

State Profile

Ground Water Scenario of Orissa

Area (Sq.km)	1,55,707
Physiography	Five physiographic units <ul style="list-style-type: none"> ▪ The Coastal Plains ▪ The Northern Uplands ▪ The Erosional plains of Mahanadi valley ▪ The South-Western Hilly Region ▪ The Subdued Plateaus
Drainage	Mainly eight major river basins within the State, whereas the Indravati, Kolab, Machakund sub-basins forms part of Godavari river basin. Most of the major rivers flow in easterly and southeasterly.
Rainfall (mm)	1502
Total Districts / Blocks	30 Districts

Hydrogeology

The State is underlain by diverse rock types ranging in age from Archaean to Recent. The State can be hydrogeologically sub divided into consolidated, semi-consolidated & unconsolidated formations. The consolidated formations include hard crystallines and compact sedimentary rocks whereas semi-consolidated formations include weathered and friable Gondwana sedimentaries and loosely cemented Baripada beds. The unconsolidated formations include laterites and recent alluvium. The yield of tubewells tapping granite gneisse ranges between 10-35 m³/hr whereas other consolidated formations, it ranges between 5-18 m³/hr. The yield of tubewells in semi-consolidated formations range between 20-115 m³/hr.

Dynamic Ground Water Resources (2011)	
Annual Replenishable Ground water Resource	17.78 BCM
Net Annual Ground Water Availability	16.69 BCM
Annual Ground Water Draft	4.73 BCM
Stage of Ground Water Development	28 %
Ground Water Development & Management	
Over Exploited	NIL
Critical	NIL
Semi- critical	NIL
Artificial Recharge to Ground Water (AR)	<ul style="list-style-type: none"> ▪ Area identified for AR: 5229 sq km ▪ Volume of water to be harnessed: 1192.05 MCM ▪ Volume of water to be harnessed through RTRWH: 76.66 MCM ▪ Feasible AR structures: <ul style="list-style-type: none"> ❖ Percolation tanks- 1107 ❖ Storage tanks- 905 ❖ Subsurface dykes- 871 ❖ Gully Bunds- 2265 ❖ Weir- 181 ❖ Flooding- 121 ❖ Induced Recharge- 22 ❖ Recharge shafts- 384 ❖ RTRWH(H)- 285000 ❖ RTRWH(G&I)- 15000
Contaminants	Districts affected (in part)
Salinity (EC > 3000 μ S/cm at 25 ° C)	Balasore, Bhadrak, Ganjam, Jagatsingpur, Jajpur, Kendrapara, Puri
Fluoride (>1.5 mg/l)	Angul, Balasore, Bargarh, Bhadrak, Baudh, Cuttack, Deogarh, Dhenkanal, Jajpur, Keonjhar, Khurda, Mayurbhanj, Nayagarh, Nawapara,

	Sonpur
Iron (>1.0 mg/l)	Balasore, Bargarh, Bhadrak, Cuttack, Deogarh, J.Singhpur, Jajpur, Jharsuguda, Kalahandi, Kandmahal, Keonjhar, Kendrapara, Khurda, Koraput, Mayurbhanj, Nayagarh, Puri, Rayagada, Sambalpur, Sundergarh, Sonpur
Nitrate (>45 mg/l)	Angul, Balasore, Bargarh, Bhadrak, Bolangir, Boudh, Cuttack, Deogarh, Dhenkanal, Gajapati, Ganjam, J.Singhpur, Jajpur, Jharsuguda, Kalahandi, Kendrapara, Keonjhar, Khurda, Koraput, Malkangiri, Mayurbhanj, Nawapada, Nayagarh, Phulbani, Puri, Sambalpur, Sundergarh, Sonpur
Heavy metals: Chromium (above 0.05 mg/l)	Chromium (Hexavalent) - Sukinda valley in Sukinda block of Jajpur District

Central Ground Water Authority

Areas Notified for Regulation of ground water development	NIL
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