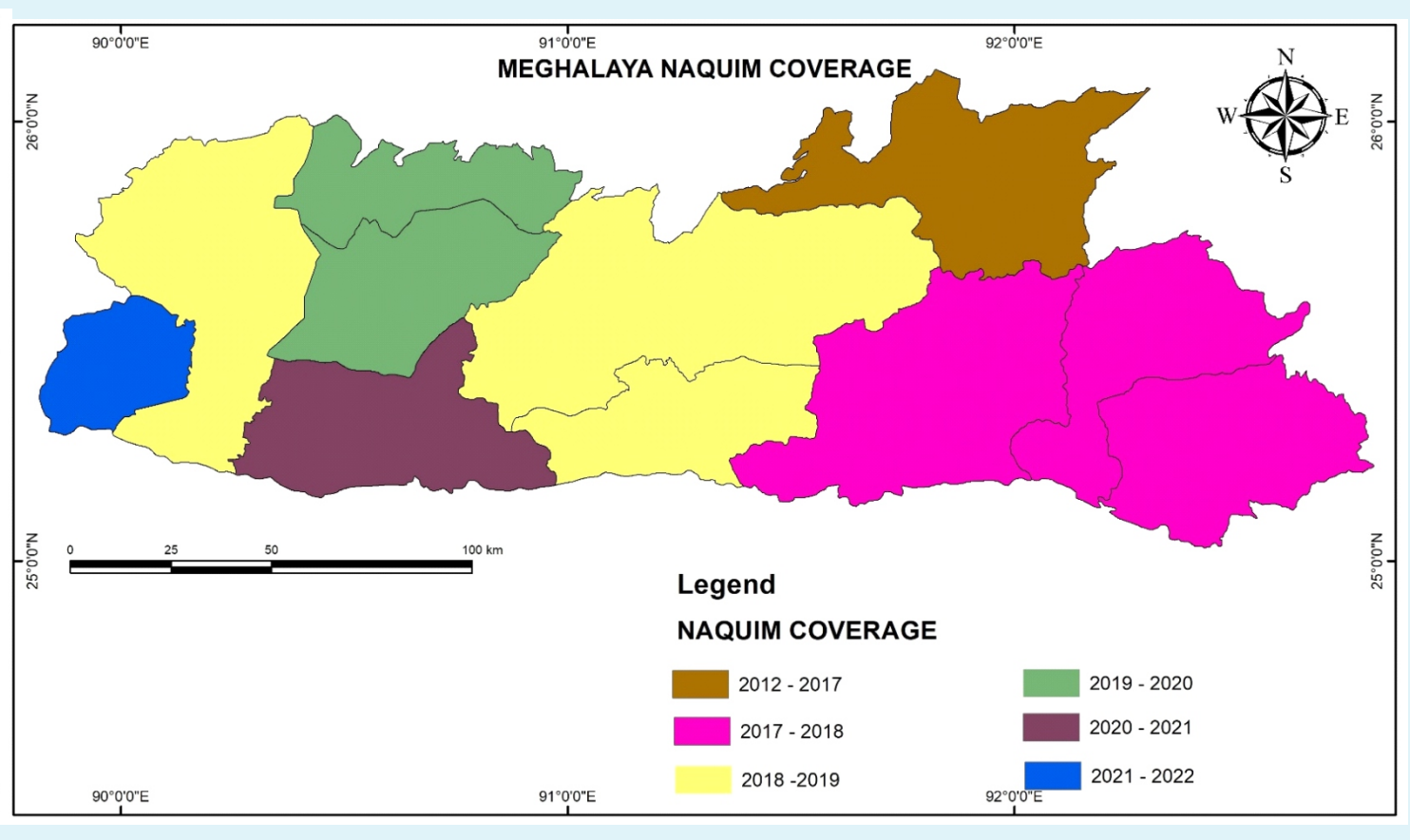
ACTIVITIES OF CGWB IN MEGHALAYA

Central Ground Water Board

MEGHALAYA

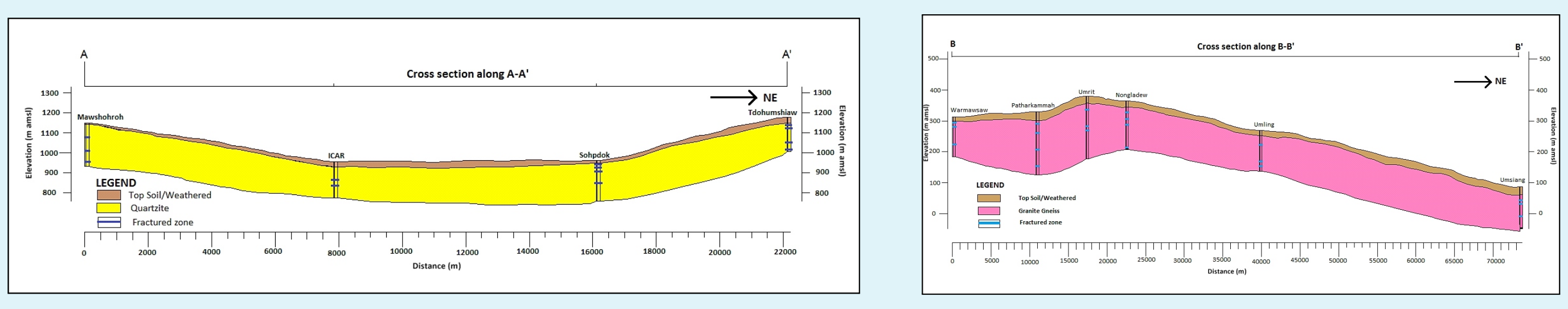
22,429 sq. km. Geographical Area	**11** Districts	**29,66,889** Population
10,645 sq.km. NAQUIM Mappable Area	**3,500 sq. km.** Valley Area (15% of total)	**Very High** Rainfall (2000 to 12500mm)



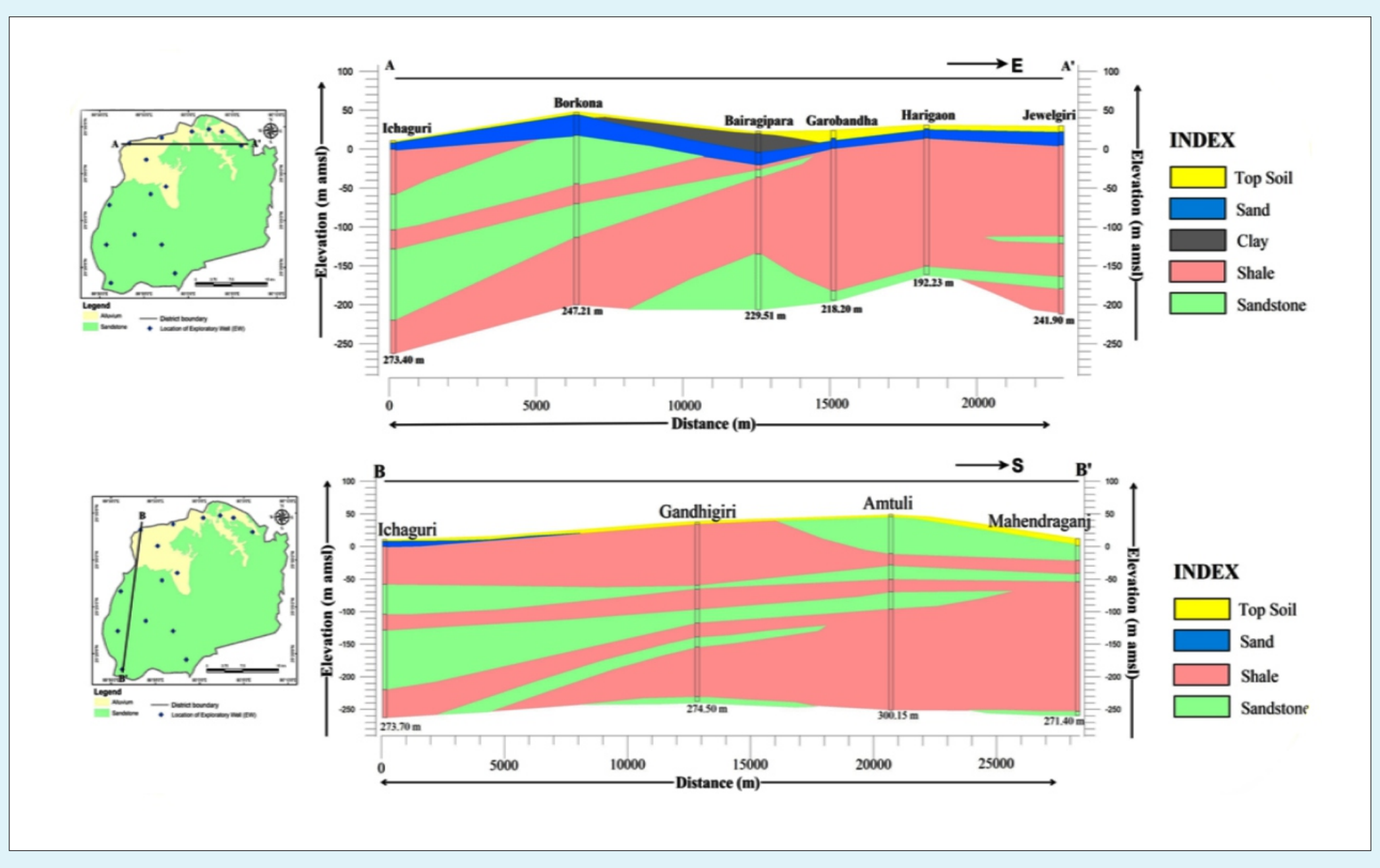


NATIONAL AQUIFER MAPPING (NAQUIM)

- Under NAQUIM all the districts of Meghalaya has been mapped to delineate the disposition of aquifers in 1:50,000 scale.
- Under NAQUIM 2.0, urban studies in Greater Shillong area has been taken up.



2D Aquifer disposition in Ri Bhoi District



2D Aquifer Disposition in South West Garo Hills District

GW irrigation for rabbi paddy at Mahendraganj

Inquiring about GW irrigation and agricultural activities from local farmers

GROUND WATER EXPLORATION

Under ground water exploration, around 112 exploratory wells having discharge from 0.29 to 45.83lps were drilled. High discharge wells were handed over to the State departments.

- Explored depth: upto 300 m bgl.
- Drawdown: 1 to 44 m
- Static water level: 3.29 to 26.75 m bgl
- Discharge: 0.5 to 222m^3/hr
- Transmissivity: 1 to 1595 m^2 /day
- Storativity: 3.7 X 10^{-4} to 9.9 X 10^{-1}
- Specific Capacity: 6 to 1726 lpm/m

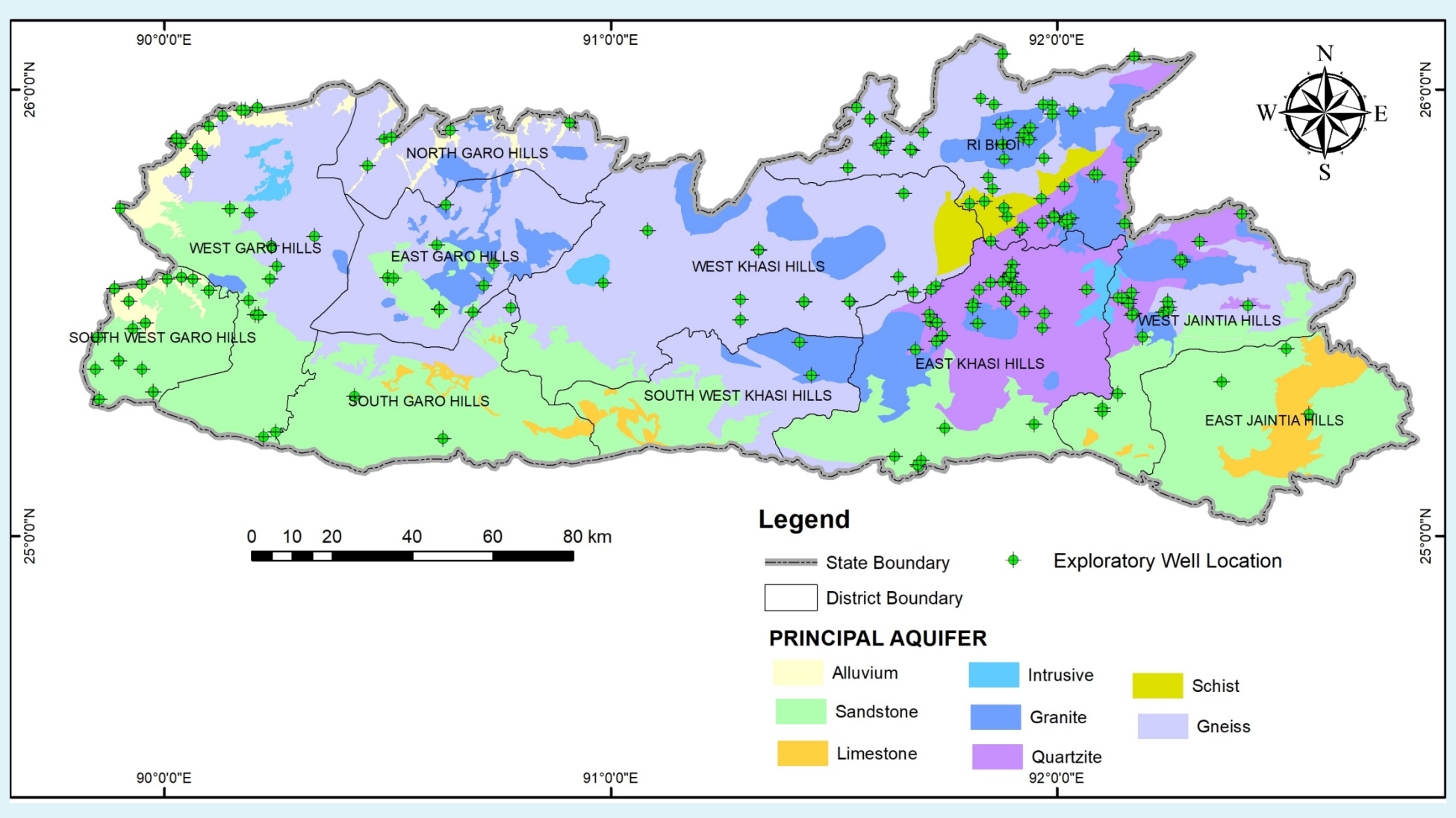
GROUND WATER QUALITY SCENARIO

- The chemical analysis of ground water samples from phreatic aquifer reveals that the ground water of Meghalaya is generally suitable for drinking purposes.
- Almost all the chemical constituents are within the permissible limits of drinking water standards except for Iron, which is high in isolated locations.
- Presence of Fe & F beyond permissible limit & low pH in pockets.

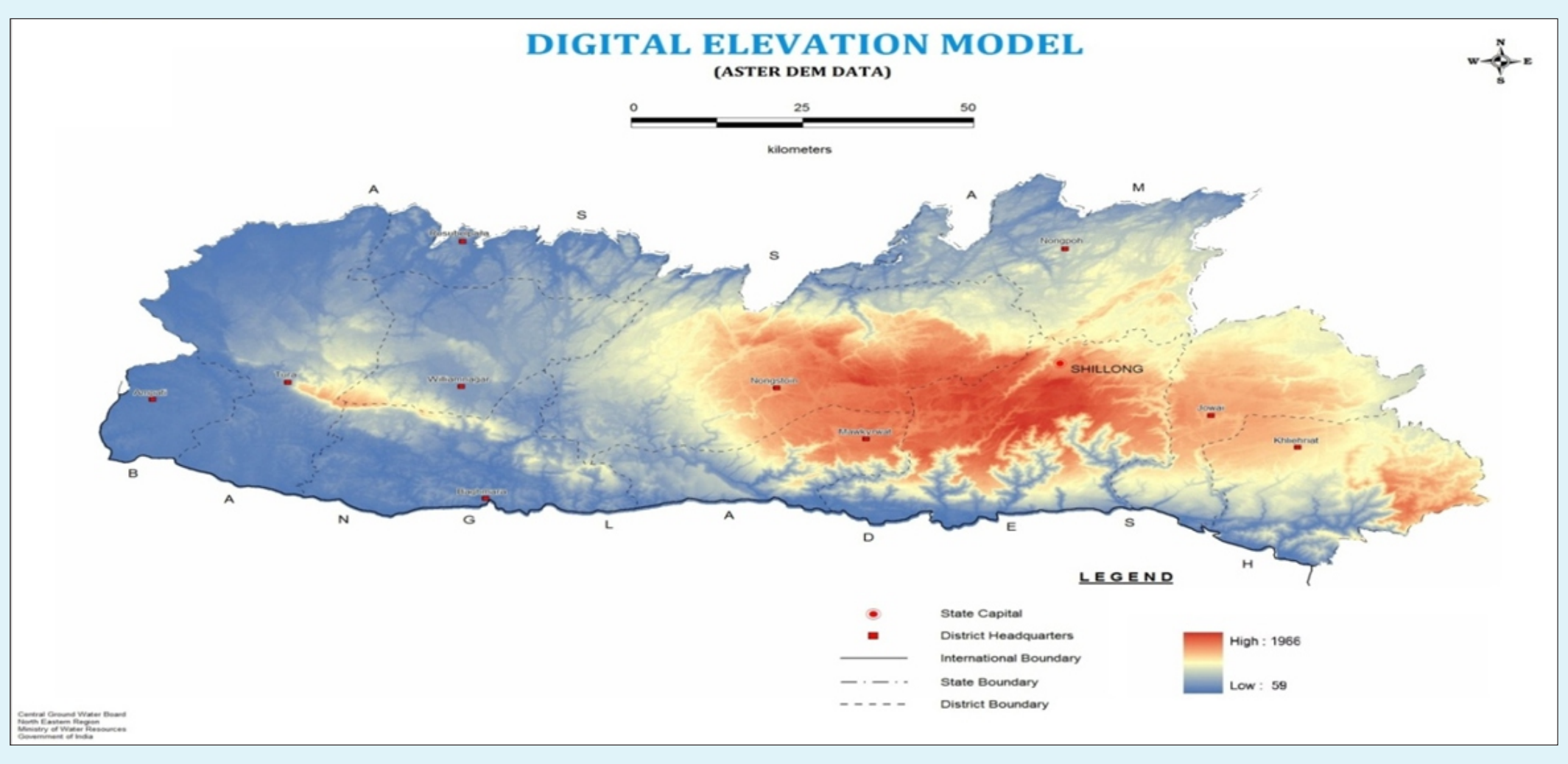
PRINCIPAL AQUIFER MAP

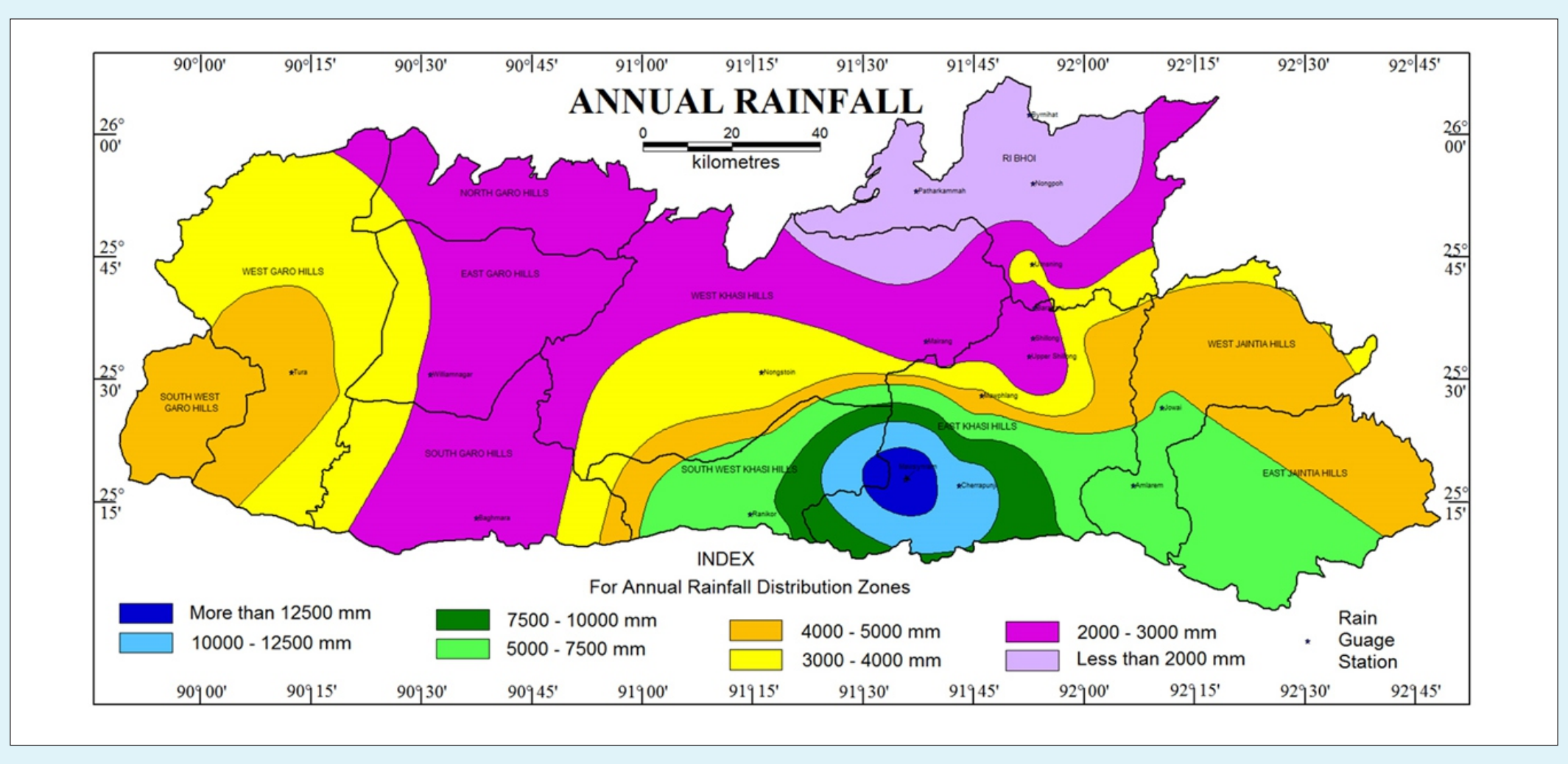
The area can be divided into following groups:

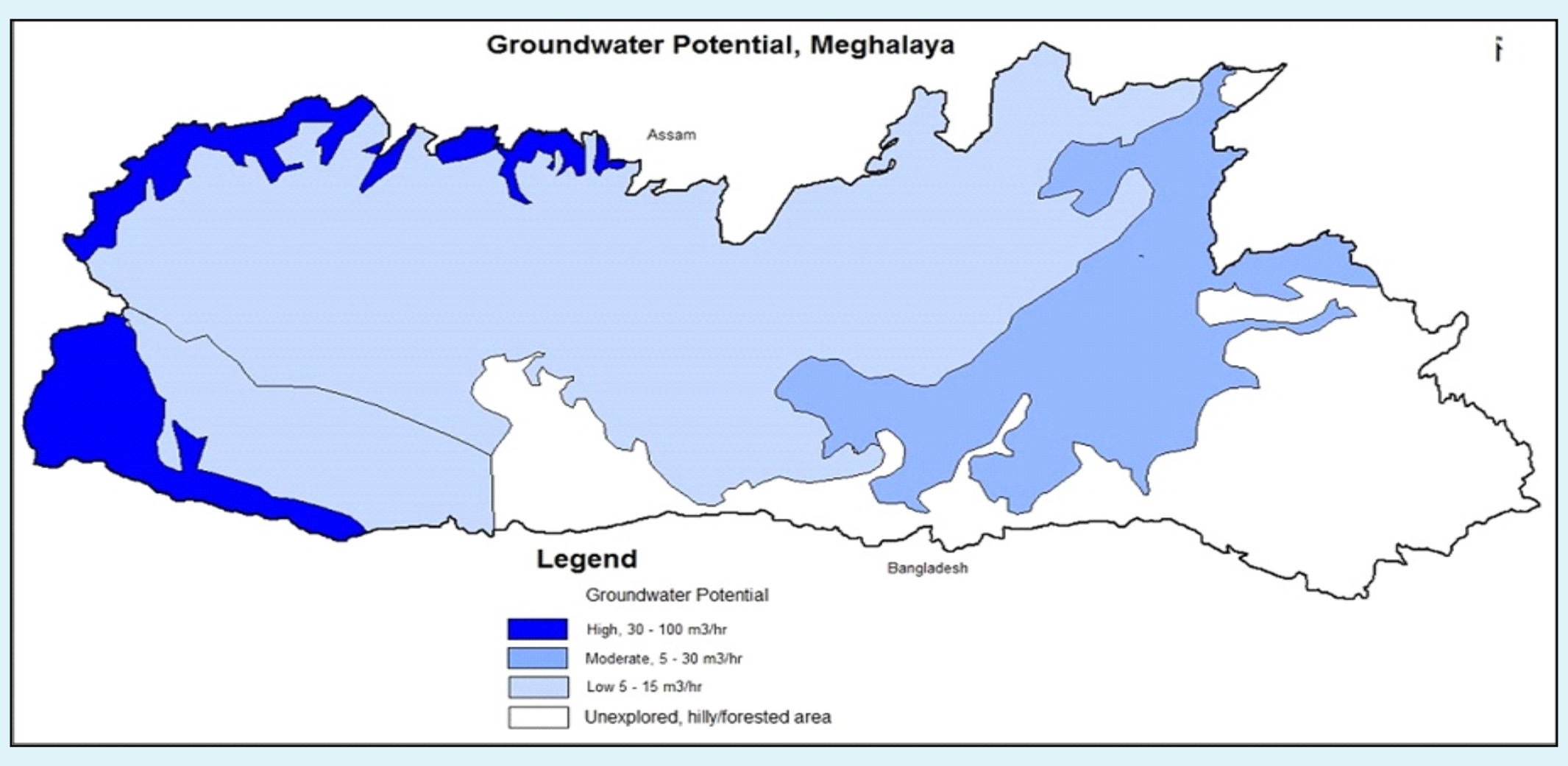
- **Consolidated** - Archaean Gneissic Complex, acid and basic intrusives, quartzite and phyllite of Shillong Group of rocks, carbonate and non-carbonate sedimentary rocks.
- **Semi-consolidated** - sandstones, siltstone and shale inter bedded with the coal seams
- **Unconsolidated** - comprises clay, silt, sand, pebbles and gravel.



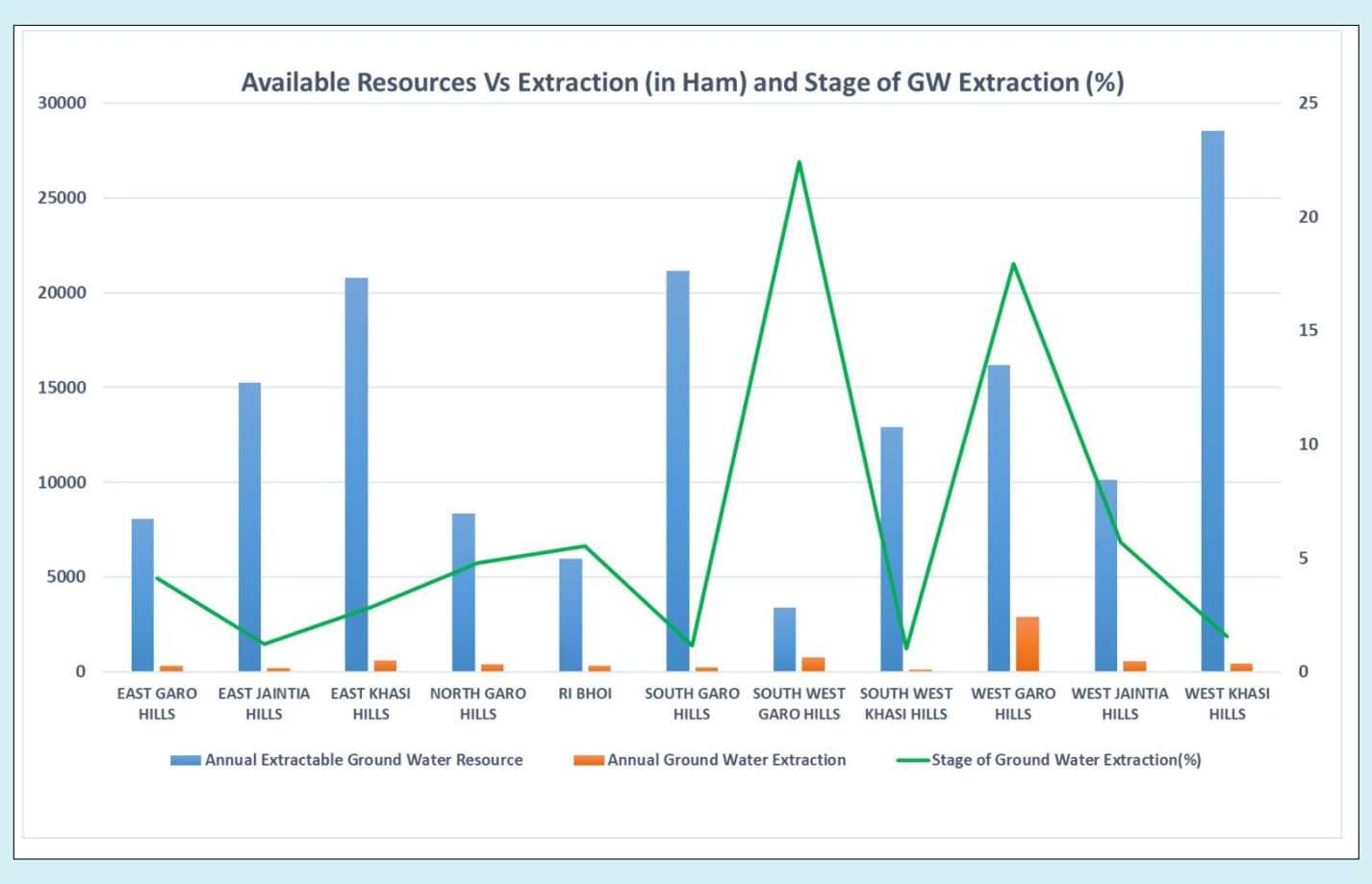
DIGITAL ELEVATION MODEL, ANNUAL RAINFALL PATTERN AND GW POTENTIAL MAP







DYNAMIC GROUND WATER RESOURCE ESTIMATION (GWRE)



OUTCOME OF NAQUIM WORKS

- **Short term water supply investigation:** Provided assistance to Defense and Para military establishments, State government and other organizations in selecting suitable sites for construction of ground water abstraction structures through short term water supply investigations.

- **National Hydrology Project:** Provided assistance to state government department in selecting sites for construction of piezometers.

- **Jal Jeevan Mission:** Provided assistance to state government department.

PUBLIC OUTREACH AND SHARING OF REPORTS

- Public Interaction Program is being carried out in different districts of Meghalaya during NAQUIM.
- All the 11 districts NAQUIM report have been shared to the respective Deputy Commissioner.

Certificate of Appreciation

Shri Khageswar Pegu, ACS
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No. KDC/MISC/CER/2019/ 135, Dated, Karimganj, the 24th September, 2021.

CERTIFICATE OF APPRECIATION

I wanted to take this opportunity to appreciate the Scientist of Central Ground Water Board, Shillong for demonstrating excellent power point presentation today on Aquifer Management Plan for Karimganj district. In this meeting the Circle Officers of Karimganj, EE, Irrigation, District Agricultural Officer, EE, Water Resource & EE, Public Health Engineering, Karimganj attended.

The District Administration of Karimganj do hereby sincerely appreciate the Central Ground Water Board for sending their team headed by Smti. Rinku Rani Das, Scientist-B for demonstrating the power point presentation and all Officials attended in the meeting have very much benefitted from the power point presentation and it will be very useful for formulation of better District Irrigation Plans/PMKSY-HKK-GW irrigation programmes, to tackle problems in drinking water supply etc in the district.

With thanks,

24/9/21
(Khageswar Pegu, ACS)

To
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Central Ground Water Board,
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Ministry of Jal Shakti
Department of Water Resources, RD & GR
Central Ground Water Board
North Eastern Region, Guwahati

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For Sustainable Ground Water Management