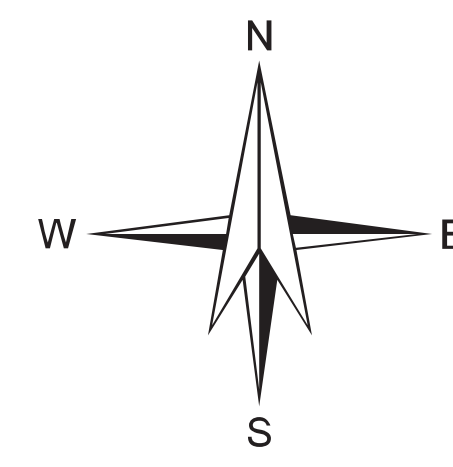
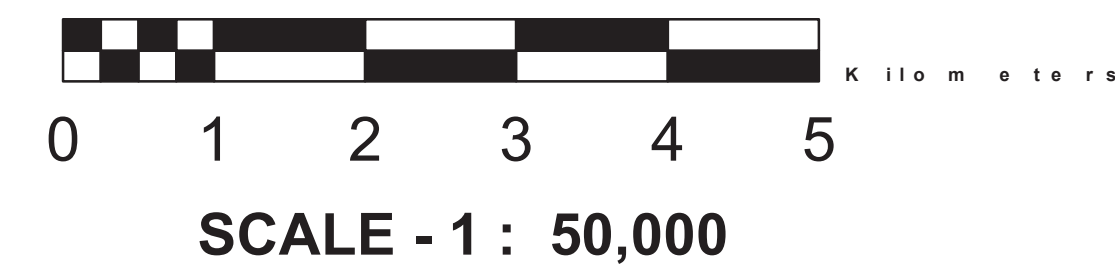
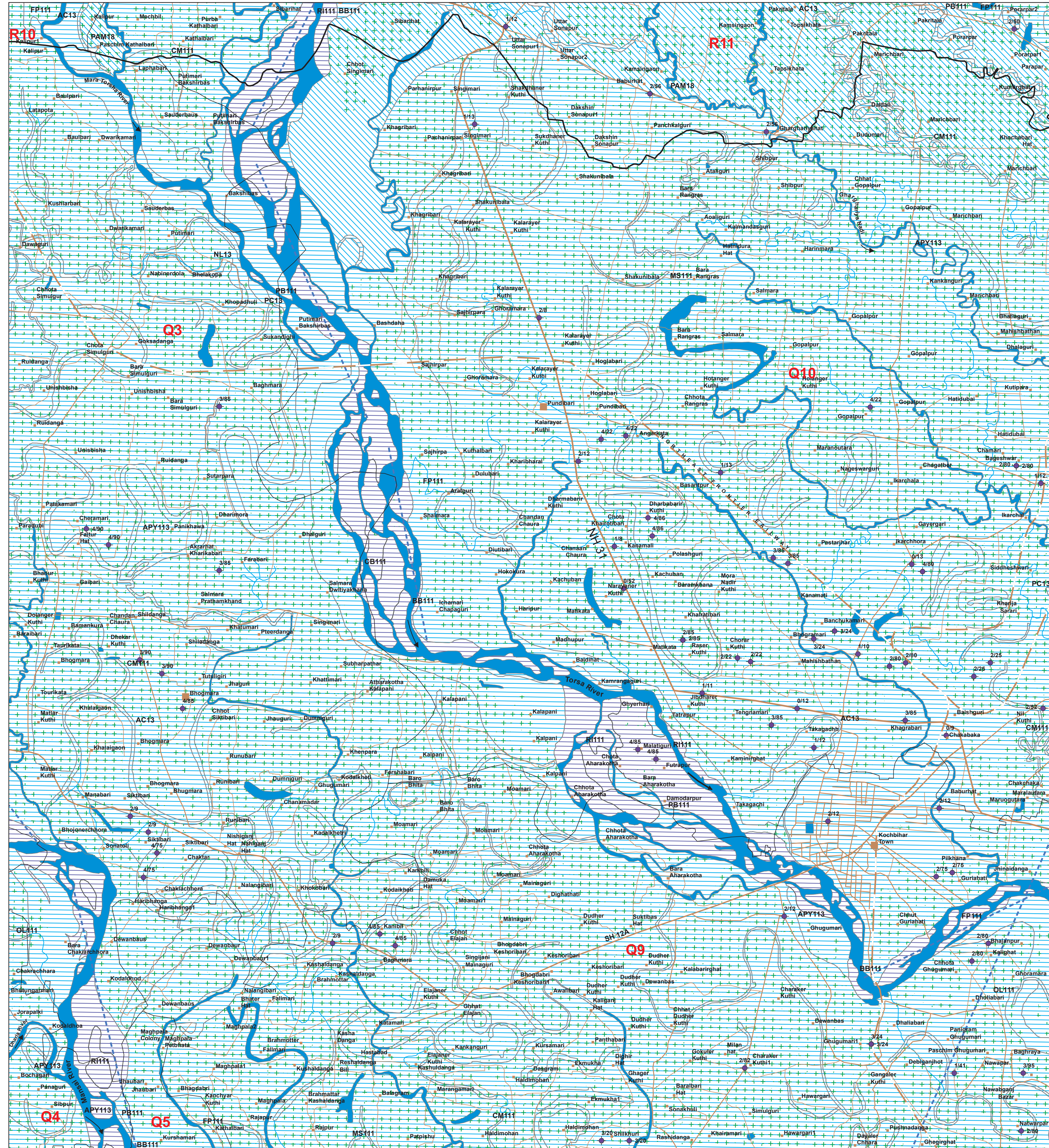


GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



MAP SHEET NO. 78F7 JALPAIGURI & KOCH BIHAR DISTRICTS, WEST BENGAL



LEGEND

MAP UNIT (HYDROGEOLOGIC UNIT) REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE (COLOUR INDICATES YIELD RANGES AND HATCHING INDICATE DEPTH RANGES)	GEOLOGICAL SEQUENCE / ROCK TYPE (REPRESENTED IN THE MAP WITH NUMERIC CODE)	GEOMORPHIC UNIT / LANDFORM (REPRESENTED IN THE MAP WITH ALPHABETIC CODE)	DEPTH TO WATER LEVEL PRE / POST MONSOON (AVERAGE IN METERS) NO. OF WELLS OBSERVED	RECHARGE CONDITIONS BASED ON AVAILABILITY OF WATER (RAINFALL & OTHER SOURCES)	GROUND WATER PROSPECTS						RECHARGE STRUCTURES SUITABLE & PRIORITY	RE MARKS (PROBLEMS / LIMITATIONS)		
					AQUIFER MATERIAL	TYPE OF WELLS SUITABLE	DEPTH RANGE OF WELLS (BOREHOLE) MIN - MAX (IN METERS)	YIELD RANGE OF WELLS (LPM) (IN LPM m ⁻² day ⁻¹)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY)	QUALITY OF WATER (POTABLE / NON-POTABLE) (NON-POTABLE / NON-POTABLE)			GROUND WATER BRIGADED AREA (APPROX. RANGE IN PERCENTAGE)	
CB111	Shajgon Formation (Present Day)	Channel Bar (CB)	No Well Observed	Excellent	LS	TW	5-10 m	400-500 LPM	Very High	P	Nil	Not Required	Highly productive shallow aquifer with good recharge from the river base flow.	
BB111		Braid Bar (BB)	No Well Observed	Excellent	LS	TW	5-10 m	400-500 LPM	Very High	P	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.	
PB111		Point Bar (PB)	No Well Observed	Very Good	LS	RW TW	5-10 m	300-400 LPM	Very High	P	Nil	Not Required	Groundwater prospects very high with high recharge potential. Recharge structures not required.	
RI111		River Island (RI)	5/2	Very Good	LS	TW	5-10 m	400-500 LPM	High	P	Nil	Not Required	Highly productive aquifer in shallow depth. Good recharge.	
OL111		Oxbow Lake (OL)	No Well Observed	Good	LS	TW	20-30 m	200-300 LPM	Moderate	P	75	Not Required	Though occur as water bodies, but highly productive aquifer occurs at depth.	
CM111		Cut-off Meander (CM)	4/3	Very Good	LS	RW TW	10-20 m	300-400 LPM	Very High	P	85	Not Required	Highly productive shallow aquifers with good recharge.	
MS111		Meander Scar (MS)	No Well Observed	Very Good	LS	RW TW	10-15 m	200-250 LPM	High	P	55	Not Required	Highly productive shallow aquifers with good recharge.	
FP111		Flood Plain (FP)	No Well Observed	Very Good	LS	TW	<30 m	250-350 LPM	Very High	P	Nil	Not Required	Receives good recharge and forms shallow aquifer. Overall quality of the water is potable.	
APY113		Maldajalpaiguri Formation (Early-Late Holocene)	Alluvium (Sand and Silt) (APY)	3/2	Good	LS	TW	25-30 m	200-250 LPM	High	P	98	Not Required	Highly productive aquifer at shallow depth with good recharge.
AC13			Abandoned Channel (AC)	No Well Observed	Excellent to Very Good	LS	RW TW	10-15 m	250-300 LPM	Very High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge from base flow.
PC13	Alluvium (Sand, Silt & Clay) (PC)		No Well Observed	Very Good	LS	RW TW	15-20 m	150-200 LPM	Very High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge.	
NL13	Natural Levee (NL)		No well observed	Good	LS	RW TW	20-30 m	200-250 LPM	High	P	59	Not Required	Area of good groundwater potential at shallow depth. Recharge good. recharge structures not required.	
PAM18	Santal Formation (Lithomeric)	Alluvium (Gravel Dominant) (18)	2/2	Good	LS	TW	40 - 60m	300-400 LPM	Moderate	P	75	Not Required	Good ground water prospect at greater depth along piedmont slope.	
		Alluvium Moderate (PAM)	2/2	Good	LS	TW	40 - 60m	300-400 LPM	Moderate	P	75	Not Required	Good ground water prospect at greater depth along piedmont slope.	

F --- F --- / --- / ---
 These are fault / fracture zones, which generally act as conduits for movement of ground water in hard rocks. Along these zones, the yields are significantly higher and wells are likely to be sustainable for longer duration. However, the inferred fractures need to be confirmed by detailed ground surveys.

D --- D --- / --- / ---
 These are dykes, quartz reefs and pegmatite veins, which generally act as barriers for ground water movement.

N.B. - The depth range and yield range of wells may vary within the unit because of certain inhomogeneities. Fractures/lineaments which are clearly observed / inferred from the satellite image are indicated on the map. There could be some obscured fractures which also influence the ground water prospects. Locations of the recharge structures shown in the map are tentative. This map is useful for narrowing down the target zones and exact location on the ground for wells and recharge structures should be identified based on follow-up ground hydrogeological/geophysical surveys.

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