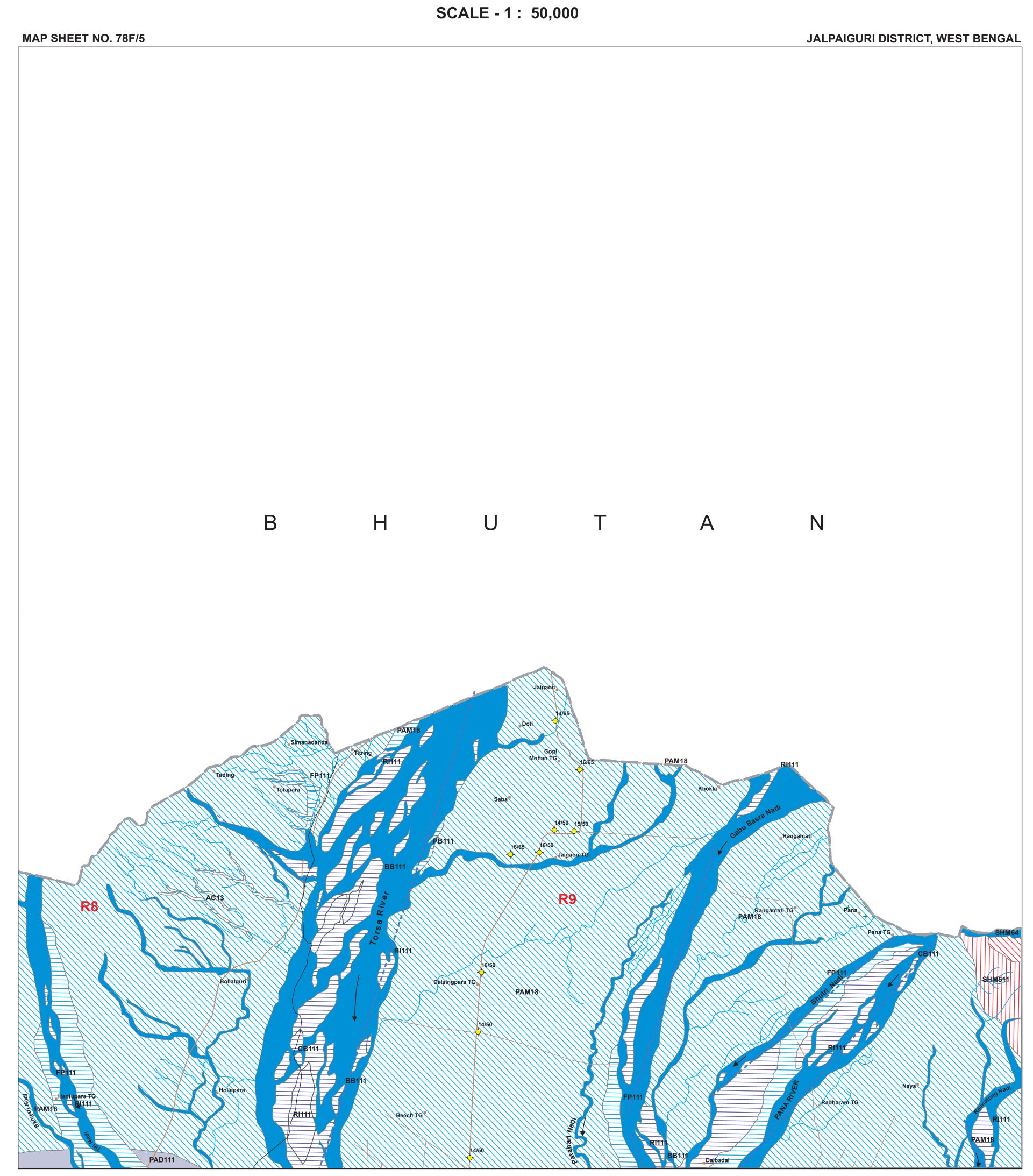
GROUND WATER PROSPECTS MAP

(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)





NRSC (ISRO), DEPT. OF SPACE, GOVT. OF INDIA DATA USED: IRS - P6 LISS III FCC dated February 2009, March 2009 & Nov 2011, GROUND TRUTH & WELL OBSERVATION during February-March 2011, Published Geological maps & Literatures. Designed & Developed by Hydrogeology Division, NRSC, ISRO

L E G E N D

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MAP UNIT	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 &	REMARKS
(HTDROGEOMORPHIC UNIT) REPRESENTED IN THE MAP WITH ALPHANUMERIC CODE (COLOUR INDICATES YIELD RANGE AND HATCHING INDICATE DEPTH RANGE)					AQUIFER MATERIAL LS = LOOSE SEDIMENTS PR = PERMEABLE ROCK FIR = FISSURED ROCK FR = FRACTURED ROCK WR /= WEATHERED ROCK / WM WEATHERED MATERIAL IR = IMPERIVIOUS ROCK	TYPE OF WELLS SUITABLE DW = DUG WELL RW = RING WELL BW = BORE WELL TW = TUBE WELL DBW /= DUG CUM-BORE WELL / DTW DUG CUM-TUBE WELL	DEPTH RANGE OF WELLS (SUGGESTED) MIN - MAX (IN METERS)	YIELD RANGE OF WELLS (EXPECTED) (in LPM or m ³ /day)	HOMOGENEITY IN THE UNIT & SUCCESS RATE OF WELLS (PROBABILITY) VERY HIGH HIGH MODERATE LOW	QUALITY OF WATER POTABLE (P) NON - POTABLE (NP) (INDICATE REASONS IF NON POTABLE)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)	PRIORITY PT = PERCOLATION TANK CD = CHECK DAM NB = NALA BUND RW = RECHARGE WELL DT = DESILTING OF TANK RP = RECHARGE PIT SD = SUBSURFACE DYKE RS = RECHARGE SHAFT ST = STORAGE TANK SCM = SOIL CONSERVATION MEASURES	(PROBLEMS / LIMITATIONS)
CB111	Shaugaon Formation/Present Day Deposits (Present Day) (Present Day) (IIII) (IIII) (IIII)	Channel Bar (CB)	No Well Observed	Excellent	LS	TW	5- 10 m	400-500 LPM	Very High	Р	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)	No Well Observed	Very Good	LS	TW	5-10 m	400-500 LPM	High	Р	Nil	Not Required	Highly productive aquifer in shallow depth.Good recharge
FP111		Flood Plain (FP)	No Well Observed	Very Good	LS	TW	<30 m	250-350 LPM	Very High	Р	Nil	Not Required	Receives good recharge and forms shallow aquifer.Overall quality of the water is potable.
PAD111		Piedmont Alluvium Deep (PAD)	No Well Observed	Good	LS	TW	60-80 m	400-500 LPM	Moderate	Р	Nil	Not Required	Good ground water prospect at greater depth as the principal aquifer occurs below PAM.
AC13	Malda/Jalpaiguri Formation (Early-Late Holocene) (Saud,Silt & Clay) (13) (13)	Abandoned Channel (AC)	No Well Observed	Excellent to Very Good	LS	TW	10-15 m	250-300 LPM	Very High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge from base flow.
PAM18	Samsing Formation (Lt.Pleistocene) (Ct.Pleistocene) (Gravel Dominant) (181)	Piedmont Alluvium Moderate (PAM)	No Well Observed	Good	LS	TW	40 - 60m	300-400 LPM	Moderate	P	2	Not Required	Good ground water prospect at moderate depth along piedmont slop
SHM511	Sandstone & Conglomerate (511)	Structural Hill Moderately Dissected (SHM)										or/stroam wator	

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

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Structural Hill Moderately Dissected (SHM)

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.

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.

Essentially run-off zone. Drinking water sources primarily from springs and river/stream water. Limited prospects along Intermontane Valleys.

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