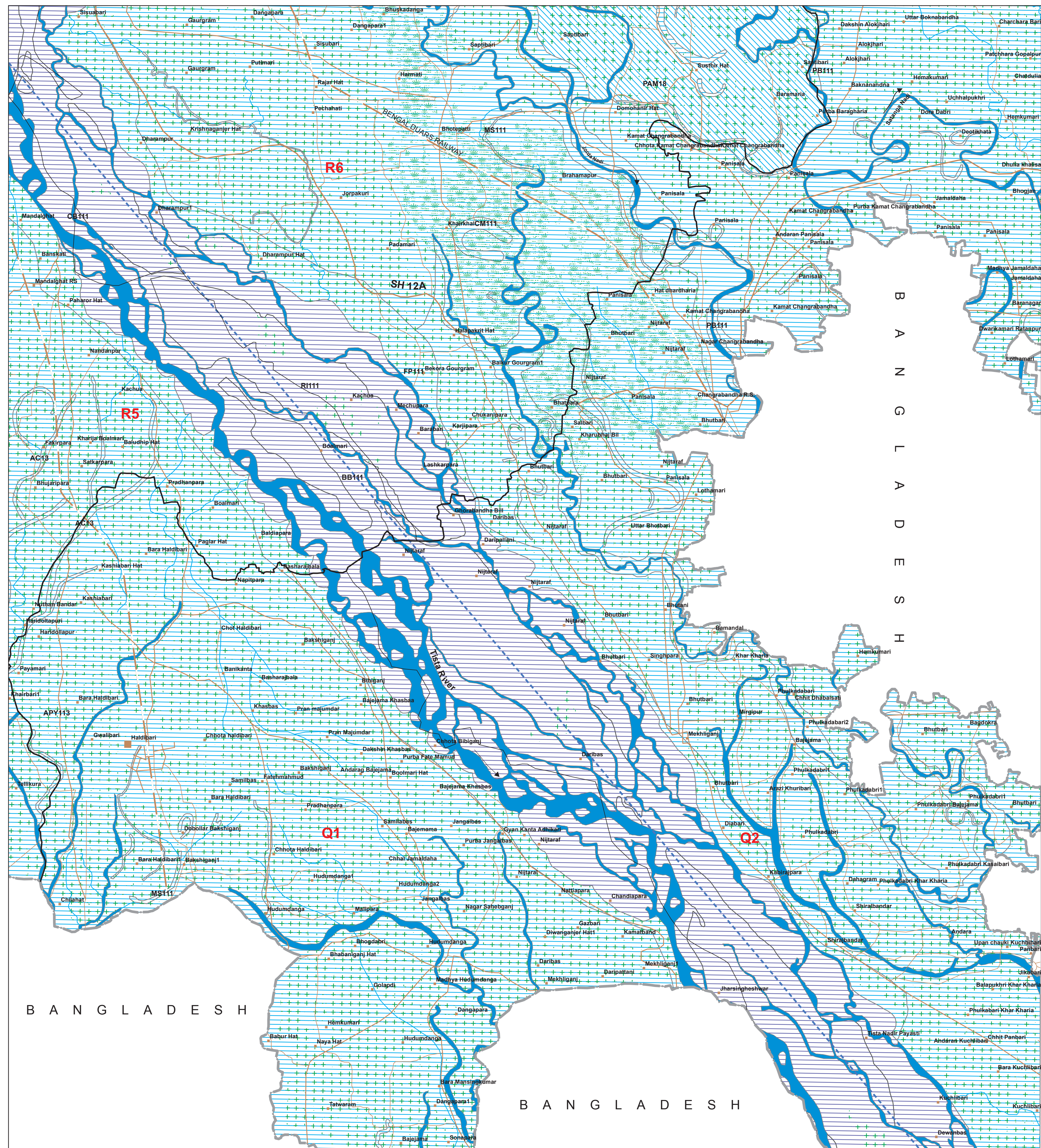


(PREPARED FROM SATELLITE IMAGE INTERPRETATION WITH LIMITED FIELD CHECKS)



JALPAIGURI & KOCH BIHAR DISTRICT, WEST BENGAL



B A N G L A D E S H

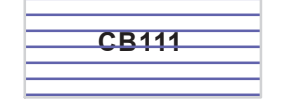

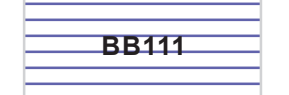
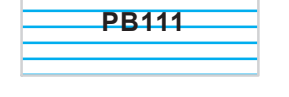

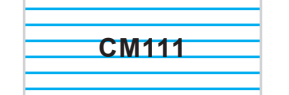
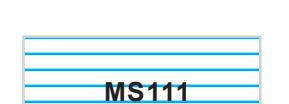

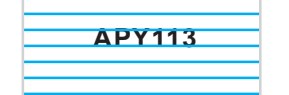

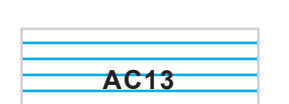

B A N G L A D E S H

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DATA USED : IRS - P6 LISS III FCC dated February 2009, March 2009 & Nov 2011, GROUND TRUTH & WELL OBSERVATION during February-March 2011, Published GSI & SOI maps.

Designed & Developed by Hydrogeology Division, NRSC, ISRO

LEGEND

MAP UNIT (HYDROGEO MORPHIC UNIT) REPRESENTED IN THE MAP WITH ALPHABETIC CODE (COLOUR INDICATES YIELD RANGE AND MATCHING INDICATE DEPTH RANGE)	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 (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 MODERATE LOW	QUALITY OF WATER POTABLE (P) NON- POTABLE (NP) (INDICATE REASON IF NON POTABLE)	GROUND WATER IRRIGATED AREA (APPROX. RANGE IN PERCENTAGE)			
		Alluvium (Sand Dominant) (111)	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.	
			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.	
			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.	
			River Island (RI)	No Well Observed	Very Good	LS	TW	5- 10 m	400-500 LPM	High	P	1	Not Required	Highly productive aquifer in shallow depth. Good recharge	
			Cut-off Meander (CM)	No Well Observed	Very Good	LS	RW TW	10-20 m	300-400 LPM	Very High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge.	
			Meander Scar (MS)	No Well Observed	Very Good	LS	RW TW	10-15 m	200- 250 LPM	High	P	Nil	Not Required	Highly productive shallow aquifers with good recharge.	
			Flood Plain (FP)	No Well Observed	Very Good	LS	RW TW	<30 m	250-350 LPM	Very High	P	85	Not Required	Receives good recharge and forms shallow aquifer.Overall quality of the water is potable.	
		Alluvium (Sand and Silt) (113)	Alluvial Plain Younger (APY)	No Well Observed	Good	LS	TW	25-30 m	200-250 LPM	High	P	98	Not Required	Highly productive aquifer at shallow depth with good recharge.	
		Alluvium (Sand,Silt & Clay) (13)	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.	
		Alluvium (Gravel Dominant) (18)	Piedmont Alluvium Moderate (PAM)	No Well Observed	Good	LS	RW TW	40 - 60m	300-400 LPM	Moderate	P	85	Not Required	Good ground water prospect at moderate depth along piedmont slope	
F_____F/_____/_____I_____															
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 / Q_____Q / P_____P D_____D / Q_____Q / P_____P															
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.															