

State Profile

Ground Water Scenario of West Bengal

Area (Sq.km)	88,752
Rainfall (mm)	2074
Total Districts / Blocks	19 Districts

Hydrogeology

The State can be divided into two hydrogeological unit namely fissured hard rocks & porous alluvial formations. Fissured formation includes crystalline, metasedimentary and volcanic rocks. The yield of wells tapping fractured zones varies from 10-20 m³/hr. Two third of the State is underlain by alluvial sediments mainly deposited by Ganga & Brahmaputra rivers. Based on the yield of wells tapping these alluvial sediments, aquifers of the alluvial area can be divided into three zones. 1. Yielding about 150m³/hr, occurs from Jalpaiguri to Kochbihar in north to Medinipur & 24 Parganas in South. 2. Yielding about 50-150 m³/hr, occurs in parts of Malda, Dinanajpur and western part of Murshidabad Districts. 3. Yielding less than 50m³/hr, occurs as Marginal alluvial tract in parts of Birbhum, Burdawan, Bankura and Murshidabad Districts.

Dynamic Ground Water Resources (2011)	
Annual Replenishable Ground water Resource	29.25 BCM
Net Annual Ground Water Availability	26.58 BCM
Annual Ground Water Draft	10.69 BCM
Stage of Ground Water Development	40 %
Ground Water Development & Management	
Over Exploited	NIL
Critical	1
Semi- critical	53 Blocks
Artificial Recharge to Ground Water (AR)	<ul style="list-style-type: none"> ▪ Area identified for AR: 36730 sq km ▪ Volume of water to be harnessed: 17797 MCM ▪ Volume of water to be harnessed through RTRWH: 100.80 MCM ▪ Feasible AR structures: <p>Hard Rock</p> <ul style="list-style-type: none"> ❖ Percolation tank- 1679 ❖ Check dams- 4449 ❖ Gabion structures- 12277 ❖ Sub surface Dykes- 5385 ❖ Recharge Shaft- 1218 <p>Alluvium</p> <ul style="list-style-type: none"> ❖ Percolation tank- 15913 ❖ Tanks- 41623 ❖ Injection well- 14816 ❖ RTRWH(H)- 285000 ❖ RTRWH(H&I)- 15000
Ground Water Quality Problems	
Contaminants	Districts affected (in part)
Salinity (EC > 3000 µS/cm at 25 ° C)	Howrah, N 24 Parganas, PurbaMedinipore, S 24 Parganas
Fluoride (>1.5 mg/l)	Bankura, Bardhaman, Birbhum, Dakshindinajpur, Malda, Purulia, Uttardinajpur.
Iron (>1.0 mg/l)	Bankura, Bardhaman, Birbhum, Dakshindinajpur, E. Midnapur, Howrah, Hugli, Jalpaiguri, Kolkatta, Murshidabad, N-24 Parganas, Nadia, S-24 Parganas, Uttardinajpur, West Midnapur

Nitrate (>45 mg/l)	Bankura, Bardhaman
Arsenic (>0.05 mg/l)	Bardhaman, Hooghly, Howrah, Malda, Murshidabad, Nadia, N-24 Parganas, S- 24 Parganas
Heavy metals: Lead (above 0.01 mg/l) Cadmium (above 0.003 mg/l) Chromium (above 0.05 mg/l)	Lead: Malda, Murshidabad, Nadia, N-24 Pargana, S-24 Praganas, Kolkata Cadmium: N-24 Praganas, S-24 Prganas Chromium: N-24 Praganas, Murshidabad

Central Ground Water Authority

Areas Notified for Regulation of ground water development	Haldia Industrial Complex (aquifer below 120 ml) East Medinipur District
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