

AQUIFER MAPPING & MANAGEMENT PLAN , GHAZIPUR DISTRICT, U.P.



Area - 3377sq Km,

Blocks - 16

Study Area - 1643 sq km (8 Block)

Normal Annual Rainfall - 1034 mm

Major Issue

A) Out of 8 Blocks – 2 Critical & 3 Semi Critical

B) Arsenic contamination

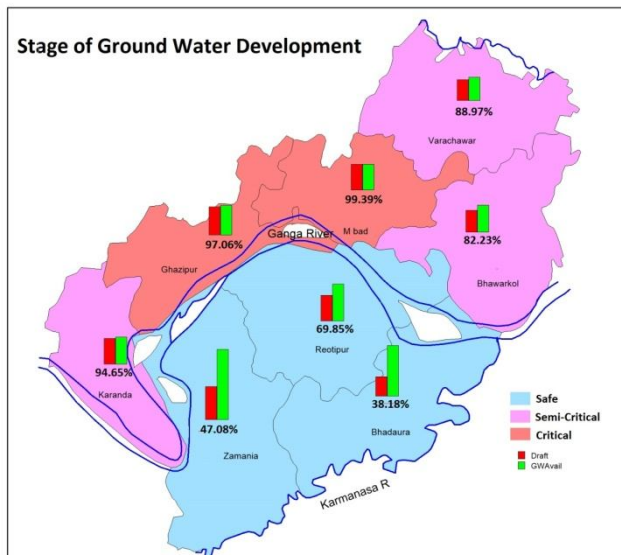
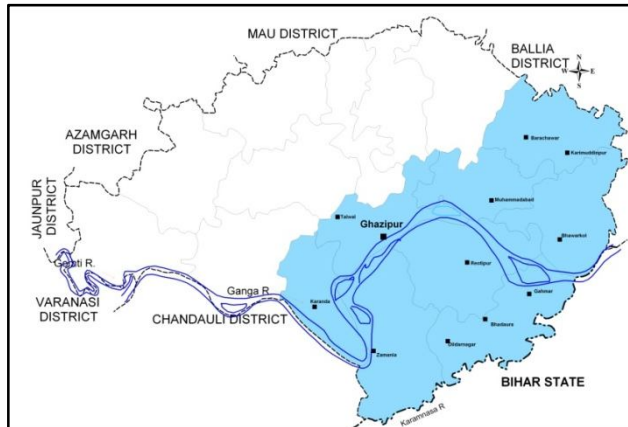
- First Aq. (90 m) Arsenic contaminated
- Area - 611 sq Km
- Affected Population about - 7 lac
- lying in flood prone area

C) Marginal Salinity in Confined Aquifer

- Generally Confined Aquifer in Upland area affected with salinity (2000 – 4000 micro s/cm)
- Area -203 sq km
- Affected Population about - 2 lac

D) Both Arsenic & Salinity

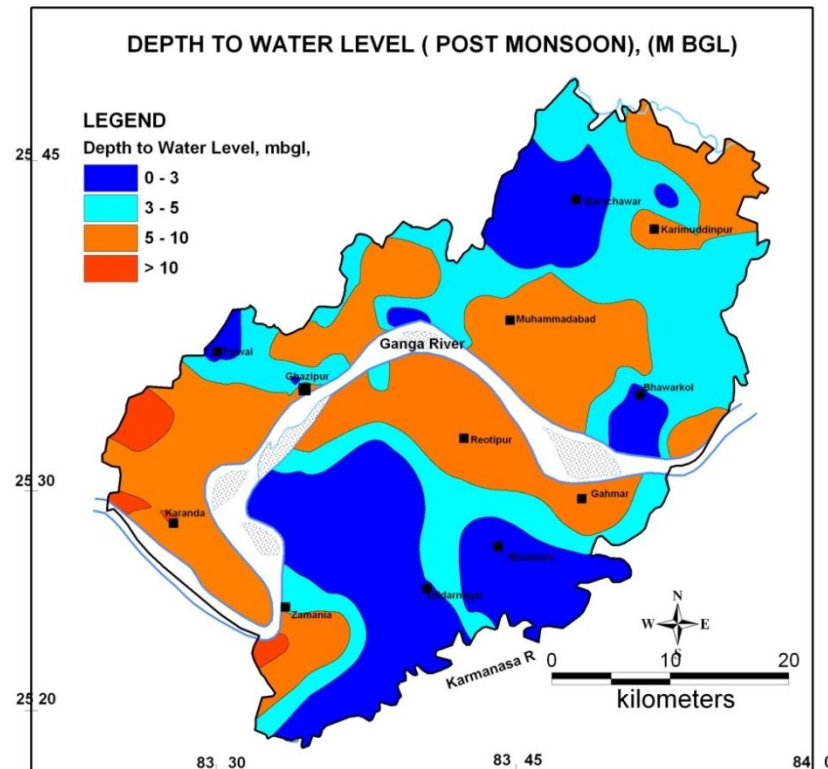
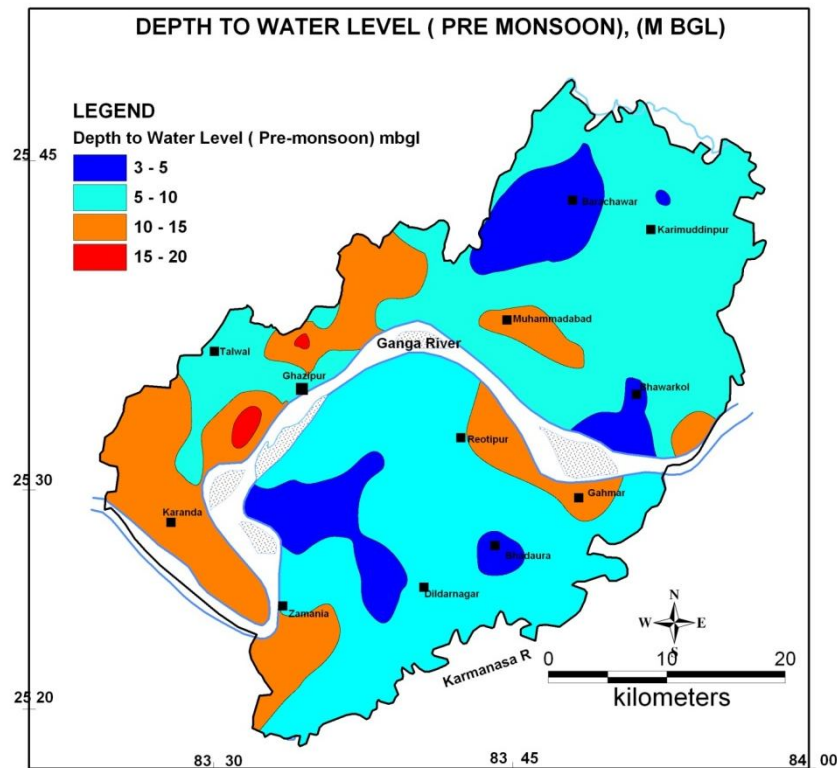
- Some part of the area both issues occur - Mednipur



AQUIFER PROPERTIES

Aq Gr	Depth Range	GW Potential	Remarks
I	0.0 to to 60- 90m.	Good Sp Yield 16	Arsenic range 0.0 – 555.9 ppb
II	90 to 200-225m	Very good T= 3120 m ² /day, S= 1.4x10E-4	Arsenic range 0.0 – 25
III	225m to 350m(~upto 400 m	T= 2080 m ² /dayS=2.7x10E-5	Arsenic range 0.0 –5 ppb,

WATER LEVEL



Ground Water Resources (MCM) up to 300m in the Area

Block	Area (sq. km.)	Aquifer-I (Unconfined)			Aq(Con-fined)	Total Res
		Dyn. Res.	Static Res.	Total Res. (Uncon)		
BARACHAWAR	199	50.19	1386.00	1436.19	1656.87	3343.80
BHADAURA	209	107.04	1492.76	1599.80	1740.13	3603.27
BHAWARKOL	251	58.03	1735.15	1793.18	2089.83	4199.27
GHAZIPUR	159	62.46	1091.07	1153.53	1323.83	2677.71
JAMANIA	270	149.17	1893.72	2042.89	2248.02	4631.11
KARANDA	154	57.43	1013.44	1070.87	1282.20	2547.12
M BAD	174	55.20	1184.65	1239.85	1448.72	2907.81
REOTIPUR	227	79.47	1552.68	1632.15	1890.00	3808.17
TOTAL	1643	618.99	11349.47	11968.46	11968.5	27718.26

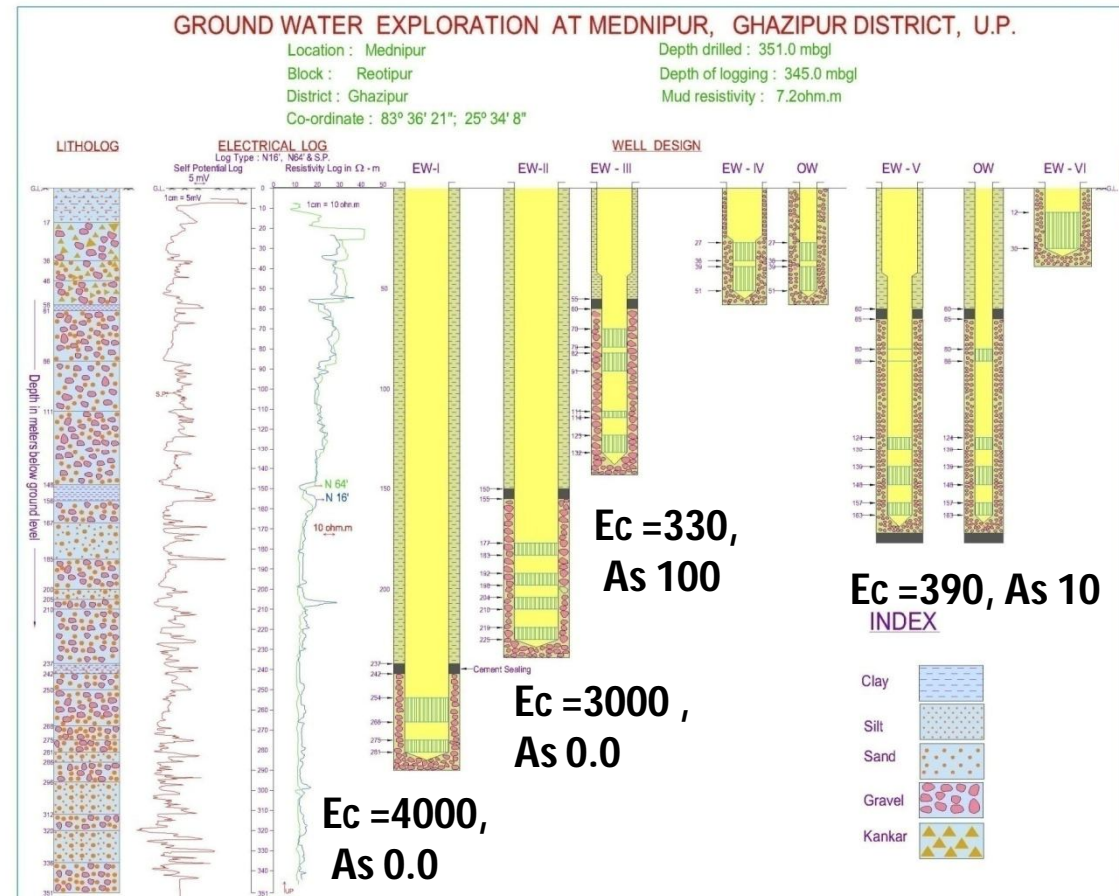
GW ISSUES & MANAGEMENT PLAN, REOTIPUR BLOCK, GHAZIPUR DISTRICT

Major Issues

In western part of the area salinity occur below 90 – 150m bgl while upper aquifer is contaminated with arsenic –

Management

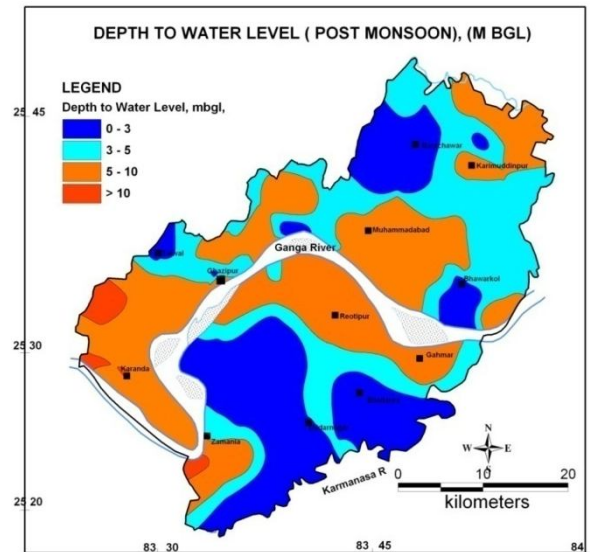
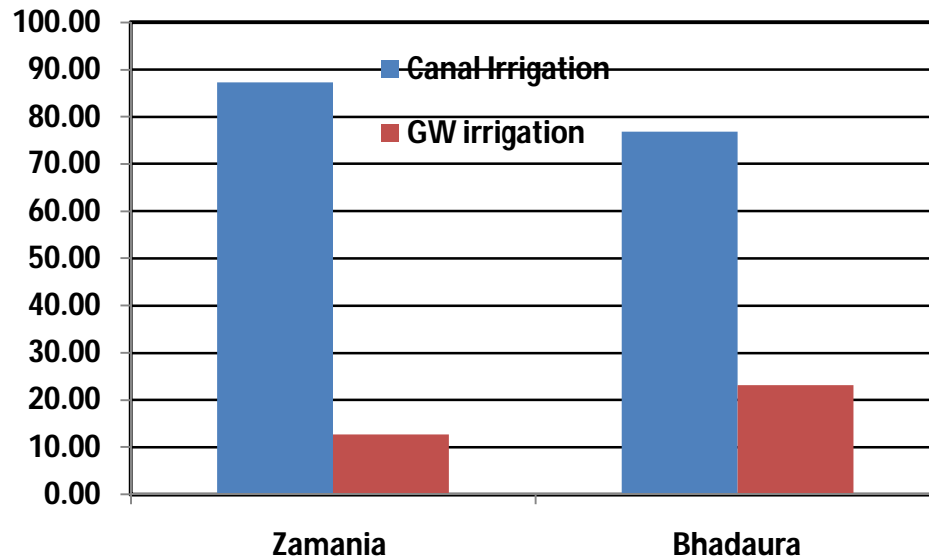
- Blending of the first and second aquifer proposed. Viz Mednipur



GW ISSUES & MANAGEMENT PLAN, Zamania & Bhadaura BLOCK, GHAZIPUR DISTRICT

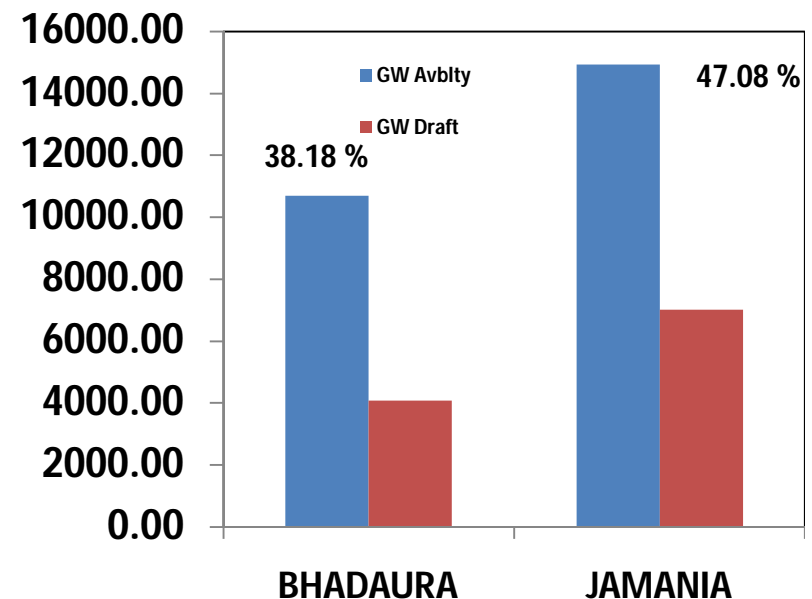
Major Issues

Water Logging in Zamania & Bhadaura Block



Management

Practice of conjunctive use of surface and ground water is to be applied in blocks *Bhadaura and Zamania* – canal irrigation causes water logging .



GW Issues & Management Plan, Ghazipur & Muhammadabad Block, Ghazipur District

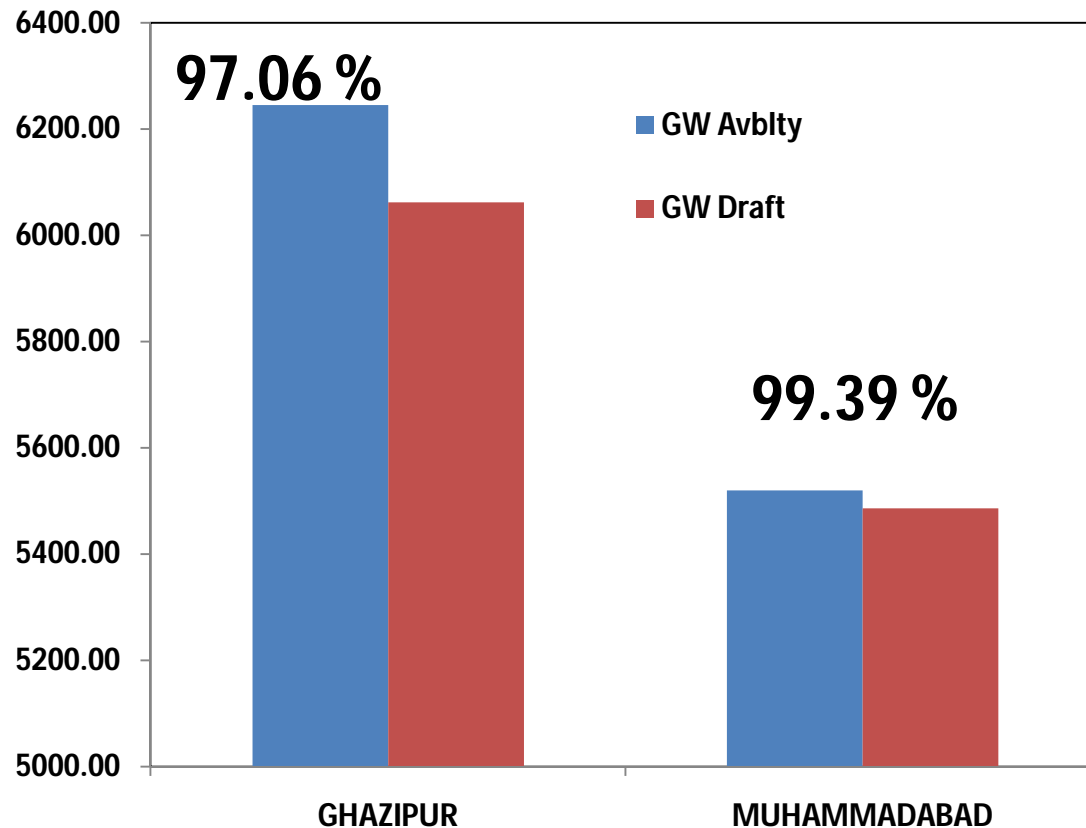
Major Issues

GW Dev is high (~ 100 %)
in Ghazipur &
Muhammadabad Block. No
Gw is allocated for
irrigation in future.

In both block, vegetable
farming is adopted in large
area.

Management

Efficient irrigation practices
will reduce GW draft by
~ 16 MCM in each block
and stage of GW
development will reduce
to 71 % in both block



THANKS