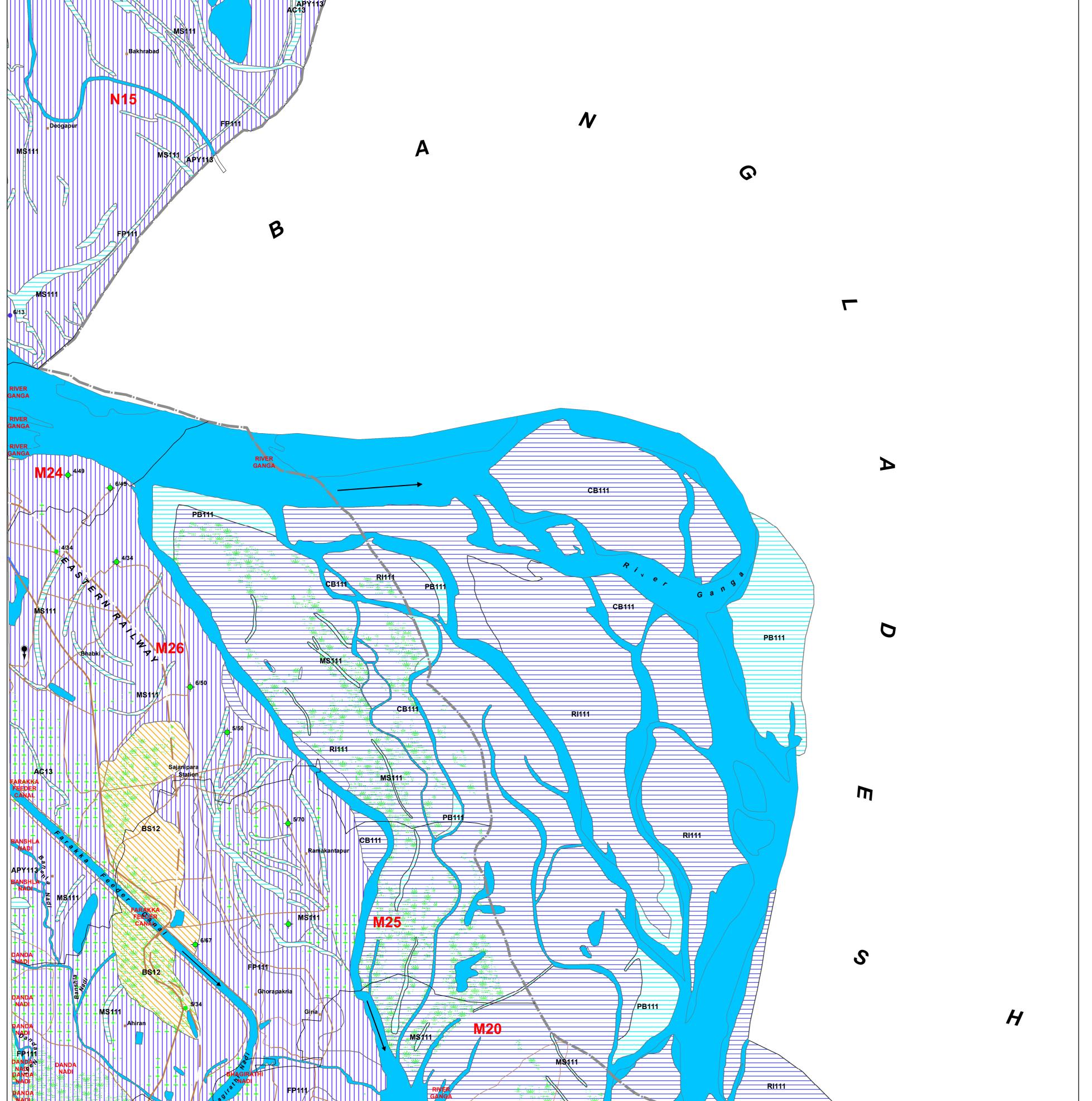
GROUND WATER PROSPECTS MAP (PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS) W Kilometers 0 1 2 3 4 5 SCALE - 1: 50,000 MALDA & MURSHIDABAD DISTRICTS, WEST BENGAL

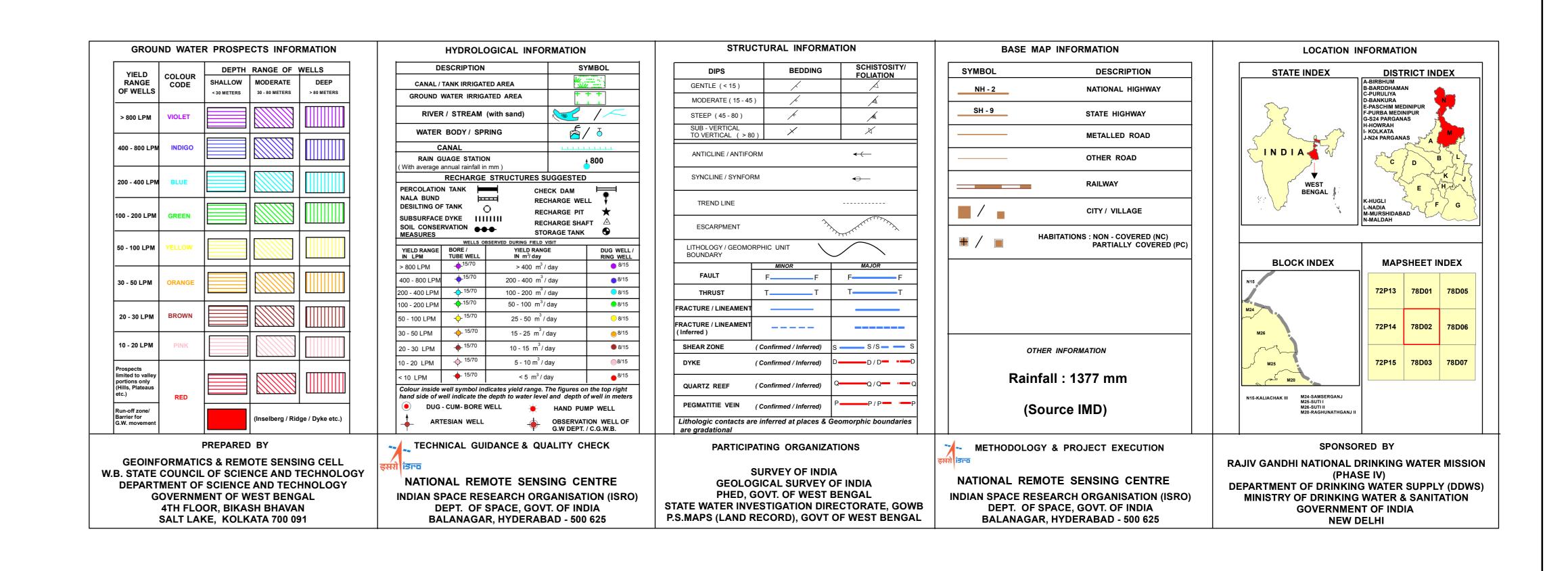
MAP SHEET NO. 78D/2



NRSC (ISRO), DEPT. OF SPACE, GOVT. OF INDIA DATA USED: IRS - P6 LISS III FCC dated September 2005-February 2006, GROUND TRUTH & WELL OBSERVATION during March-June, 2012 & Oct 2012-Jan 2013, Published Geological maps & Literatures. Designed & Developed by Hydrogeology Division, NRSC, ISRO

LEGEND

MAP UNIT	GEO	LOGICAL SEQUENCE / ROCK TYPE	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	
YDROGEOMORPHIC UNIT) REPRESENTED IN THE MAP WITH PHANUMERIC CODE COLOUR INDICATES VIELD RANGE AND ATCHING INDICATE DEPTH RANGE)	(REPRESE THE MAI	(REPRESENTED IN THE MAP WITH NUMERIC CODE)				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)	SUITABLE & PRIORITY PT = PERCOLATION TANK CD = CHECK DAM NB = NALA BUND RW = RECHARGE WELL DT = DESILITING OF TANK RP = RECHARGE PIT SD = SUBSURFACE DYKE RS = RECHARGE SHAFT ST = STORAGE TANK SCM = SOIL CONSERVATION MEASURES	REMARKS (PROBLEMS/LIMITATIONS)
CB111	nt day Deposits		Channel Bar (CB)	No Well Observed	Excellant	LS	RW 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
RI111			River Island (RI)	No Well Observed	Excellant	LS	RW 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	rmation/Preseresent Day)	Alluvium (Sand Dominant) (111)	Point Bar (PB)	No Well Observed	Very Good	LS	RW TW	5-10 m	300-400 LPM	Very High	Р	Nil	Not Required	Groundwater prospects very hig with high recharge potential. Recharge structures not require
MS111	Hugli/Bhagirathi Foi (Pr		Meander Scar (MS)	No Well Observed	Good	LS	RW TW	10-15 m	200-250 LPM	High	P	Nil	Not Required	Groundwater prospects very hig with high recharge potential. Recharge structures not required
FP111			Flood Plain (FP)	<u>6/3</u> 1	Very Good	LS	TW	80-100 m	400-600 LPM	Very High	NP (As) [At shallow depth]	9	RW Low	Areas with high Arsenic and Iron concentration.Potable water available at depth range above 80
BS12	mation	Alluvium (Clay Dominant) (12)	Backswamp (BS)	7/4	Poor	LS	TW	60-70 m	40-50 LPM	Low	Р	Nil	Not Required	Areas of low groundwater potent Better potential at greater depths
APY113	/Chinsura/Katwa For Late Holocene)	Alluvium (Sand and Silt) (113)	Alluvial Plain Younger (APY)	<u>6/3</u>	Good	LS	TW	100-120 m	400-500 LPM	High	NP (As&Fe) [At shallow depth]	12	RW Low	Areas with high Arsenic and Iron concentration.Potable water available at depth range above 10
AC13	ura/Arambagh/Chi (Early to Late	ura/Aram bagh (Early to mrivully	Abandoned Channel (AC)	No Well Observed	Very Good	LS	RW TW	10-15 m	250-300 LPM	Very High	P	Nil	Not Required	Areas of very high groundwater potential at shallow depth.Most suitable for extraction of groundwa
	Pansk	(Sand,Silt & Clay) (13)	Alluvial Plain Older (APO)	No Well Observed	Moderate to Good	LS	TW	40-60 m	150-200 LPM	Moderate to High	P	Nil	RW Moderate to Low	Moderate groundwater potential a intermediate depths.
F// D /QQ D /QQ /			ılt / fracture zones, which ge	enerally act as conduits for m	ovement of ground water in	hard rocks. Along these zone	es, the yields are significantly	r higher and wells are	e likely to be sustaina	ble for longer duration	n. However, the inferre	d fractures need to be o	onfirmed by detailed ground surveys.	



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.