

GEO-SPATIAL DATABASE CREATION AND DEVELOPING SDI IN RAJASTHAN

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Department of Science and Technology
Jodhpur

Geospatial Forum, 2013



STATE REMOTE SENSING APPLICATION CENTRE

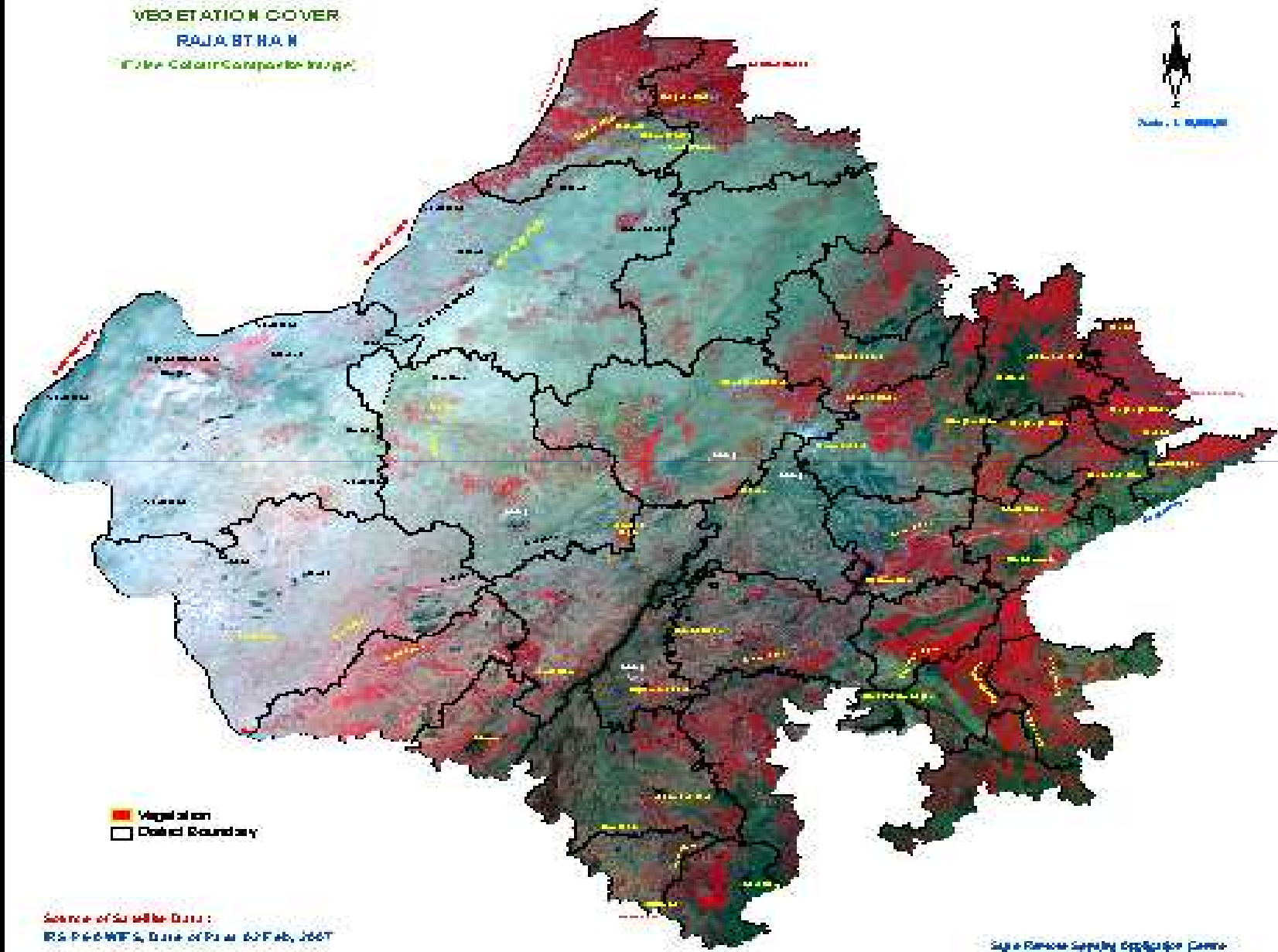
Department of Science & Technology

Government of Rajasthan, Jodhpur

➤ The Centre was established in 1979 as part of Desert Development Programme, named as Aerial Photo Interpretation Laboratory (APIL) to assist Soil and Water Conservation Planning in the State.

➤ To make it multi user oriented, the Laboratory was transferred to State Science and Technology Department in 1985 and renamed as “State Remote Sensing Application Centre (SRSAC)”.

VEGETATION COVER
RAJASTHAN
(True Color Composite Image)

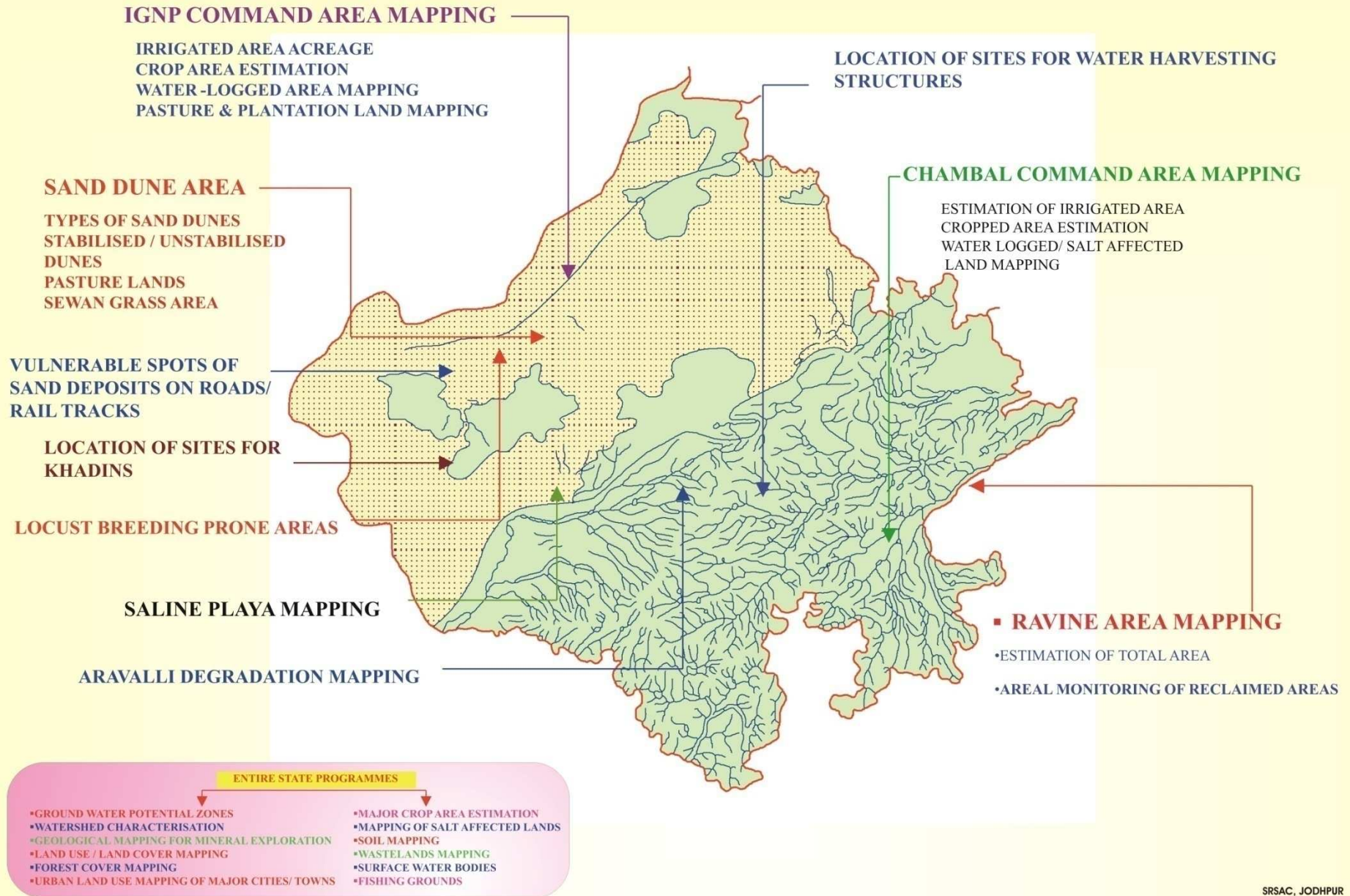


■ Vegetation
□ District Boundary

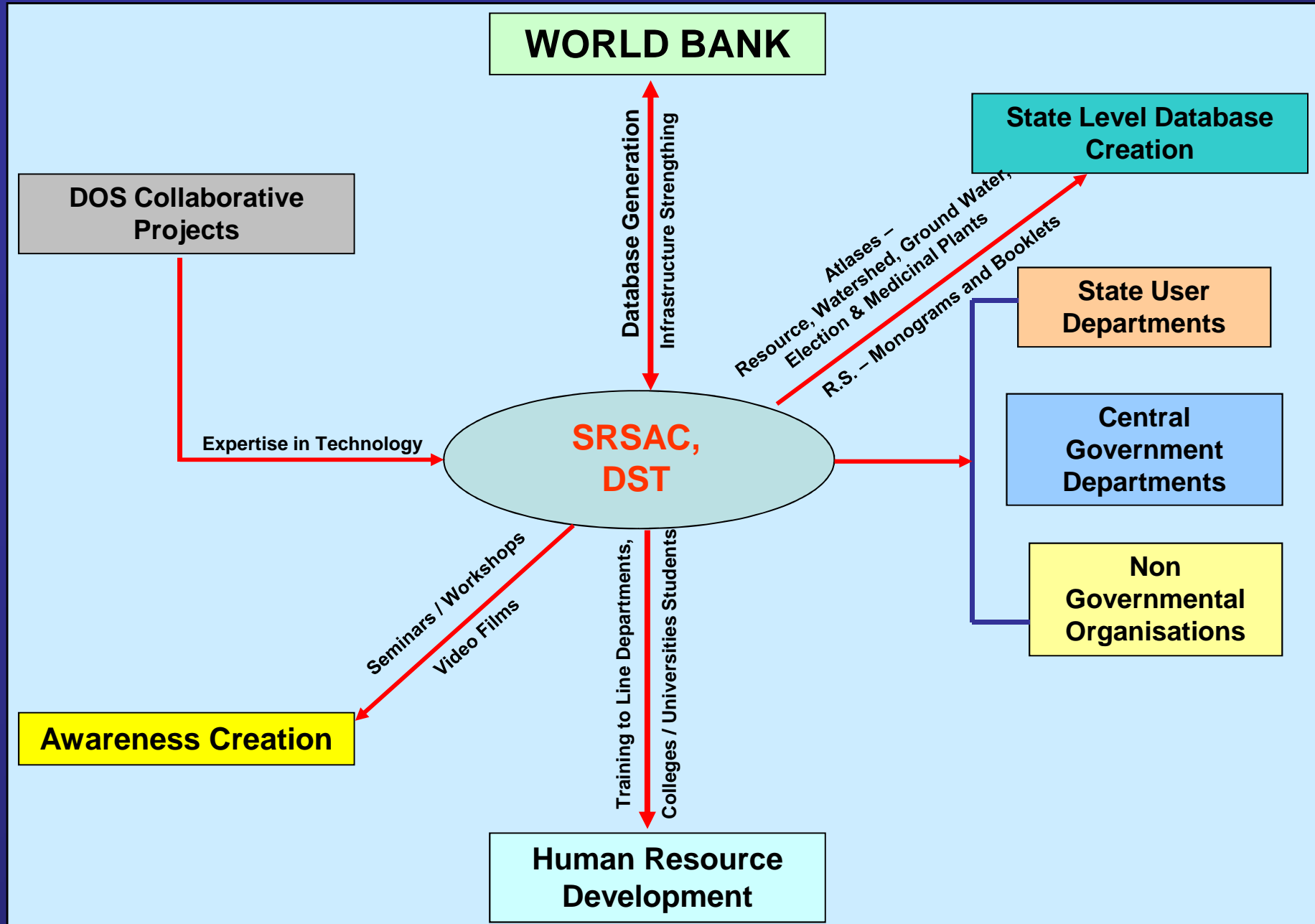
Source of Satellite Data :
IRS P6-3WV2, Date of Pass: 02 Feb, 2007

Space Remote Sensing Application Centre
Department of Space, Govt. of India
201412

RAJASTHAN - NATURAL RESOURCES AND DEVELOPMENT PRIORITIES



Broader activities of SRSAC



Infrastructure

Existing Hardware	Qty
HP Workstations - Intel Core i-7, OS - window 7 / Windows XP	06
Desktops - Intel Core i-5, OS - window 7 (HP)	03
Desktops - Intel Core i-7, OS - window 7 (Dell)	20
Desktops - Intel PIV window XP -	32
Printers/Plotters/Scanners	
A4 size BW Laser Printers -	4
A3 size BW Laser Printers -	1
A4 size Color Laser Printers -	1
42" Inkjet Plotters	2
42" Color Scanner	1
Survey Equipments	
Total Station	One
Hand Held GPS	Four
Differential GPS	2 Sets
Software	
Image Analysis –ERDAS	8 Licenses
Envi	1 License
GIS – ARC/INFO	14 Licenses
ARC GIS Server	1 License
Arc View	2 Licenses
Auto CAD	1 License

Circular defining SRSAC as Nodal Agency for all Remote Sensing , GIS and GPS related work

Department of Science & Technology

No.F.()DST/SRSAC/IT-2/2011 416 Jaipur, Feb. 10, 2012

CIRCULAR

The State Remote Sensing Application Centre (SRSAC), Jodhpur was established within the Department of Science and Technology in 1985. Since then, it has been engaged in the creation of a data base on infrastructure and natural resources through remote sensing and Geographical Information Systems (GIS). It has all infrastructural facilities, the requisite hardware/software for satellite data interpretation, image analysis and database creation on a GIS platform.

I hear that the departments are still allotting the work of remote sensing and GIS to private firms without taking an NOC from the State Remote Sensing Application Centre. In the process, the base layer information such as rail, roads, settlements, water bodies etc. is being created by each department on a different projection and scale. There is,

thus, duplication of work and, naturally, problems in sharing and integrating databases. The State Remote Sensing Application Centre can here play a pivotal role in checking quality and ensuring compatibility of databases created by different departments and web hosting them to bring them on a common platform.

It has, therefore, been decided that GIS and remote sensing work of all departments/agencies of the Government should be done by the State Remote Sensing Application Centre. SRSAC has now been designated as the Nodal Agency for all Remote Sensing GIS and Global Positioning System (GPS) related work and for procurement of satellite data for the State. No government department/agency should now take up remote sensing and GIS related work without first obtaining an NOC first from the Department of Science & Technology.

(S. Ahmad)
Chief Secretary

DATA BASE CREATION

- Aerial Photo Interpretation
- Visual Interpretation of satellite data
- Manual Cartographic preparation of maps
- Ammonia printing
- Shifted to digital cartography, digital analysis

Collaborative Projects with ISRO

- Integrated Mission for sustainable development(IMSD)
- Rajeev Gandhi National Drinking Water Mission(RGNDWM)
- Land Degradation Mapping
- Wasteland Mapping
- Integrated Resource Information System for Desert Areas (IRIS-DA)
- Natural Resources Information System(NRIS)
- National Urban Information System(NUIS)
- Crop Acreage and Production Estimation
- Wetland Mapping
- Space based Information System for decentralized planning (SIS-DP)
- Land use Mapping
- National Geomorphology and Lineament Mapping(NGLM)

Projects with State user Department

- Agriculture
- Mines and Geology
- PHED
- PWD
- Industry
- Town Planning
- Disaster Management
- Watershed Development and Soil Conservation
- Rural Development
- Forest
- Ground Water
- Irrigation
- Environment

Central Government Departments

Rural Development Ministry, Government of India, New Delhi

- Natural & Live Stock Development Plan-10 DDP Districts.

Defence Laboratory, Jodhpur

- Site Selection for Desalination Plants- Barmer
- Hydrogeological mapping - Barmer

National Productivity Council, New Delhi

- Sanganer Town (Environmental Studies)

Desert Medicine Research Centre (DMRC), Jodhpur

- GIS for Malaria Information System

Central Arid Zone Research Institute (CAZRI)

- Digital Generation of Agro Climatic map

Department of Science and Technology, Government of India, New Delhi

- Water Resource Development Plan, 2 Tehsils of Tonk District.

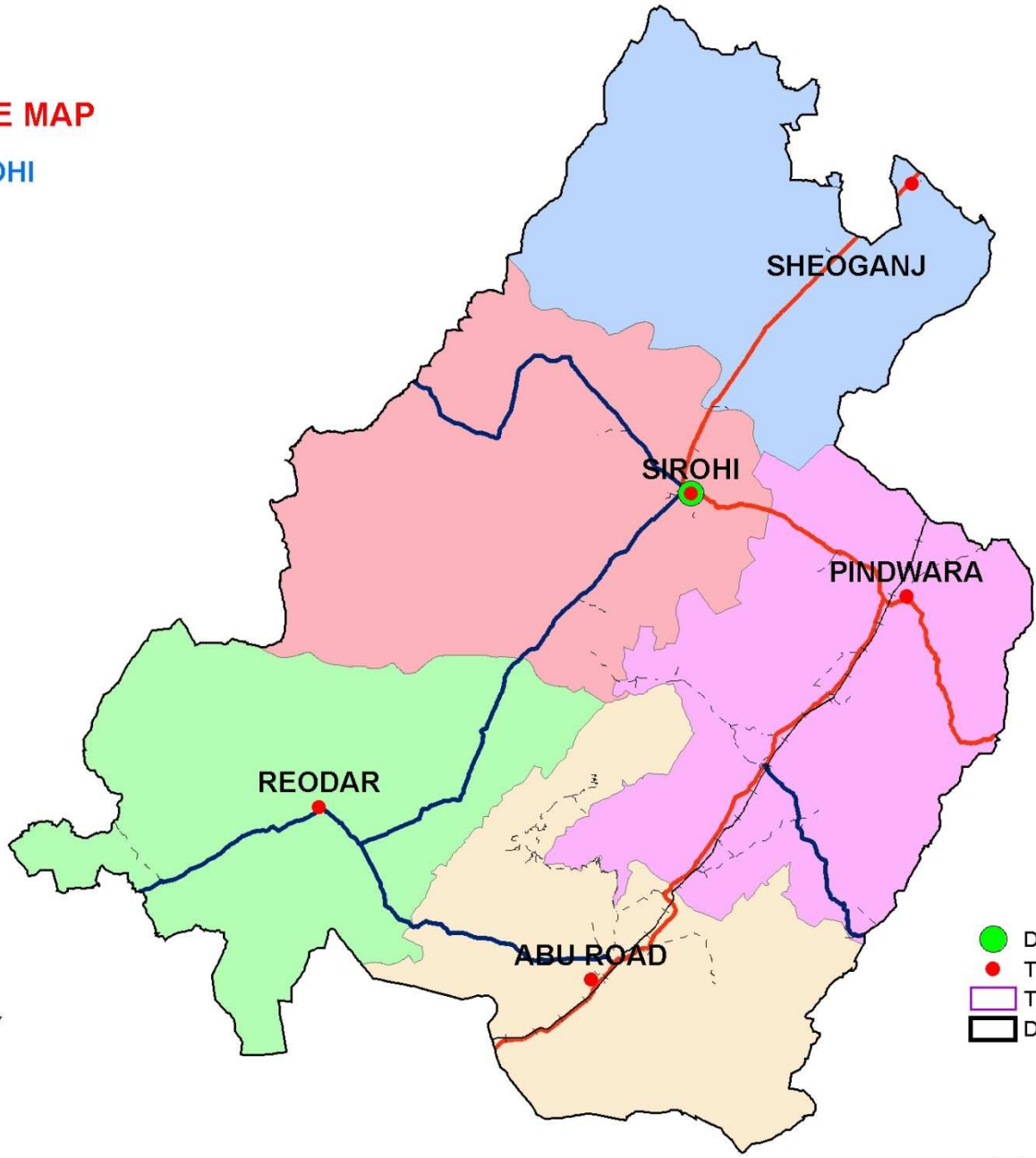
- Nuclear Power Corporation of India, Government of India,

-

Others - Cairns Energy Pvt Ltd, Hindustan Zinc Ltd, GAIL india, NGO

ADMINISTRATIVE MAP

DISTRICT SIROHI



Legend

- +— Railway Line
- NATIONAL HIGHWAY
- STATE HIGHWAY
- OTHER ROADS

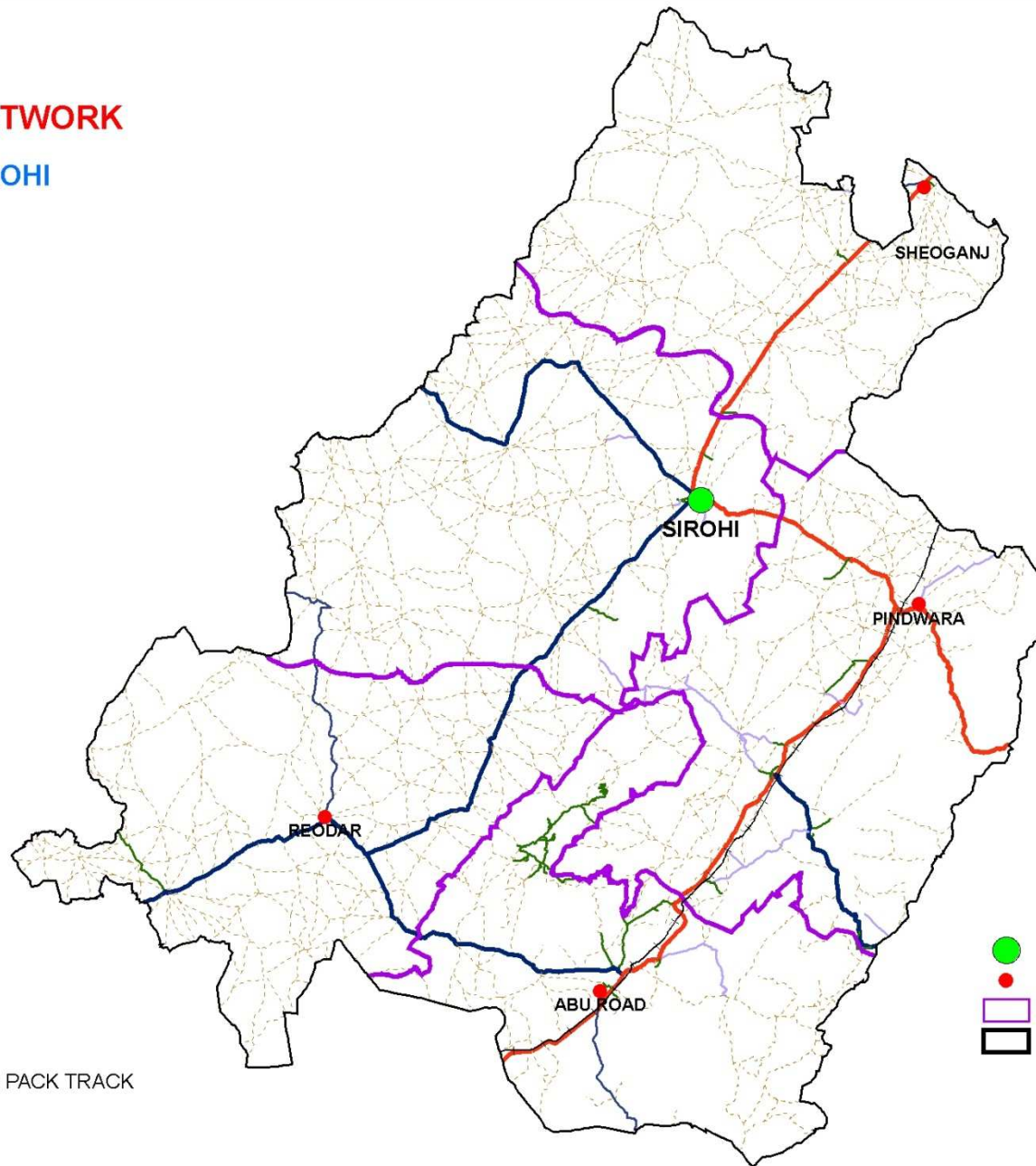
- DISTRICT HQ
- TEHSIL HQ
- TEHSIL BOUNDARY
- DISTRICT BOUNDARY

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TRANSPORT NETWORK

DISTRICT SIROHI



Legend

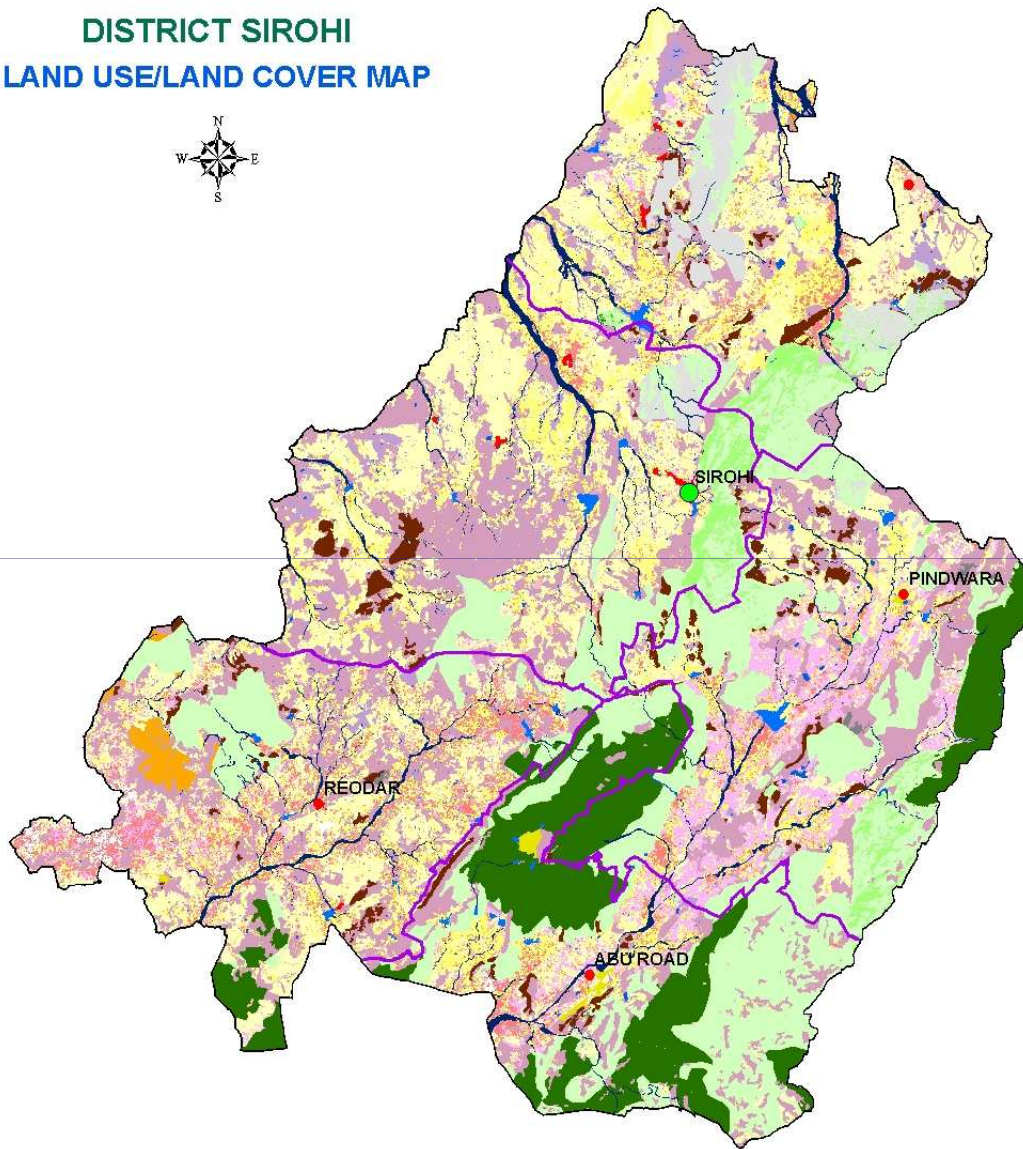
- NATIONAL HIGHWAY
- STATE HIGHWAY
- MAJOR DISTRICT ROAD
- METALLED ROAD
- UNMETALLED ROAD
- - - - - CART TRACK; FOOT PATH; PACK TRACK
- + + + + + Railway Line

- DISTRICT HQ
- TEHSIL HQ
- TEHSIL BOUNDARY
- DISTRICT BOUNDARY

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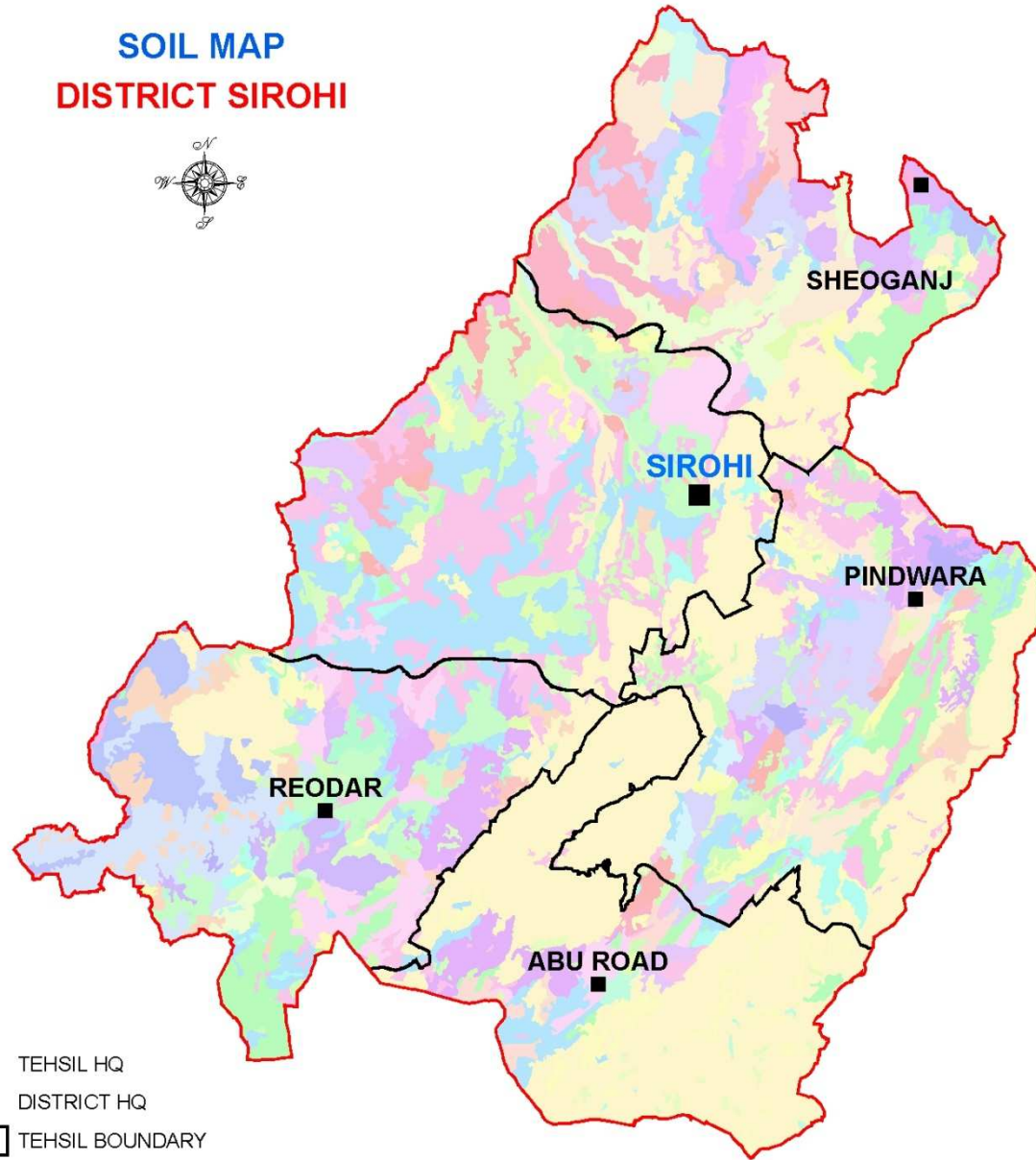
DISTRICT SIROHI LAND USE/LAND COVER MAP



Legend

- | | |
|--|--------------------------------|
| ■ | Towns/cities (Urban) |
| ■ | Villages (Rural) |
| ■ | Kharif |
| ■ | Rabi |
| ■ | Kharif + Rabi (double cropped) |
| ■ | Current Fallow |
| ■ | Dense/Closed |
| ■ | Forest Blanks |
| ■ | Open |
| ■ | Scrub Forest |
| ■ | Crop Land in Forest |
| ■ | Sandy area |
| ■ | Barren Rocky/ Stony waste/ SR |
| ■ | Gullied/Ravenous Land |
| ■ | Land with scrub |
| ■ | Land without scrub |
| | Salt Affected Land |
| ■ | Sandy-desertic Land |
| ■ | Mining/ Industrial waste |
| ■ | Reservoirs |
| ■ | Lakes/Ponds |
| ■ | Water channel area |
-
- | | |
|---|-------------------|
| ● | DISTRICT HQ |
| ● | TEHSIL HQ |
| | TEHSIL BOUNDARY |
| | DISTRICT BOUNDARY |

SOIL MAP DISTRICT SIROHI



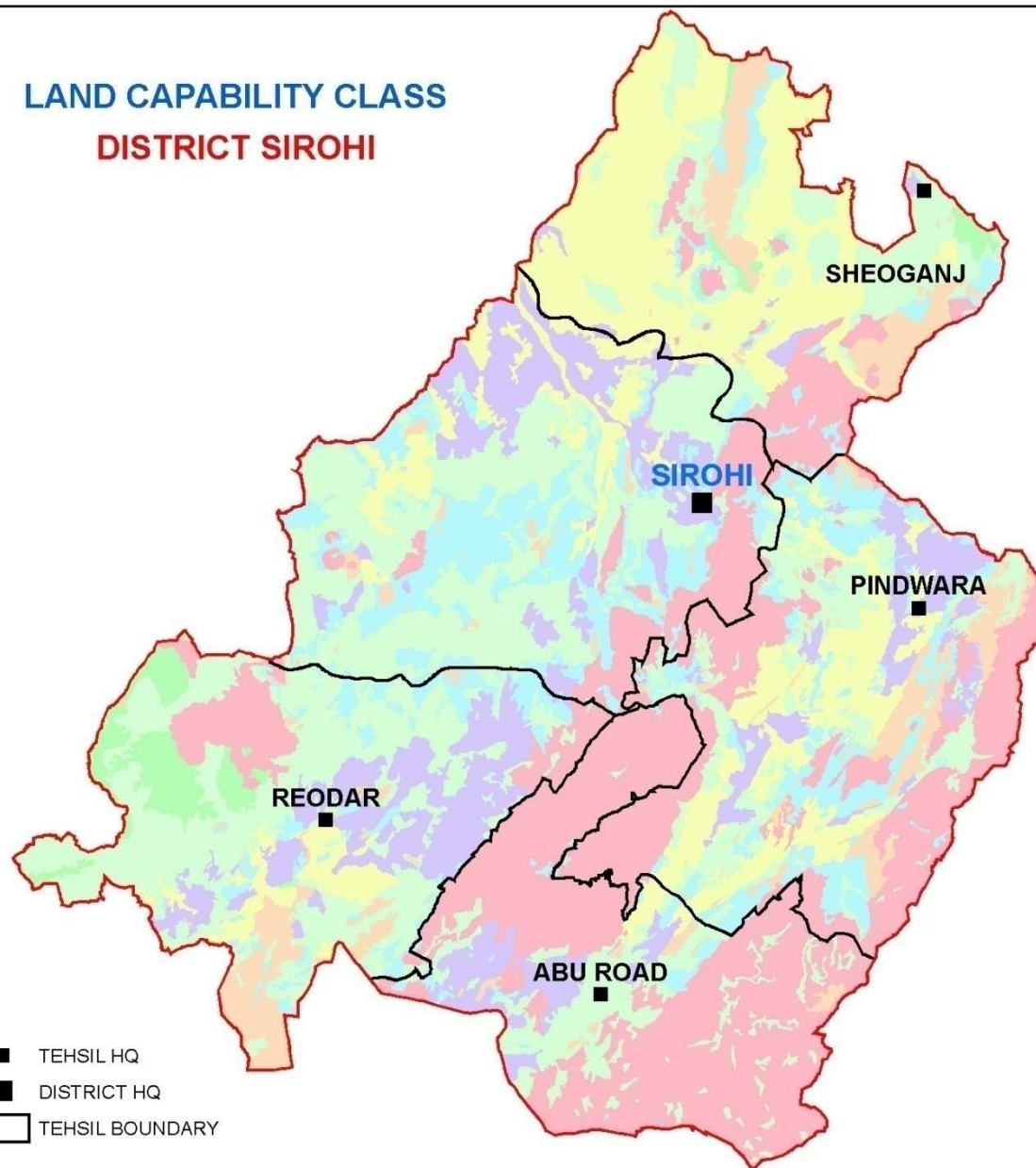
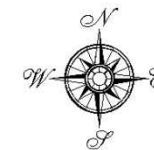
SOIL SERIES

AIRDM	Dune
Abu	Gangasahar
Anadra	Goriya
Anadra+Balda	Jhamar+Siyawa
Anadra+Dantrai	Jharoli
Anadra+Jharoli	Jharoli+Balda
Balda	Jharoli+Siyawa
Balda+Jharoli	Khakharwa
Bant	Khakharwa+Kojra
Bant+Mandar	Kojra
Bhadrajun	Kojra+Jharoli
Binmal	Kundal
Chhiparwada	Leta
Chirai	Mandar
Chirai+Tilwara	Mandar+Balda
Chopasani	Mandar+Bant
Dantrai	Mandar+Jharoli
Dantrai+Balda	Molasar+Dhanana
Dantrai+Bant	Samdari
Dantrai+Dhabar	Siyawa
Dantrai+Jharoli	Siyawa+Balda
Dhabar	Tilwara

- TEHSIL HQ
- DISTRICT HQ
- TEHSIL BOUNDARY

LAND CAPABILITY CLASS

DISTRICT SIROHI

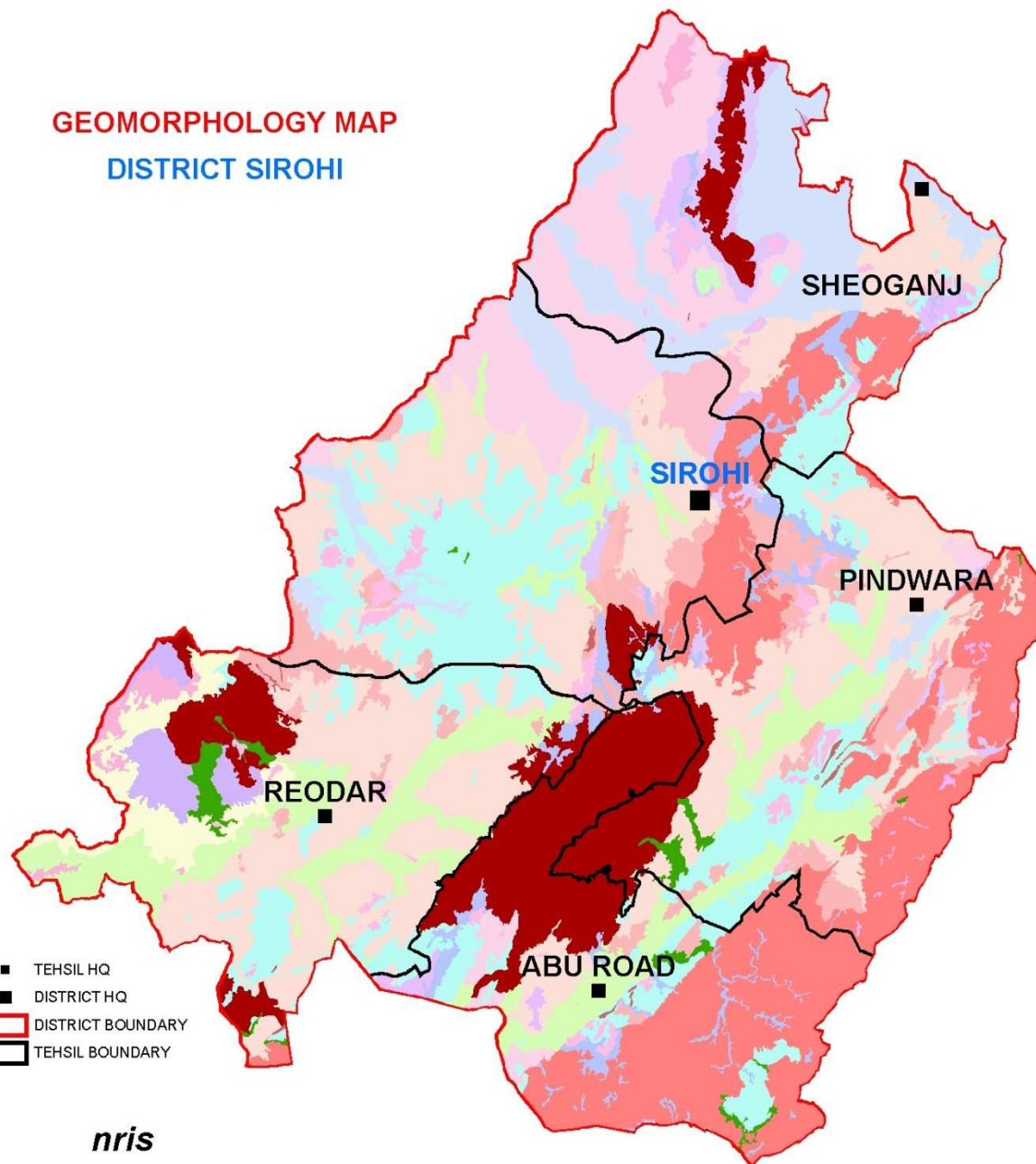


- TEHSIL HQ
- DISTRICT HQ
- TEHSIL BOUNDARY

LAND CAPABILITY CLASS

- II - Good Cultivable Land
- III - Moderately Good Cultivable Land
- IV - Fairly Good Land Suited for Occasional Cultivation
- V - Land Suited for Occasional Cultivation
- VI - Very Well Suited For Grazing and Forestry
- VII - Fairly Well Suited for Grazing or Forestry
- VIII - Suited for Wild Life Recreation

GEOMORPHOLOGY MAP
DISTRICT SIROHI



Legend

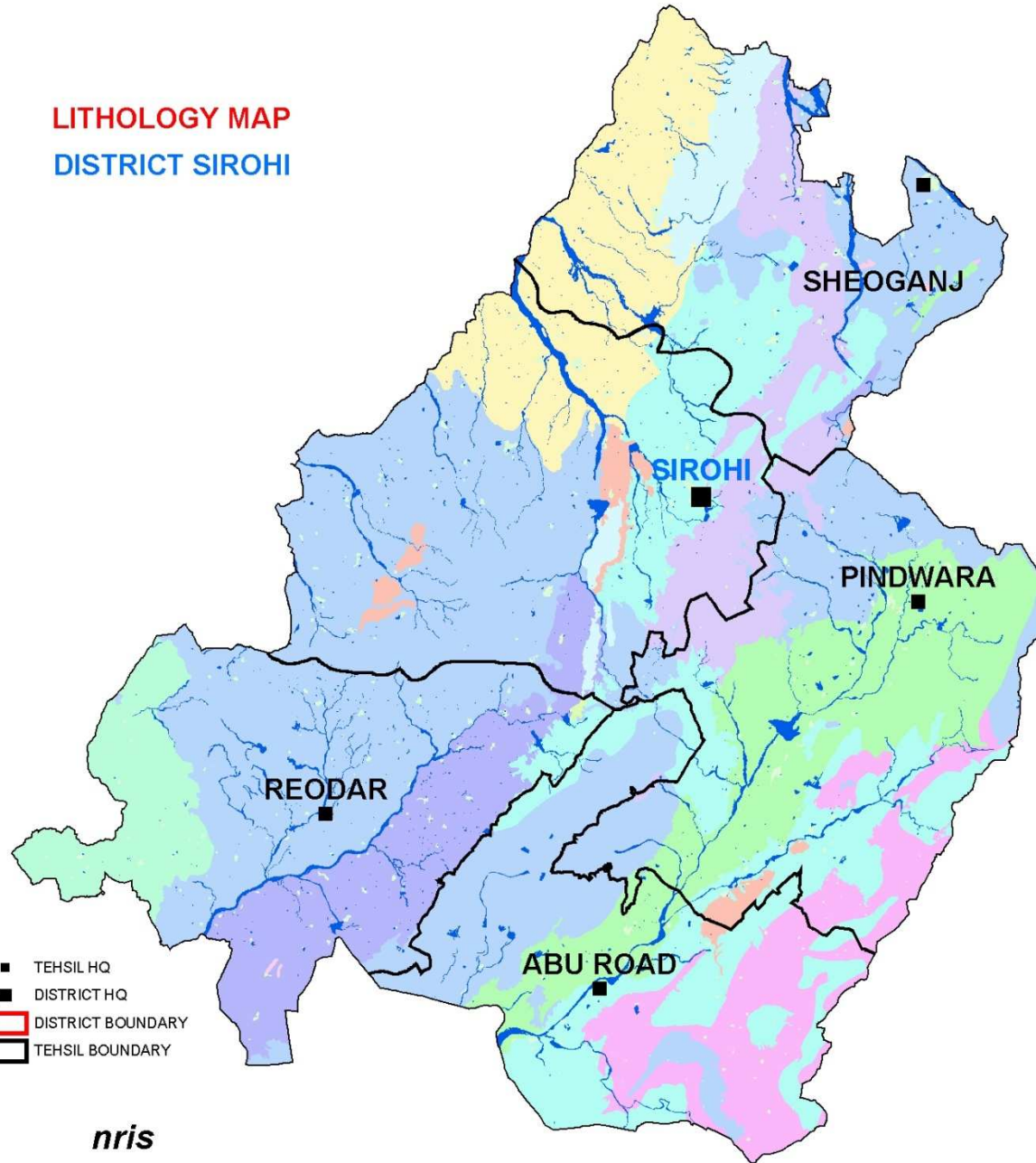
- Alluvial fan Older
- Dissected dune complex
- Dome type Residual Hills
- Eolian Plain
- Inselberg
- Intermontane valley/ Structural Valley (Large)
- Intermontane valley/ Structural Valley (Small)
- Linear Ridge
- Massive type Denudational Hills (Large)
- Massive type Denudational Hills (Small)
- Massive type Residual Hills
- Moderately weathered/ moderately buried Pediplain
- Pediment
- Ridge type Structural Hills (Large)
- Ridge type Structural Hills (Small)
- Sand dune
- Sand sheet
- Shallow alluvial plain (Older/ Upper)
- Shallow alluvial plain (Younger/ Lower)
- Shallow weathered/ shallow buried Pediplain
- Upper Piedmont Slope
- Valley Fill/ filled-in valley

- TEHSIL HQ
- DISTRICT HQ
- DISTRICT BOUNDARY
- TEHSIL BOUNDARY

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LITHOLOGY MAP
DISTRICT SIROHI



- TEHSIL HQ
- DISTRICT HQ
- ▭ DISTRICT BOUNDARY
- ▭ TEHSIL BOUNDARY

Legend

- Gneiss
- Granite and Gneissic Complex
- Gravel, Sand, Silt
- Habitation Mask
- Massive Granite & Plutonic Rocks
- Massive Limestone
- Meta-Basic/ Meta-Volcanic
- Phyllite, Schist and Slate
- Phyllite/ Schist/ Slate with bands of Quartzite
- Quartz Reef/ Quartzite
- Rhyolite
- Sandy Clay
- Schist and Gneiss mixed
- Water Body Mask

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STRUCTURE MAP
DISTRICT SIROHI



- TEHSIL HQ
- DISTRICT HQ
- ▭ DISTRICT BOUNDARY
- ▭ TEHSIL BOUNDARY

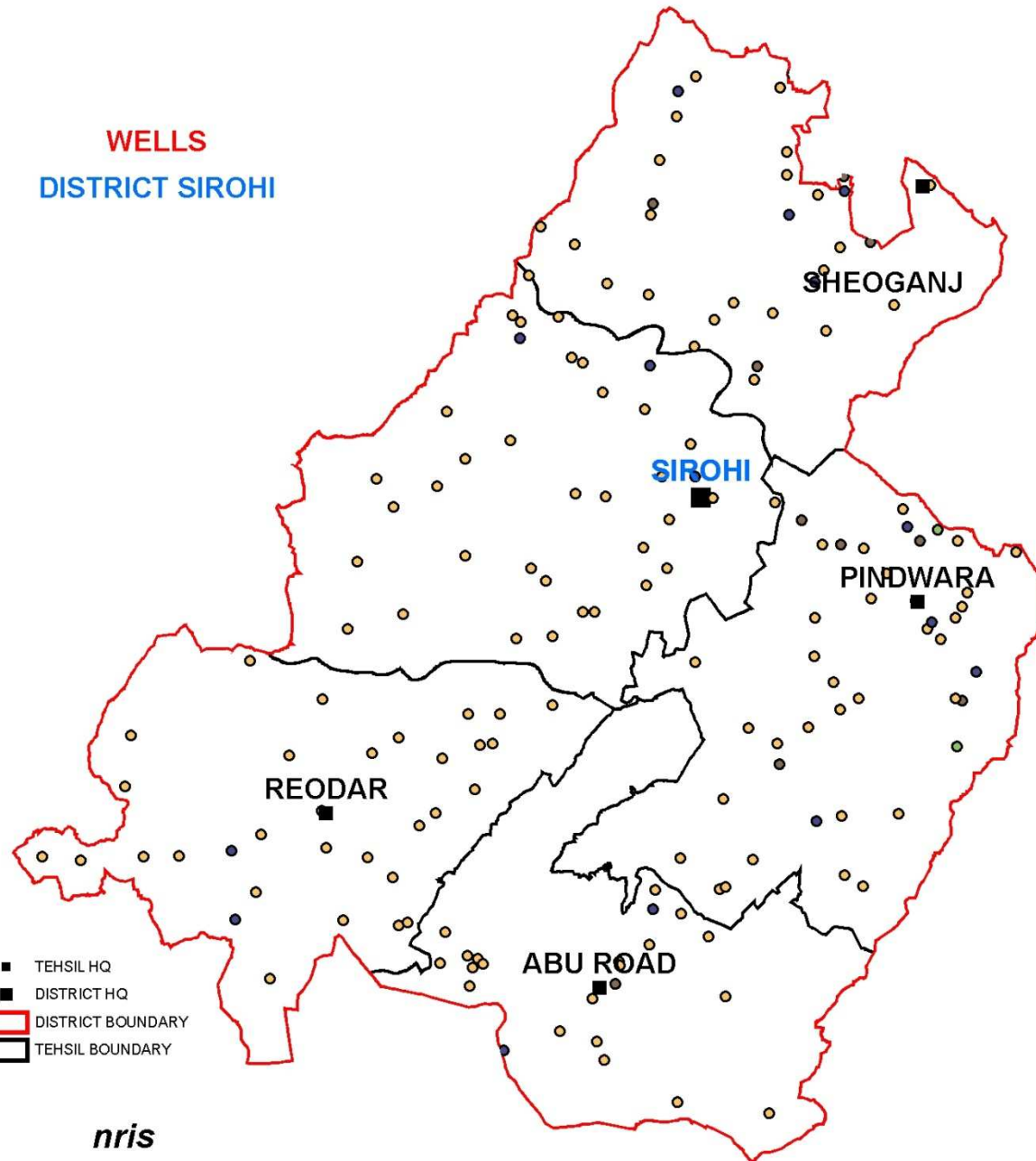
Legend

- <all other values>
- Anticlinal axis non-plunging
- Anticlinal axis plunging
- Fault inferred
- Fold axis
- Lineament
- Strike
- Structural trends
- Synclinal axis non-plunging

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WELLS
DISTRICT SIROHI



- TEHSIL HQ
- DISTRICT HQ
- ▭ DISTRICT BOUNDARY
- ▭ TEHSIL BOUNDARY

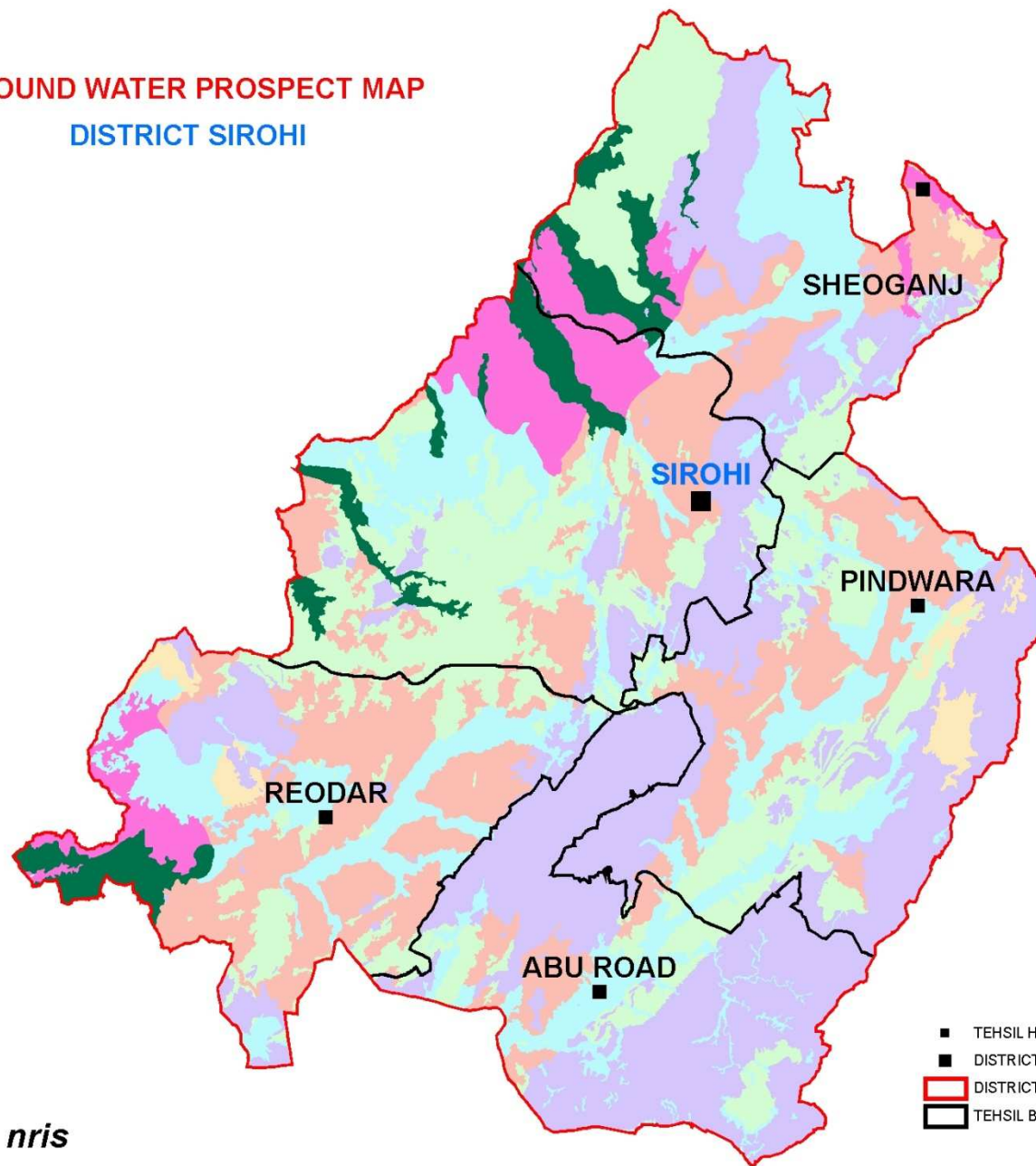
Legend

- Borewell eith hand pump
- Borewell with Power pump
- Borewell with hand pump
- Borewell with power pu
- Borewell with power pump
- Borewell with powerpump
- Dug-cum borewell
- Dug-cum-borewell
- Open Dug well
- Open dug well
- open dug well

nris





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GROUND WATER PROSPECT MAP
DISTRICT SIROHI



Legend

-  Very good to good
-  Good
-  Good but Saline
-  Good to moderate
-  Moderate
-  Moderate to Poor
-  Poor
-  Poor to Nil
-  Saline
-  Water Bodies

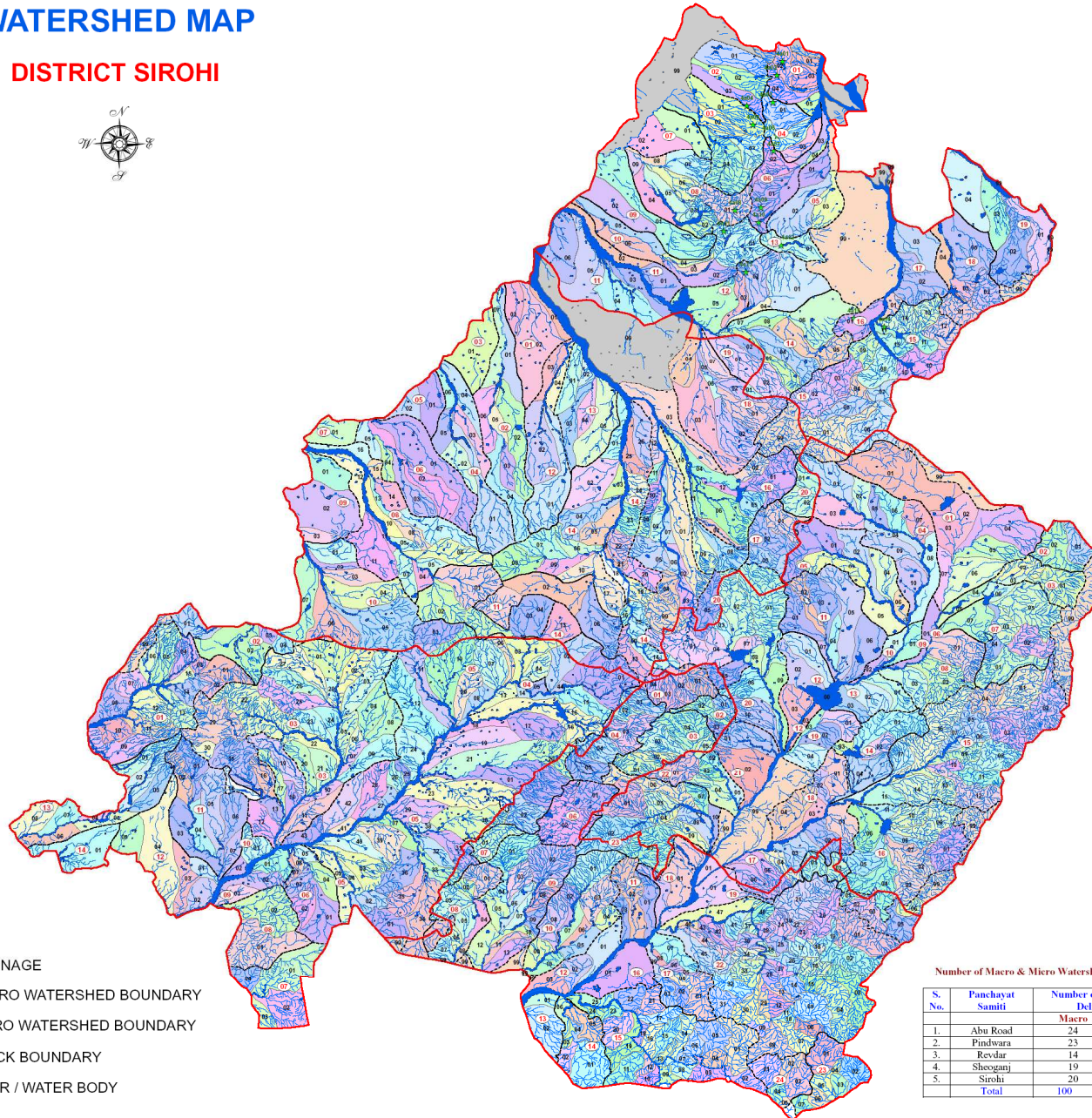
-  TEHSIL HQ
-  DISTRICT HQ
-  DISTRICT BOUNDARY
-  TEHSIL BOUNDARY

nris






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WATERSHED MAP

DISTRICT SIROHI



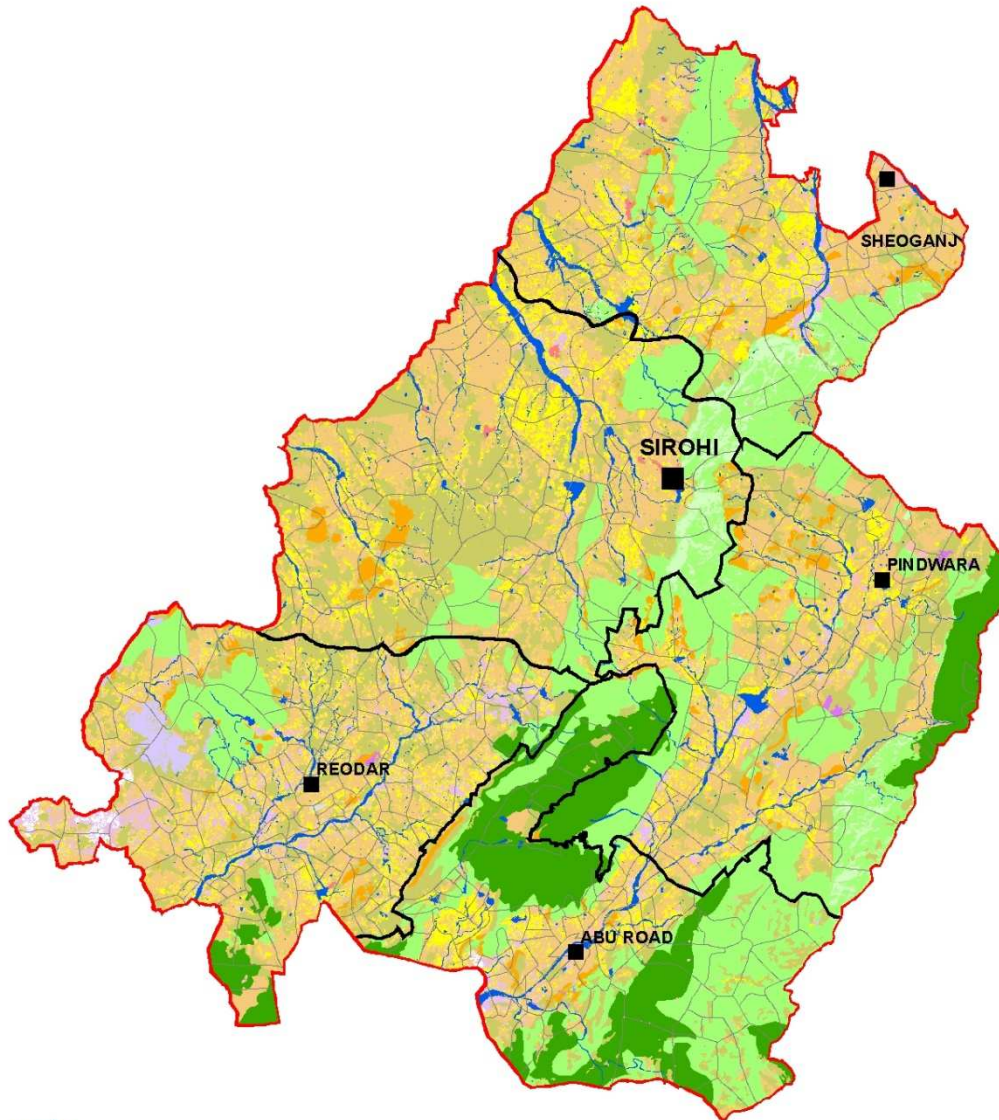
Legend

-  DRAINAGE
-  MACRO WATERSHED BOUNDARY
-  MICRO WATERSHED BOUNDARY
-  BLOCK BOUNDARY
-  RIVER / WATER BODY

Number of Macro & Micro Watershed Delineated

S. No.	Panchayat Samiti	Number of Watershed Delineated	
		Macro	Micro
1.	Abu Road	24	171
2.	Pindwara	23	130
3.	Revdar	14	136
4.	Sheoganj	19	88
5.	Sirohi	20	130
	Total	100	655

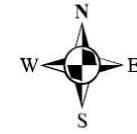
LAND RESOURCE DEVELOPMENT PLAN DISTRICT SIROHI


















Legend

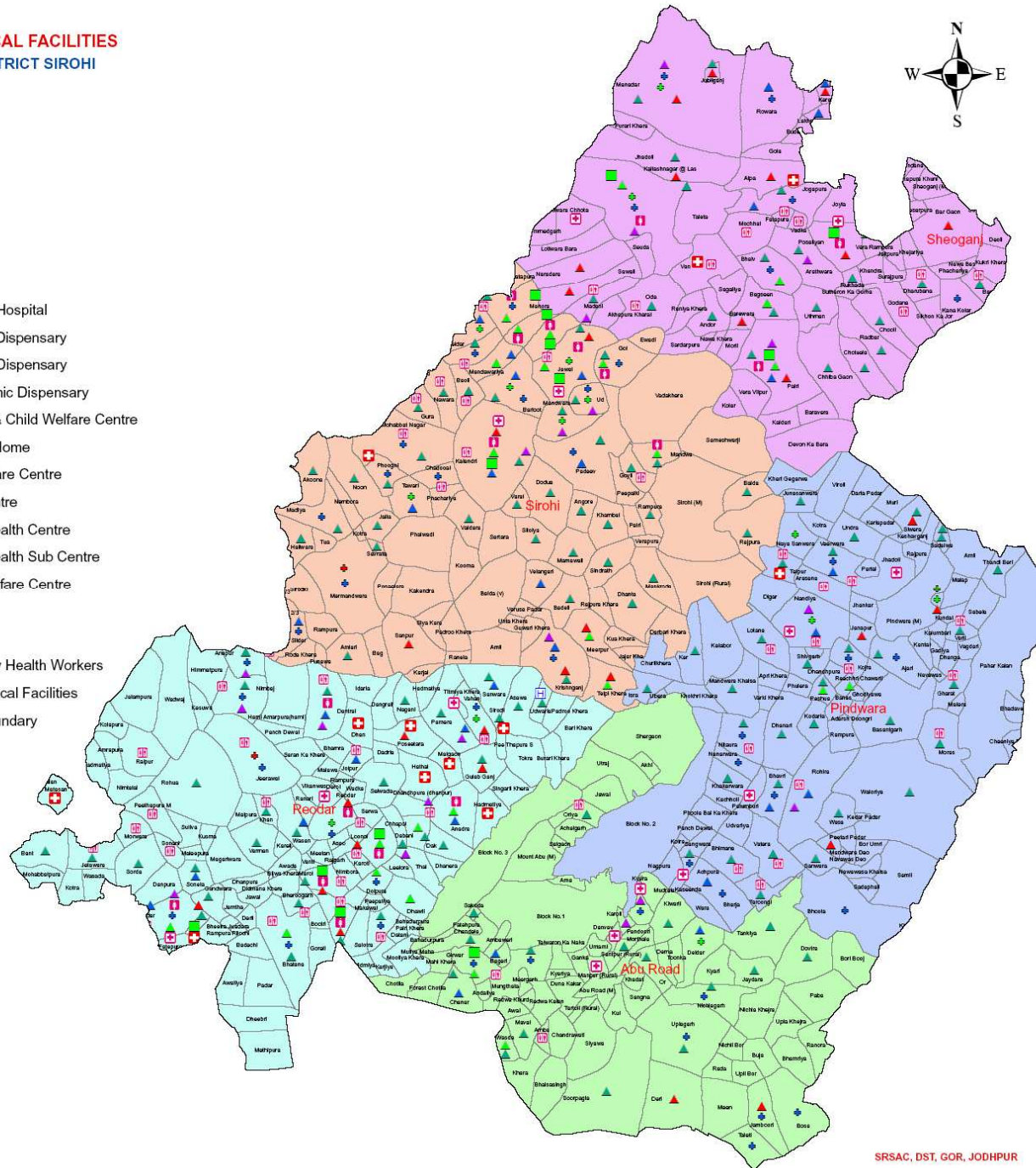
- Rabi Crop Cultivation utilising, In-Situ Conserved Moisture with Proper Management
 - Agro Forestry
 - Agro Horticulture with Judicious use of Ground Water Adopting Proper Crop Rotation
 - Agro Arid Horticulture with FYM plus Gypsum Application
 - Gap Filling and Protection of Forest Land
 - Plantation and Protection of Forest Land
 - Protection and Management of Forest Land
 - Reclamation and Management of Gullied Land
 - Silvi Pasture Development
 - Pasture Development and Management
 - Natural Regeneration and Protection of Environment
 - Protection and Management with Energy Plantation
 - Pisciculture Development
 - Towns/cities (Urban)
 - Villages (Rural)
-
- TEHSIL HQ
 - DISTRICT HQ
 - DISTRICT BOUNDARY
 - TEHSIL BOUNDARY
 - VILLAGE BOUNDARY

MEDICAL FACILITIES
DISTRICT SIROHI

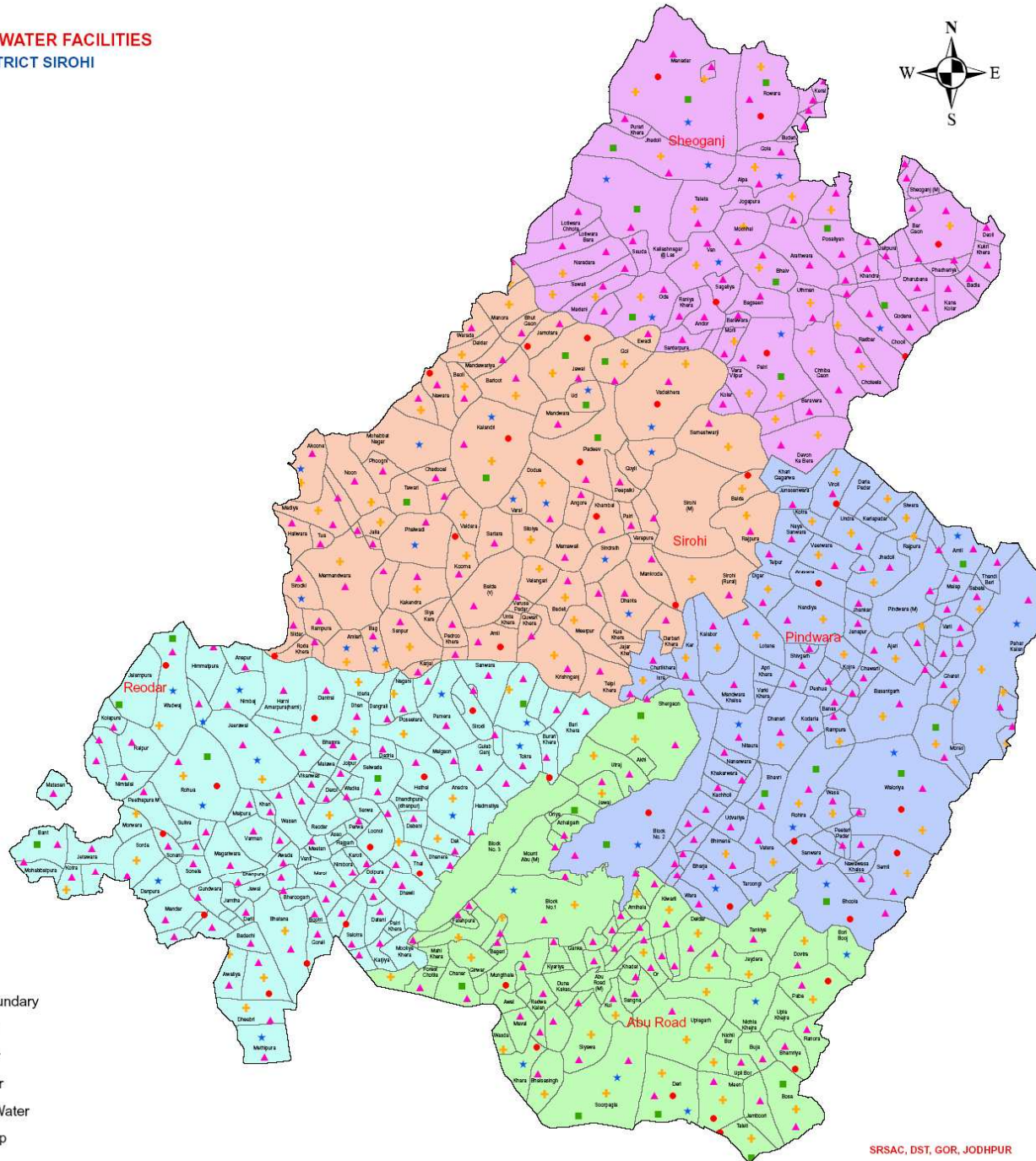


Legend

-  Ayurvedic Hospital
-  Allopathic Dispensary
-  Ayurvedic Dispensary
-  Homeopathic Dispensary
-  Meternity & Child Welfare Centre
-  Maternity Home
-  Child Welfare Centre
-  Health Centre
-  Primary Health Centre
-  Primary Health Sub Centre
-  Family Welfare Centre
-  T.B. Clinic
-  RMP
-  Community Health Workers
-  Other Medical Facilities
-  Village Boundary



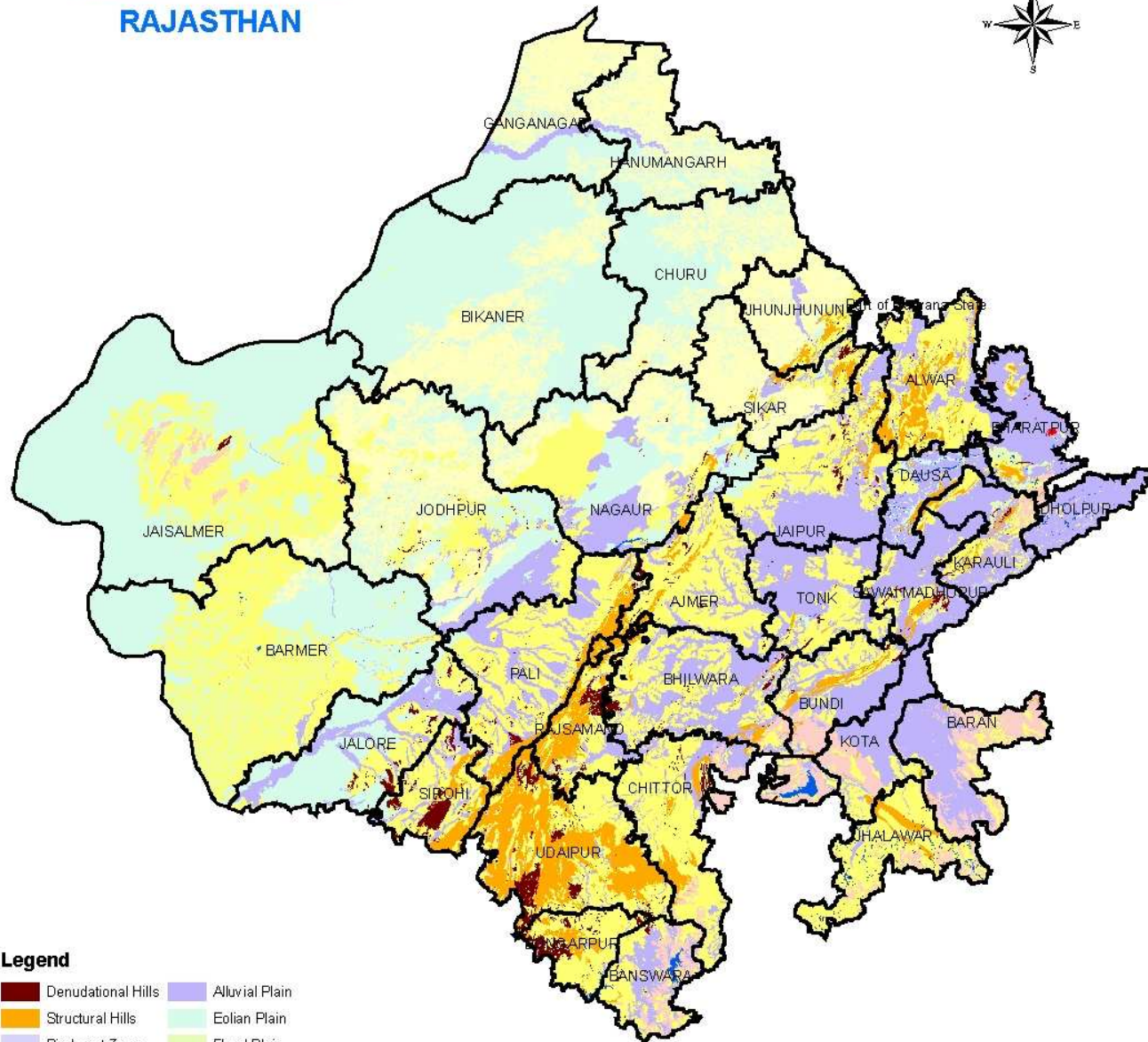
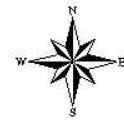
DRINKING WATER FACILITIES
DISTRICT SIROHI



Legend

- Village Boundary
- Tap Water
- Well Water
- Tank Water
- Tubewell Water
- Hand Pump

GEOMORPHOLOGY MAP
RAJASTHAN



Legend

- | | |
|--|--|
|  Denudational Hills |  Alluvial Plain |
|  Structural Hills |  Eolian Plain |
|  Piedmont Zone |  Flood Plain |
|  Pediplain |  Settlement |
|  Plateau |  Water body |
|  DISTRICT BOUNDARY | |

NRIS PROJECT LITHOLOGY MAP RAJASTHAN



Legend

- | | | |
|-----------------------------|---------------------------------|-------------------|
| Consolidated Sediments | Volcanic Flows | STATE BOUNDARY |
| Crystalline Rocks | Volcanic Flows & Inter-trapeans | DISTRICT BOUNDARY |
| Intrusive Rocks | Volcanic Flows Inter-trapeans | |
| Residual Cappings | Volcanic Flows&Inter-trapeans | |
| Semi-Consolidated Sediments | Water Body Mask | |
| Un-consolidated Sediments | | |

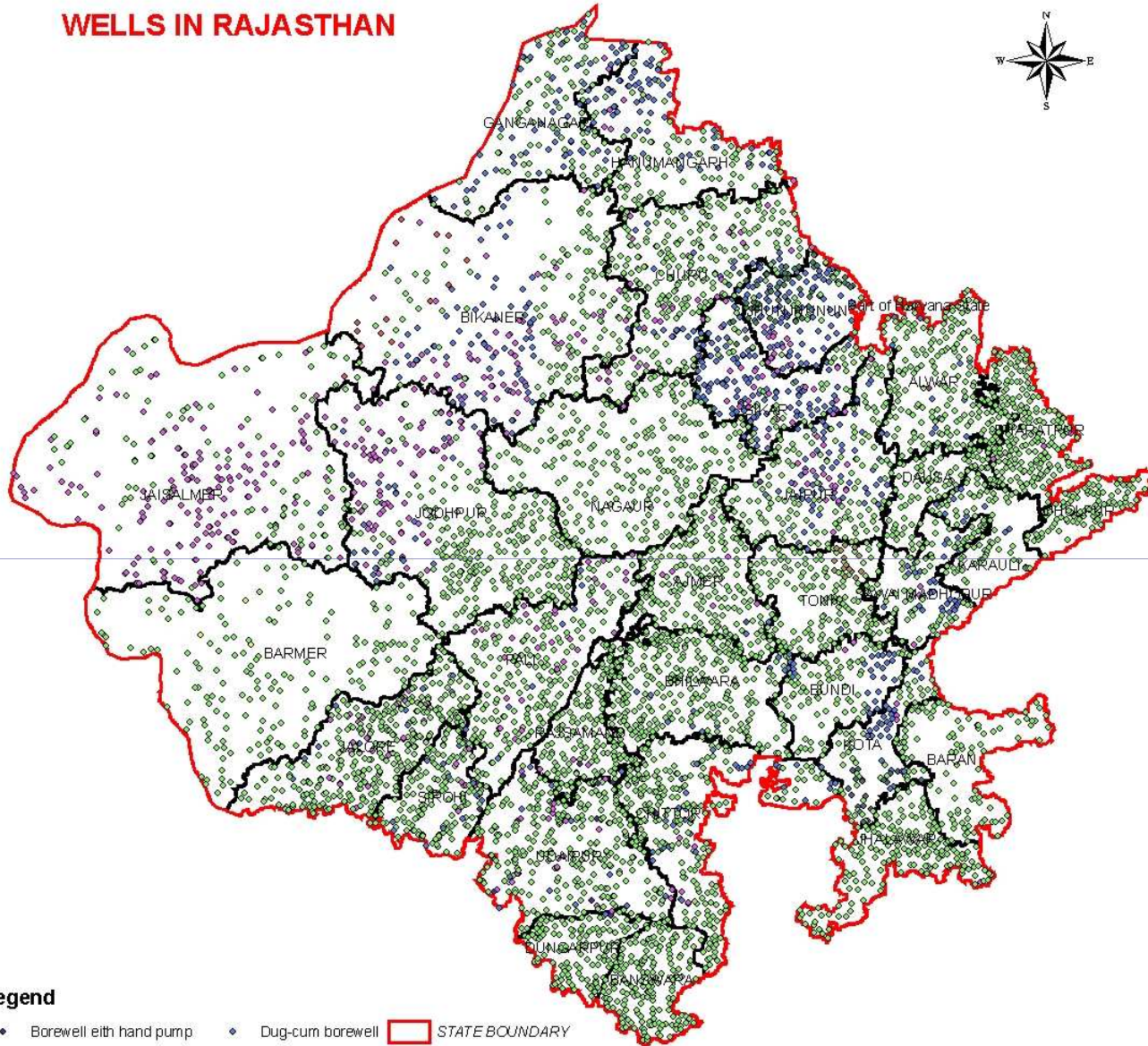
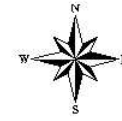
NRIS PROJECT STRUCTURE MAP RAJASTHAN



Legend

- | | | |
|--------------------------------|-------------------------------|-------------------|
| — Anticlinal axis non-plunging | — Lineament | STATE BOUNDARY |
| — Anticlinal axis plunging | — Strike | DISTRICT BOUNDARY |
| — Fault | — Structural trends | |
| — Fault inferred | — Synclinal axis non-plunging | |
| — Fold axis | — Synclinal axis plunging | |
| — Fracture | | |

WELLS IN RAJASTHAN



Legend

- ◆ Borewell eith hand pump
- ◆ Borewell with Power pump
- ◆ Borewell with hand pump
- ◆ Borewell with power pu
- ◆ Borewell with power pump
- ◆ Borewell with powerpump
- ◆ Dug-cum borewell
- ◆ Dug-cum-borewell
- ◆ Open Dug well
- ◆ Open dug well
- ◆ open dug well

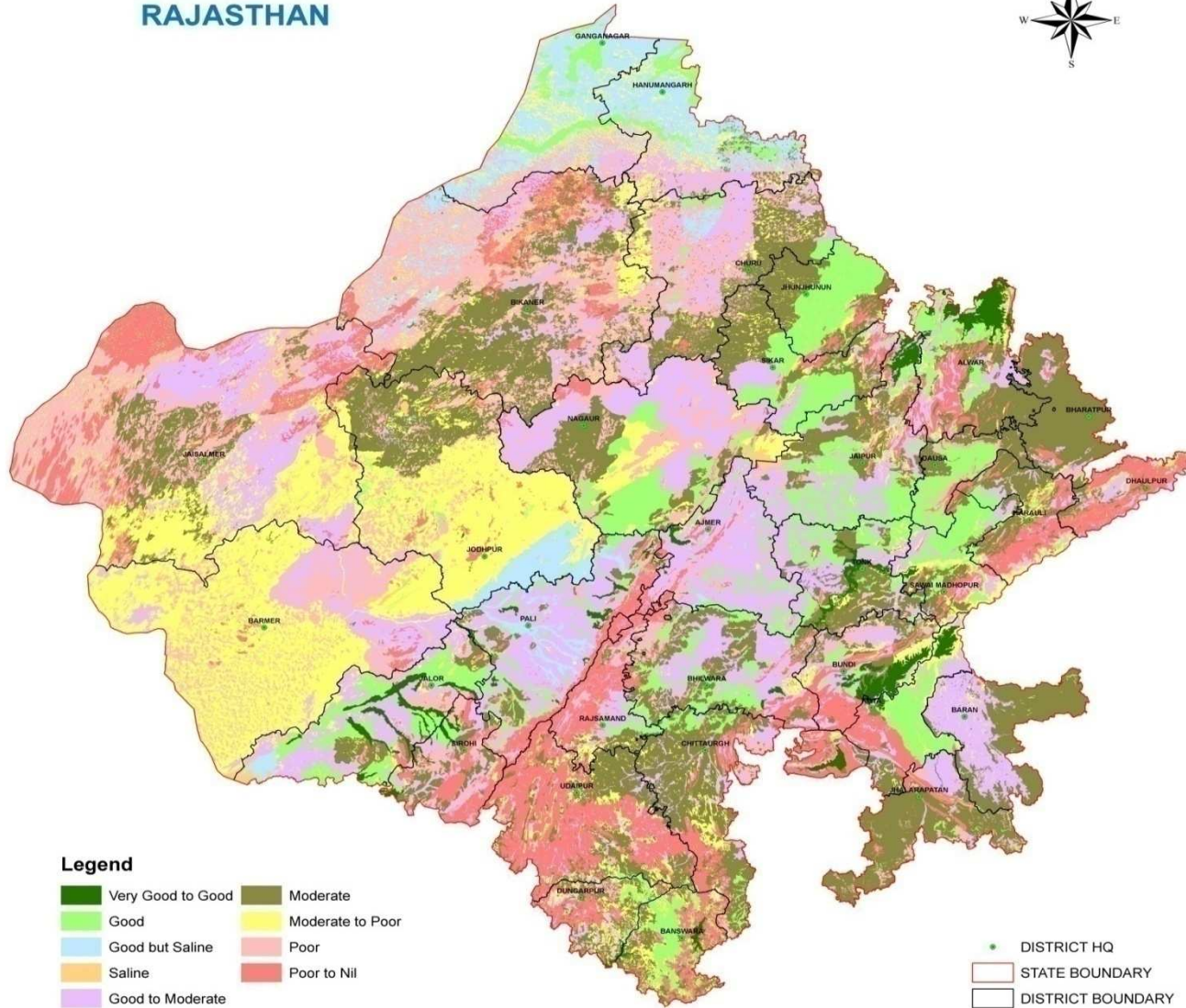
▬ STATE BOUNDARY

▬ DISTRICT BOUNDARY

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GROUND WATER PROSPECT MAP RAJASTHAN



Legend

- | | |
|---|--|
| Very Good to Good | Moderate |
| Good | Moderate to Poor |
| Good but Saline | Poor |
| Saline | Poor to Nil |
| Good to Moderate | |

- DISTRICT HQ
- STATE BOUNDARY
- DISTRICT BOUNDARY

List of Database available at SRSAC which can be uploaded on the WEB

SNO	Layer	Scale	Projection	Remark
BASE LAYERS				
1	State	1:50,000	Projected Coordinate System: WGS_1984_Transverse_Mercator Projection: Transverse_Mercator False_Easting : 500000.0000 False_Northing : 500000.0000 Central_Meridian : 73.86472222 Scale_Factor: 0.99940786 Latitude_Of_Origin : 26.59027778 Linear Unit: Meter	Scope – Entire Rajasthan Prepared under National (Natural) Resources Information System (NRIS)
2	District	1:50,000		
3	Taluk	1:50,000		
4	Block	1:50,000		
5	Village	1:50,000		
6	Settlement Point	1:50,000		
7	Settlement Poly	1:50,000		
8	Rail	1:50,000		
9	Road	1:50,000		
10	Canal	1:50,000		
THEMATIC LAYERS				
1	Landuse	1:50,000		
2	SOIL	1:50,000		
3	Drainage Line	1:50,000		
4	Drainage Poly	1:50,000		
5	Watershed	1:50,000		
6	Geomorphology	1:50,000		
7	Structure	1:50,000		
8	Lithology	1:50,000		
9	Ground Water Prospect	1:50,000		
10	SLOPE	1:50,000		

1	NAME OF THE PROJECT	IWMP (Integrated Watershed Management Program)
2	Project Detail / Assigned Task	Mapping of thematic layers of watershed projects through high resolution satellite data (Scale 1:10,000)
3	Sponsoring Agency	Watershed Development & Soil Conservation Department, Govt. of Rajasthan, Jaipur
4	Beneficiary Departments	<ul style="list-style-type: none"> • Rural Development • Watershed Development and Soil Conservation • Forest Department • Agriculture Department • Planning Department • Water Resources Department • N.G.O.s

Study Area and Budget Details

YEAR	NO OF WATERSHEDS ASSIGNED	BUDGET
2009-10	162	5.55 Crore
2010-11	110	2.97 Crore
2011-12	84	2.15 Crore

Work Assigned

Thematic mapping of watershed projects on
1:10,000 scale

Layers prepared

- Base map(rail, road, habitation, administrative boundaries)
- Drainage
- Slope
- Contour - 1m Interval
- Land use / Land cover
- Watershed Boundaries
- Digitization and Geo-Referenced Khasra map along with khasra numbers

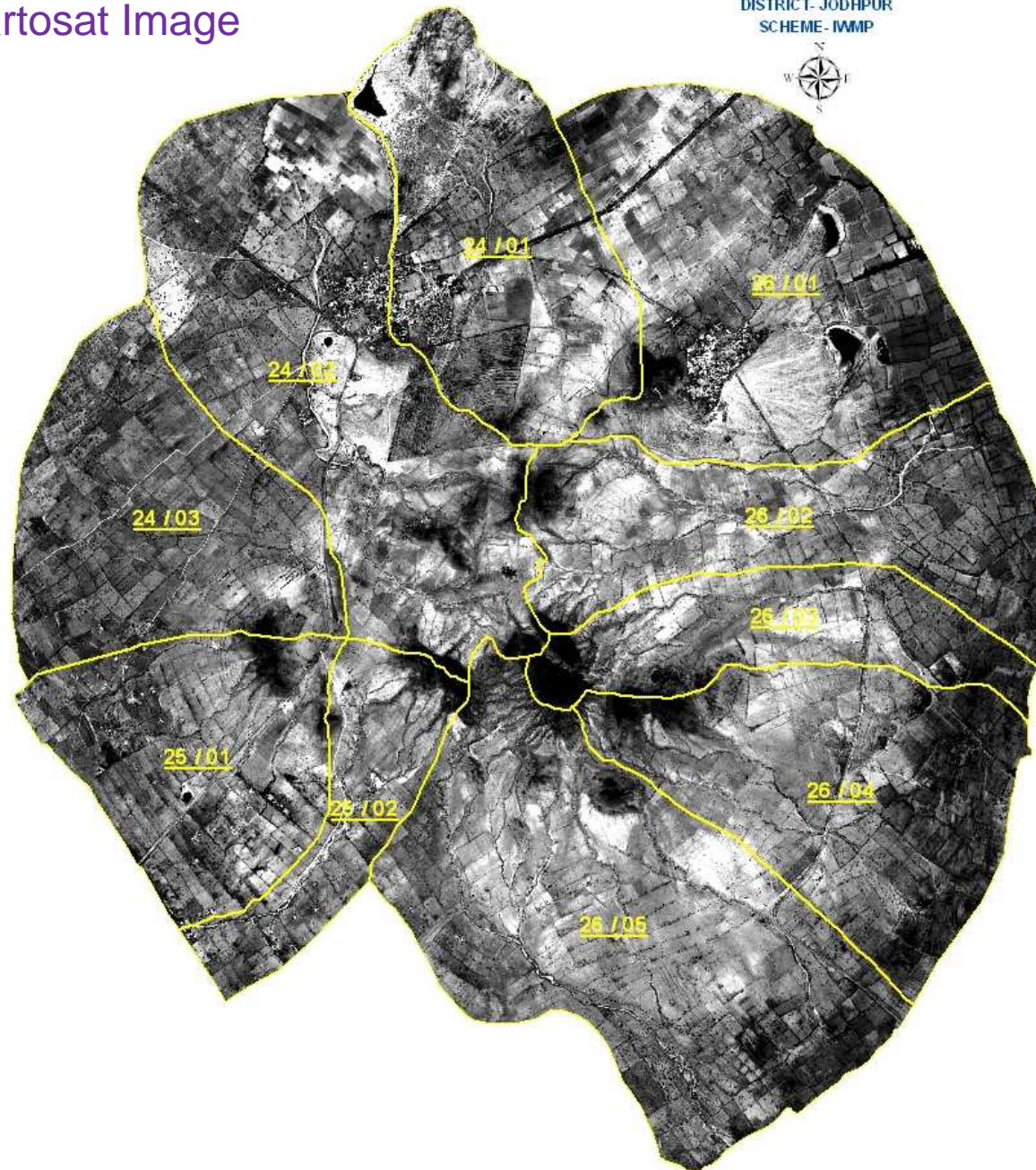
District wise Details of 162 watersheds assigned in Phase - I

Sno	District	No of watershed Assigned	Sno	District	No of watershed Assigned
1	Ajmer	4	17	Jaisalmer	9
2	Alwar	5	18	Jalore	5
3	Banswara	2	19	Jhalawar	3
4	Baran	3	20	Jhunjhunu	4
5	Barmer	16	21	Jodhpur	20
6	Bharatpur	2	22	Karauli	2
7	Bhilwara	6	23	Kota	2
8	Bikaner	10	24	Nagaur	11
9	Bundi	2	25	Pali	8
10	Chittorgarh	4	26	Pratapgarh	1
11	Churu	9	27	Rajsamand	2
12	Dausa	2	28	Sawai Madhopur	3
13	Dholpur	2	29	Sikar	5
14	Dungarpur	2	30	Sirohi	2
15	Hanumangarh	3	31	Tonk	4
16	Jaipur	6	32	Udaipur	3

WATERSHED PROJECT - KURI INDA, PANCHAYAT SAMITI - BALESAR
MACRO / MICRO WATERSHEDS NO. - [26/1,2,3,4,5] & [25/1,2] & [24/1,2,3]
DISTRICT- JODHPUR
SCHEME- IWMP

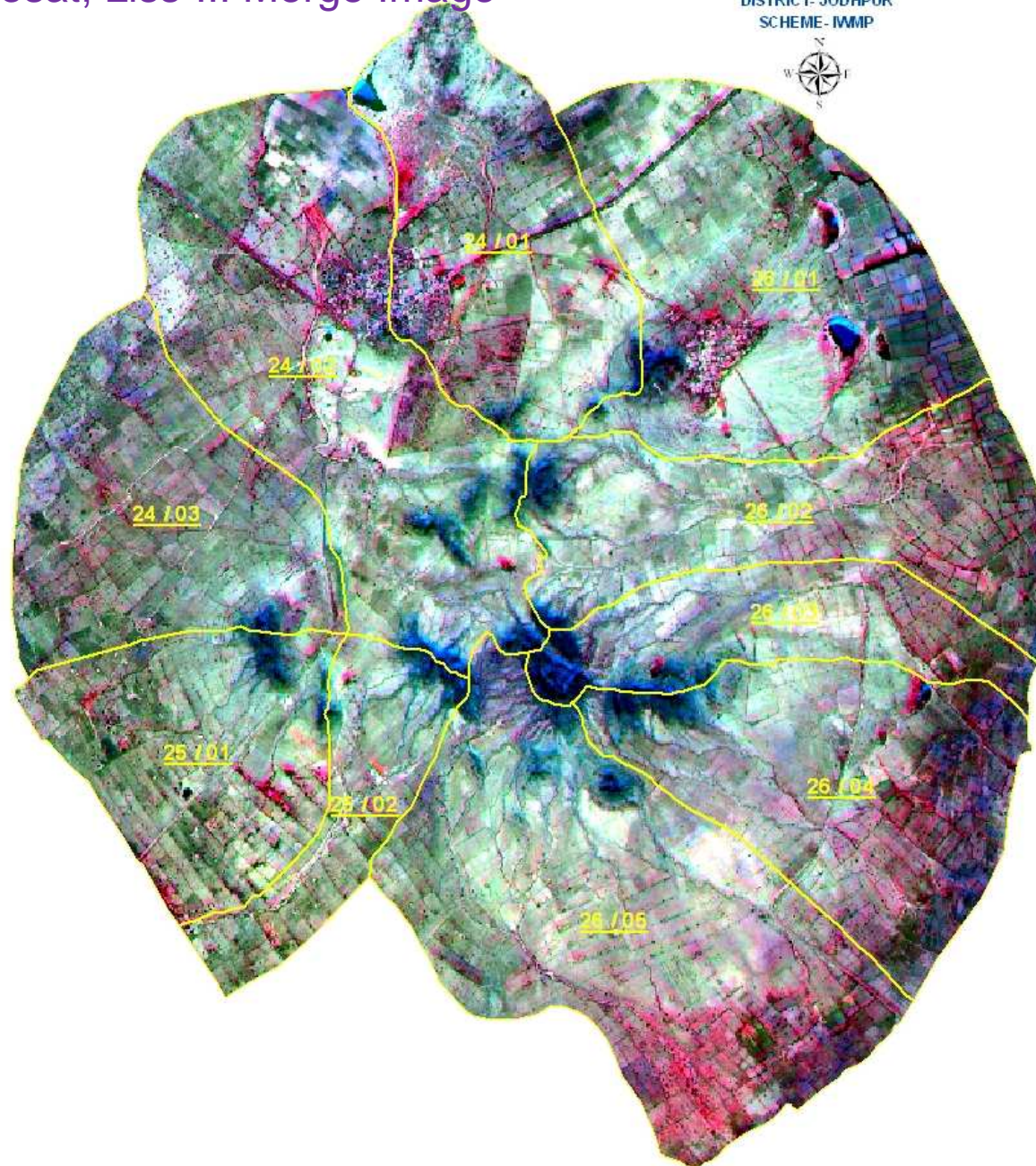


Cartosat Image

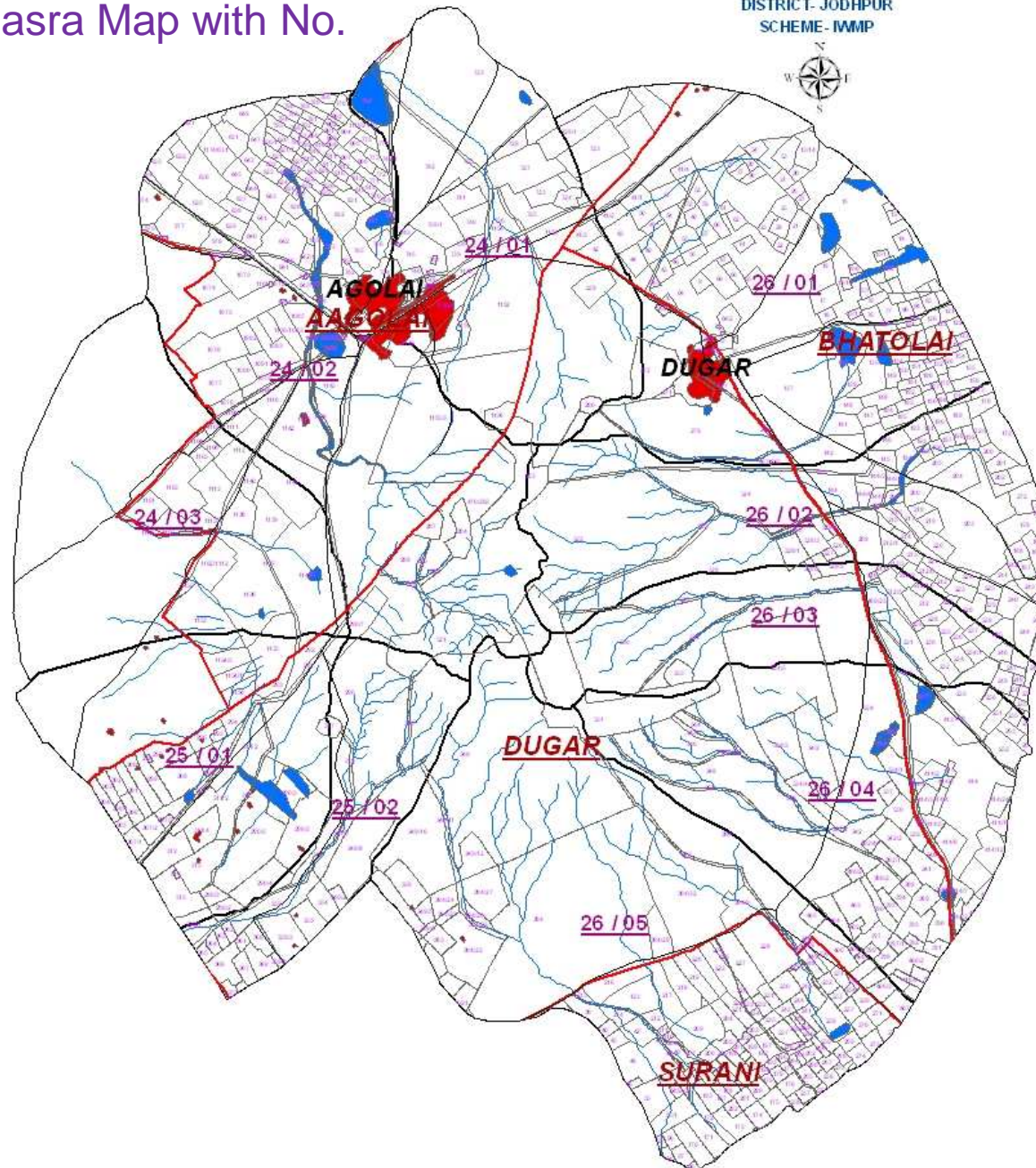


Cartosat, Liss-III Merge Image

WATERSHED PROJECT - KURI INDA, PANCHAYAT SAMITI - BALESAR
MACRO / MICRO WATERSHEDS NO. - [26/1,2,3,4,5] & [25/1,2] & [24/1,2,3]
DISTRICT- JODHPUR
SCHEME- IWMP

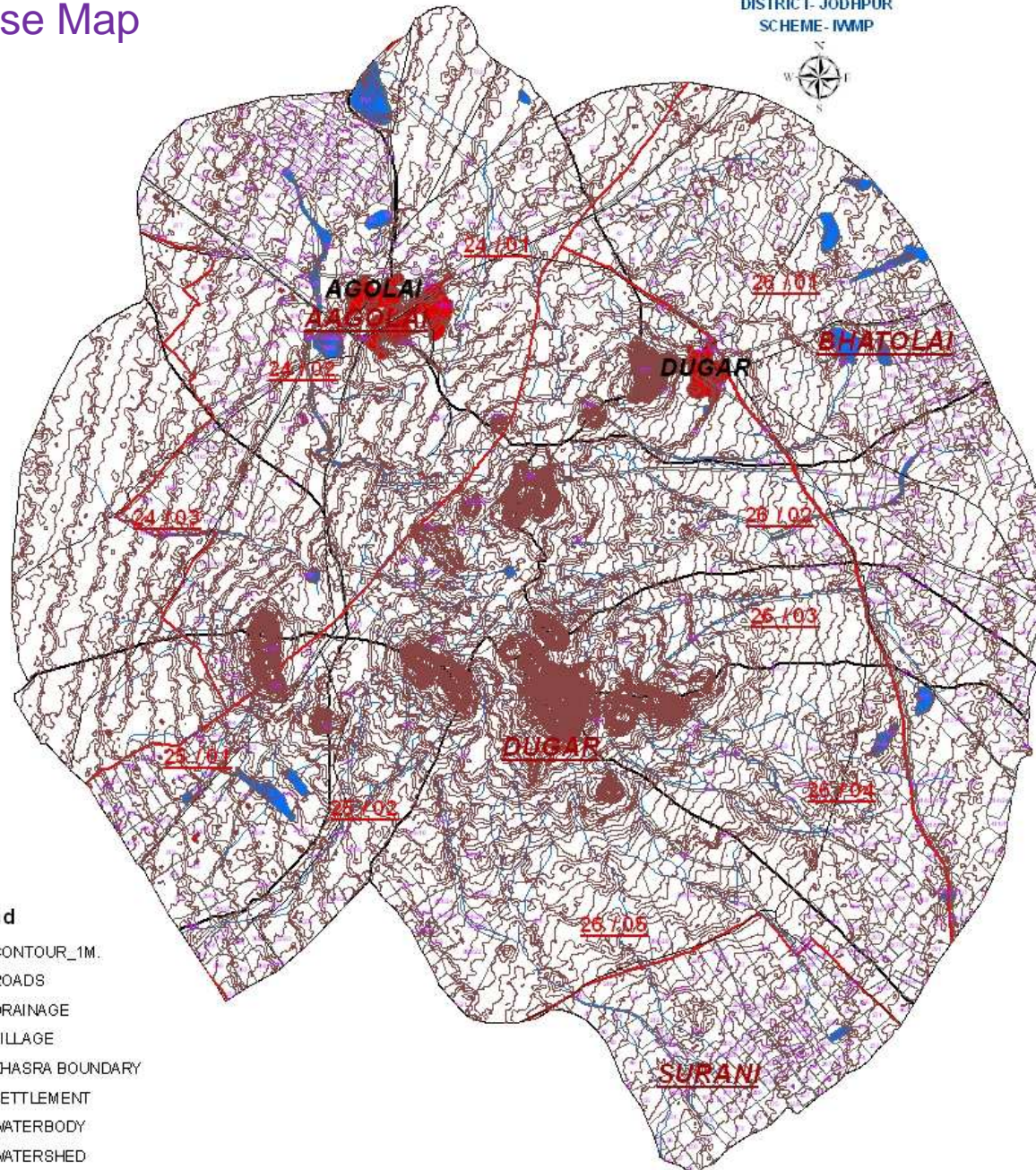


Khasra Map with No.



WATERSHED PROJECT - KURI INDA, PANCHAYAT SAMITI - BALESAR
MACRO / MICRO WATERSHEDS NO. - [26/1,2,3,4,5] & [25/1,2] & [24/1,2,3]
DISTRICT- JODHPUR
SCHEME- IWMP

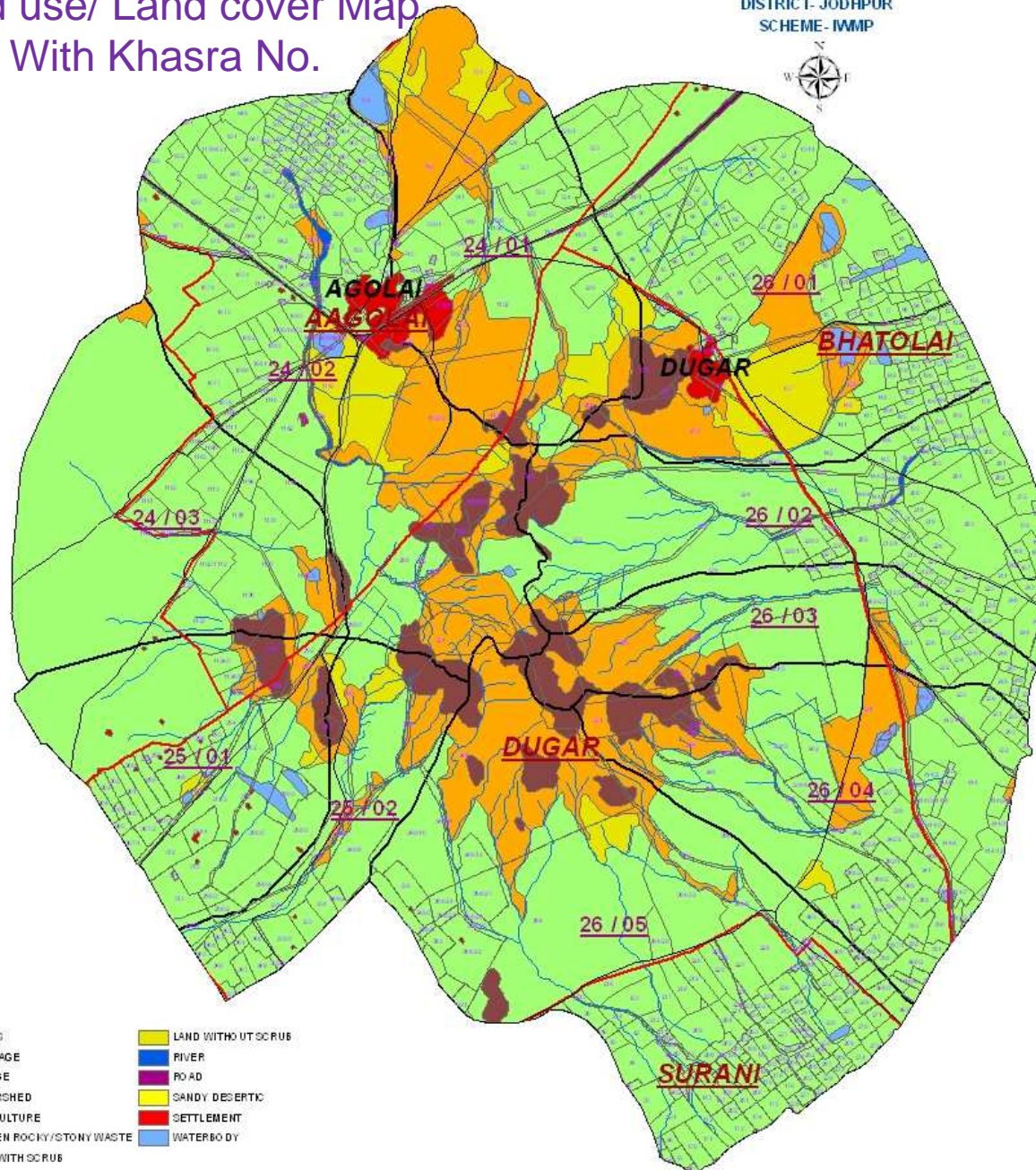
Base Map



Legend

- CONTOUR_1M.
- ROADS
- DRAINAGE
- VILLAGE
- KHASRA BOUNDARY
- SETTLEMENT
- WATERBODY
- WATERSHED

Land use/ Land cover Map
 With Khasra No.

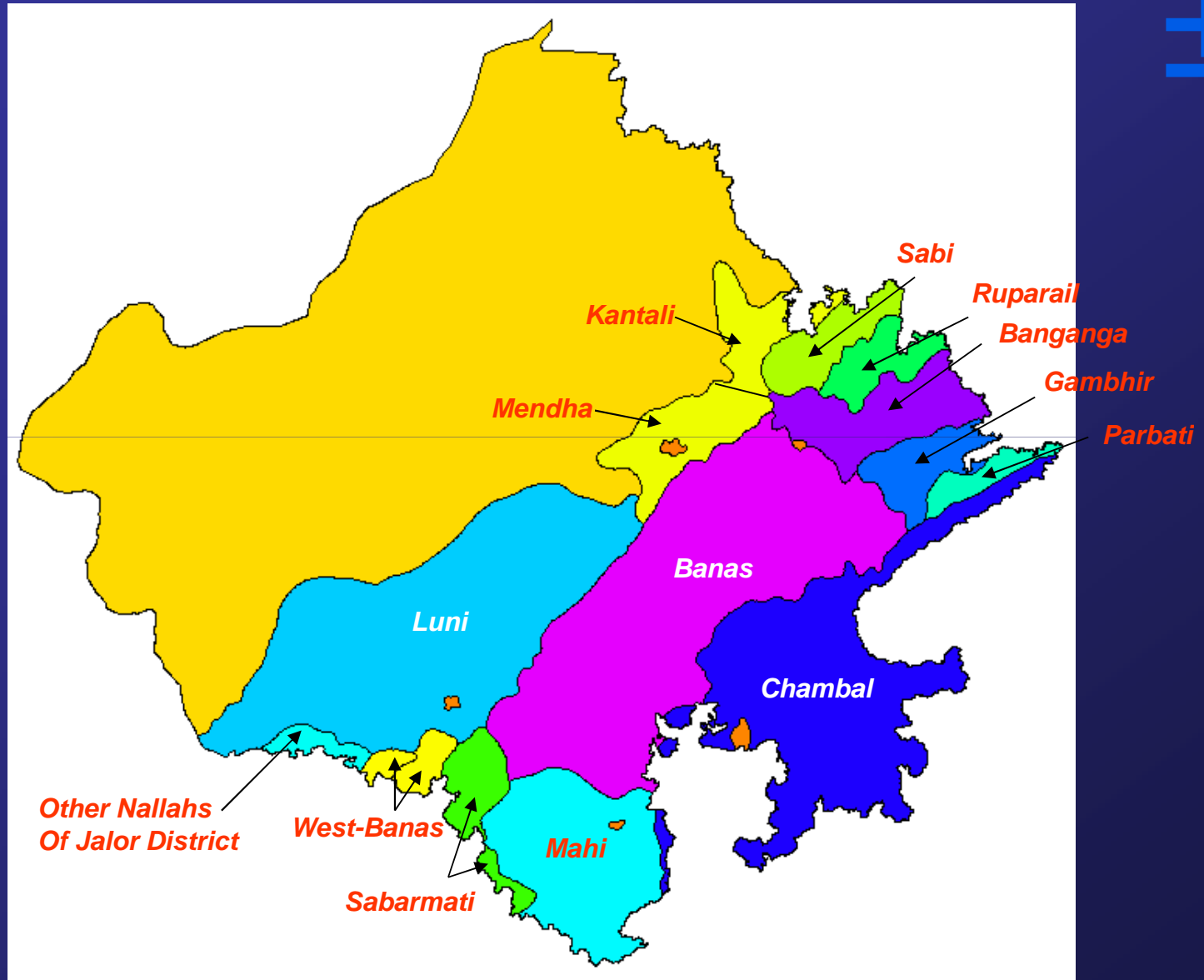


Legend

- | | |
|----------------------------|--------------------|
| — ROADS | LAND WITHOUT SCRUB |
| — DRAINAGE | RIVER |
| □ VILLAGE | ROAD |
| □ WATERSHED | SANDY DESERTIC |
| ■ AGRICULTURE | SETTLEMENT |
| ■ BARREN ROCKY/STONY WASTE | WATER BODY |
| ■ LAND WITH SCRUB | |

IRRIGATION

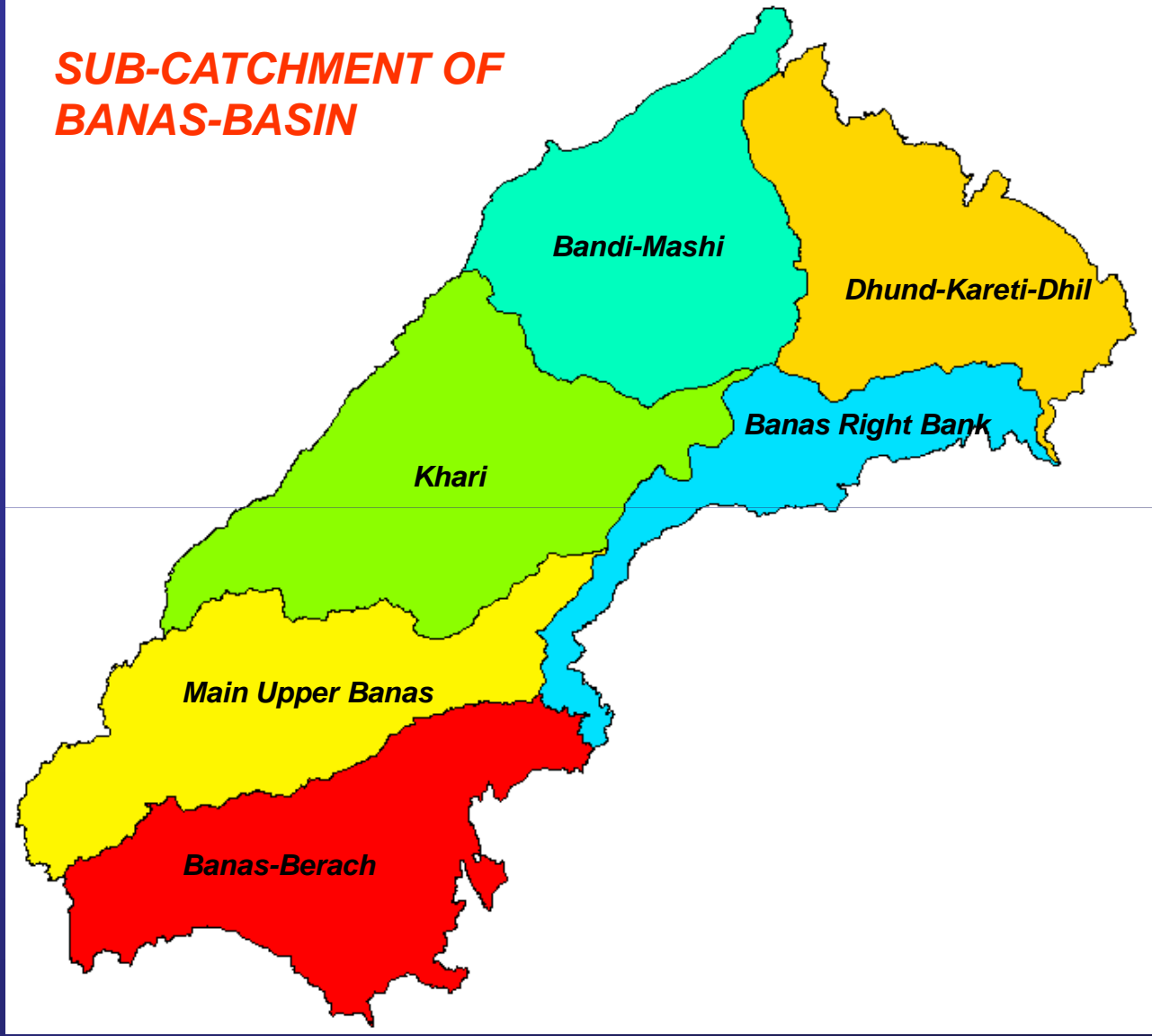
RIVER BASIN OF RAJASTHAN



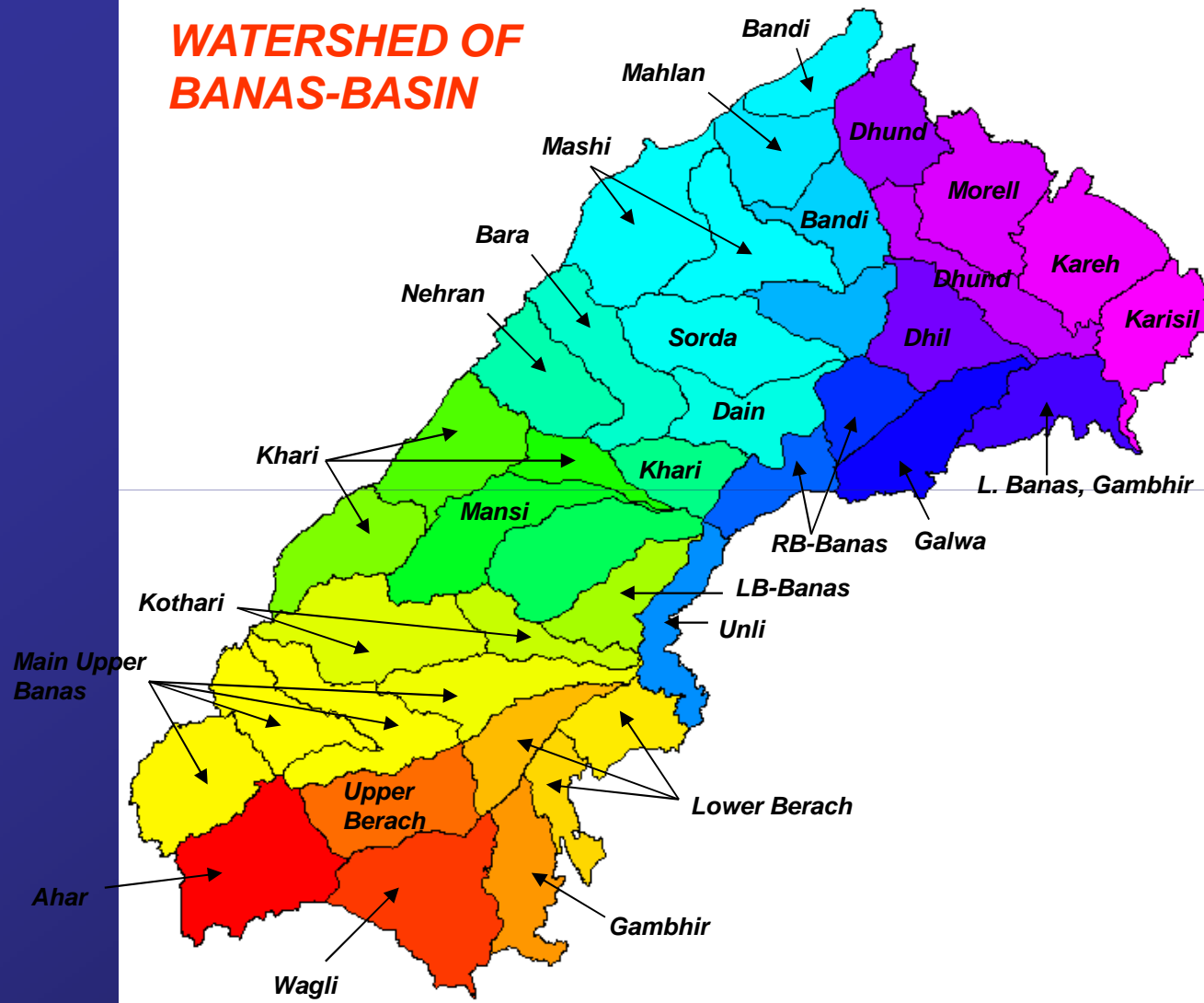
Layers Prepared under the Project Scale 1:10,000

S.No.	Layer
1	Basin
2	Sub-Basin
3	Sub-Sub-Basin
4	District
5	Block
6	Drnl
7	River
8	Waterbody
9	Soil
10	SOI
11	Hydro-Rainguage
12	Settlement
13	Rail
14	Road
15	Agroclimatic
16	Canal
17	Contour

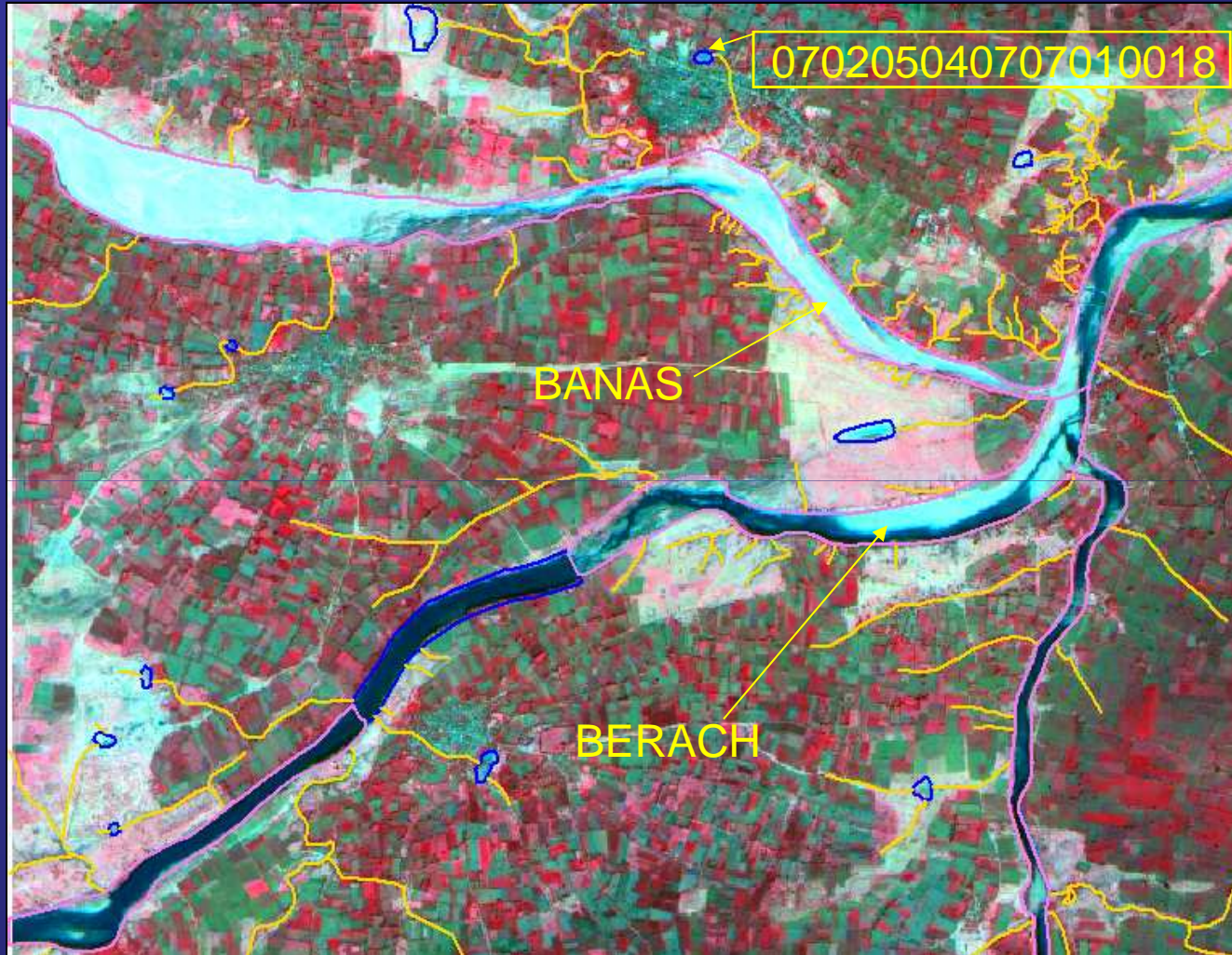
**SUB-CATCHMENT OF
BANAS-BASIN**



WATERSHED OF BANAS-BASIN



WATER BODY CODING PATTERN



0702050407010018

07- Basin Code
02- Catchment Code
05- Sub-Catchment Code

04- Watershed Code
07- District Code
07- Block Code

01- WB Category Code
0018- WB. S. NO. (Block Wise)



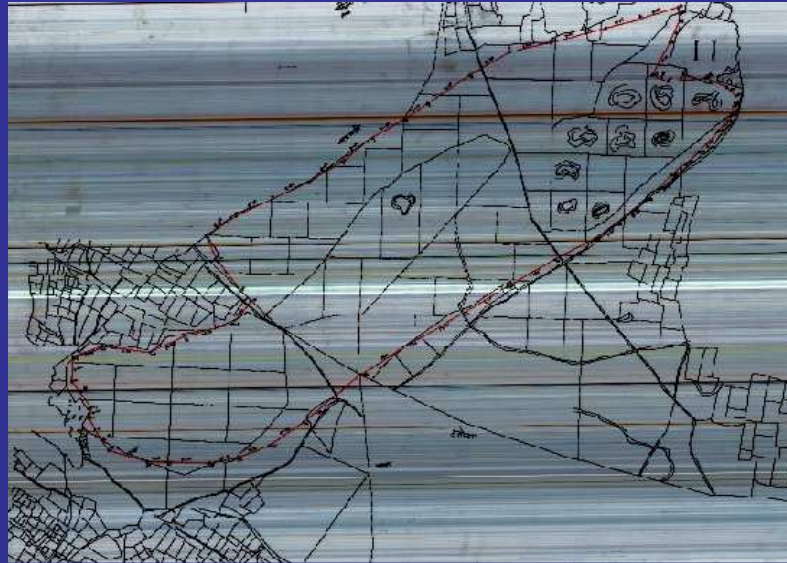
FOREST
GIS BASED FOREST DEVELOPMENT PLAN
1:10,000

S.No.	District / VAN MANDAL	FOREST BLOCK RECEIVED FROM FOREST DEPARTMENT	COMPLETED
1	Kota	36	36
2	Karauli	8	8
3	Ajmer	153	133
4	Alwar+DCF Sariska	76	76
5	Bharatpur	18	10
6	Dholpur	12	12
7	Sawaimadipur	19	19
8	Bundi	81	49
9	Baran	97	97
10	Jhalawar	31	--
11	Sikar	90	90
12	Jhunjhunu	34	22
13	Jaisalmer	14	--
14	Jalore	46	27
15	Pali	62	55
16	Jodhpur	1	--
17	Nagaur	40	40
18	Bhilwara	72	72
19	Tonk	39	39
20	Jaipur (N)	92	92
21	Dausa	41	41
22	Churu	55	50
TOTAL		1155	968

Classification of Forest (Sohela-A, Tonk District)



Rectified Khasra

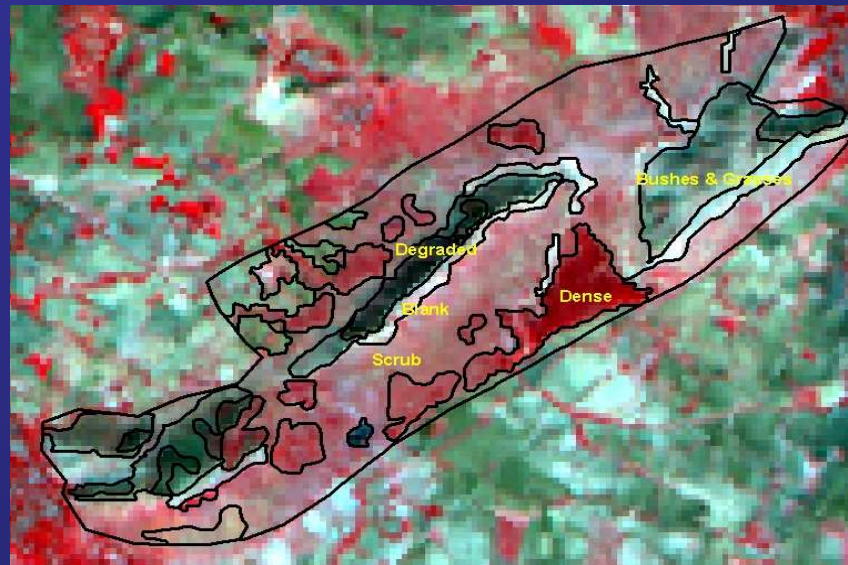


Cartosat Image

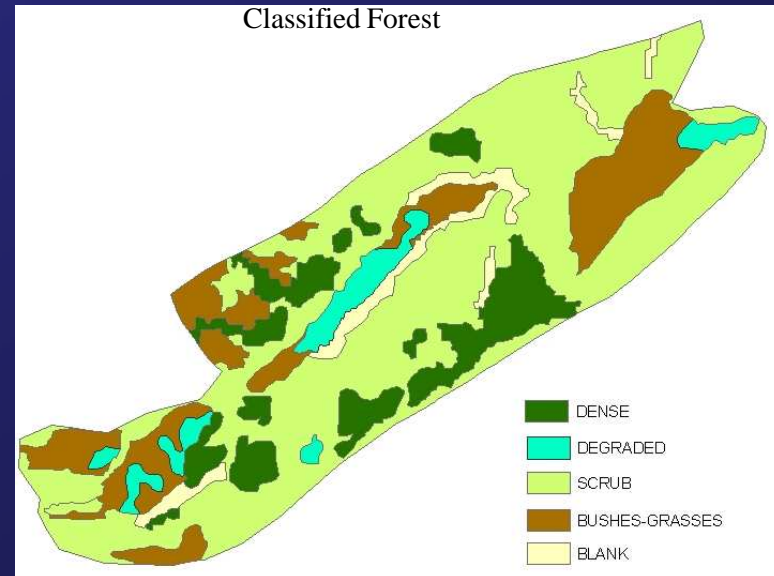


— Forest Boundary

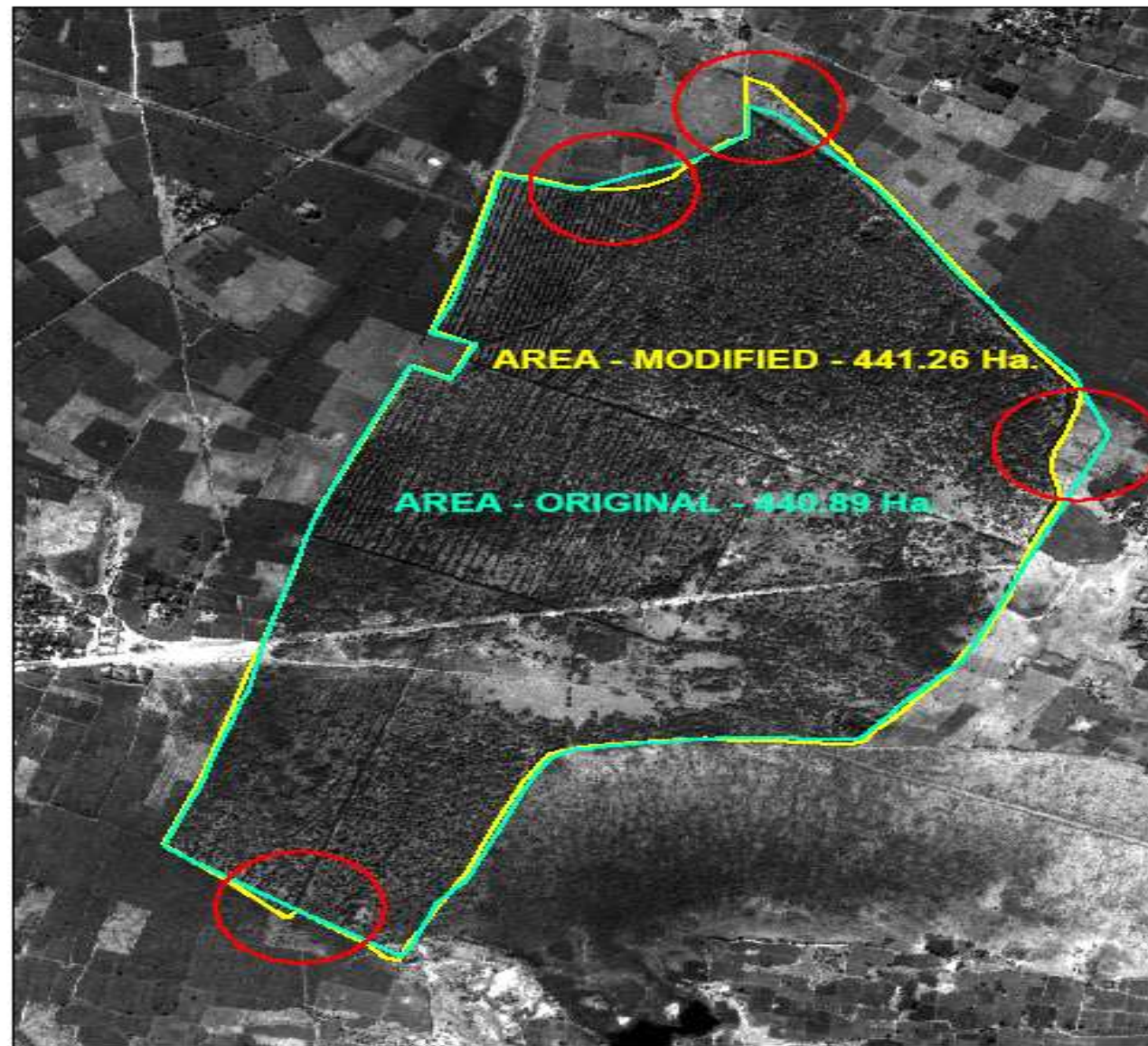
LISS3 Image



Classified Forest



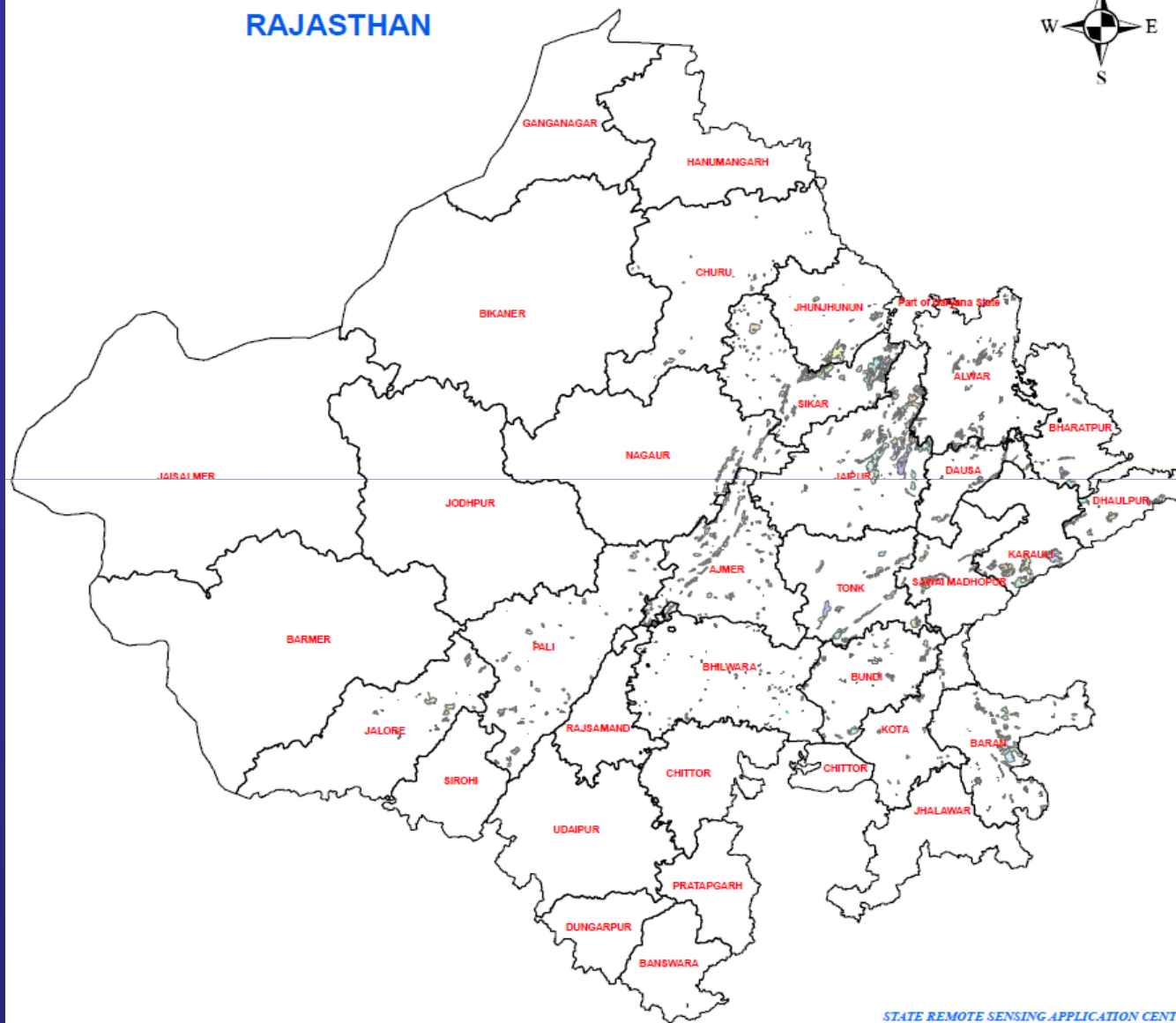
FOREST BLOCK - JHARANA, JAIPUR SOUTH
COMPARISON OF ORIGINAL AND MODIFIED BOUNDARIES



Area Comparison of Forest Blocks

S. No.	Block	Area by SRSAC	Area by Forest	Percentage Diff
12	GAURI KUND	875.08	851.86	-2.73
2	PUNERA	125.59	125.45	-0.11
3	KADAL NAND	1680.92	1624.946	-3.44
4	AJMER SAMALPUR	201.3	194.32	-3.59
5	PANCHMATA	109.18	107.28	-1.77
6	RAJOSE KHWAJPURA	326.25	326.312	0.02
7	RAIN BHINAI	839.73	802.02	-4.70
8	SINGAWAL	153.98	146.95	-4.78
9	RATAKOT	1017.59	978.88	-3.95
10	CHATAR BIR	410.75	410.75	0
11	SONIYANA	141.77	141.64	-0.09
12	KIRAP	590.02	590.03	0.00
13	JALIYA DANTRI KA BIR	30.93	32.37	4.45
14	LIDI LABANA	177.67	177.732	0.02
15	SAWAR SUNDARPURA	180.07	170.77	-5.45
16	BIR ARBAD	266.75	271.13	1
17	Bir II	16.64	16.18	-2.84
18	JAGPURA(bhutokich oki)	4.21	4.32	2.55
19	JAGPURA	6.19	6	-3.17
20	DHANDHOLA	209.51	216.5	3.23
21	PARADE BIR	8.94	8.9	2.55
22	BALAD BIR	5.19	5.18	-0.19
23	SHEONAGRI	57	57.06	0.11
24	BADKOC HRAN	71.58	71.63	0.07
25	SHEOPURA-1 - II	6.27	6.07	-3.29

GEO-REFERENCED FOREST BLOCKS RAJASTHAN



STATE REMOTE SENSING APPLICATION CENTRE
Department of Science & Technology
JODHPUR

पंचायत समिति-माण्डलगढ़
जिला-भीलवाड़ा

कृषि विभाग, राजस्थान



मृदा पोषक तत्व स्तर



सूक्ष्म पोषक तत्व की कमी

- लोहा
- जस्ता
- ◆ लोहा व जस्ता
- राष्ट्रीय राजमार्ग
- राज्य राजमार्ग
- मुख्य नदी/नालै

उर्वरा स्तर -

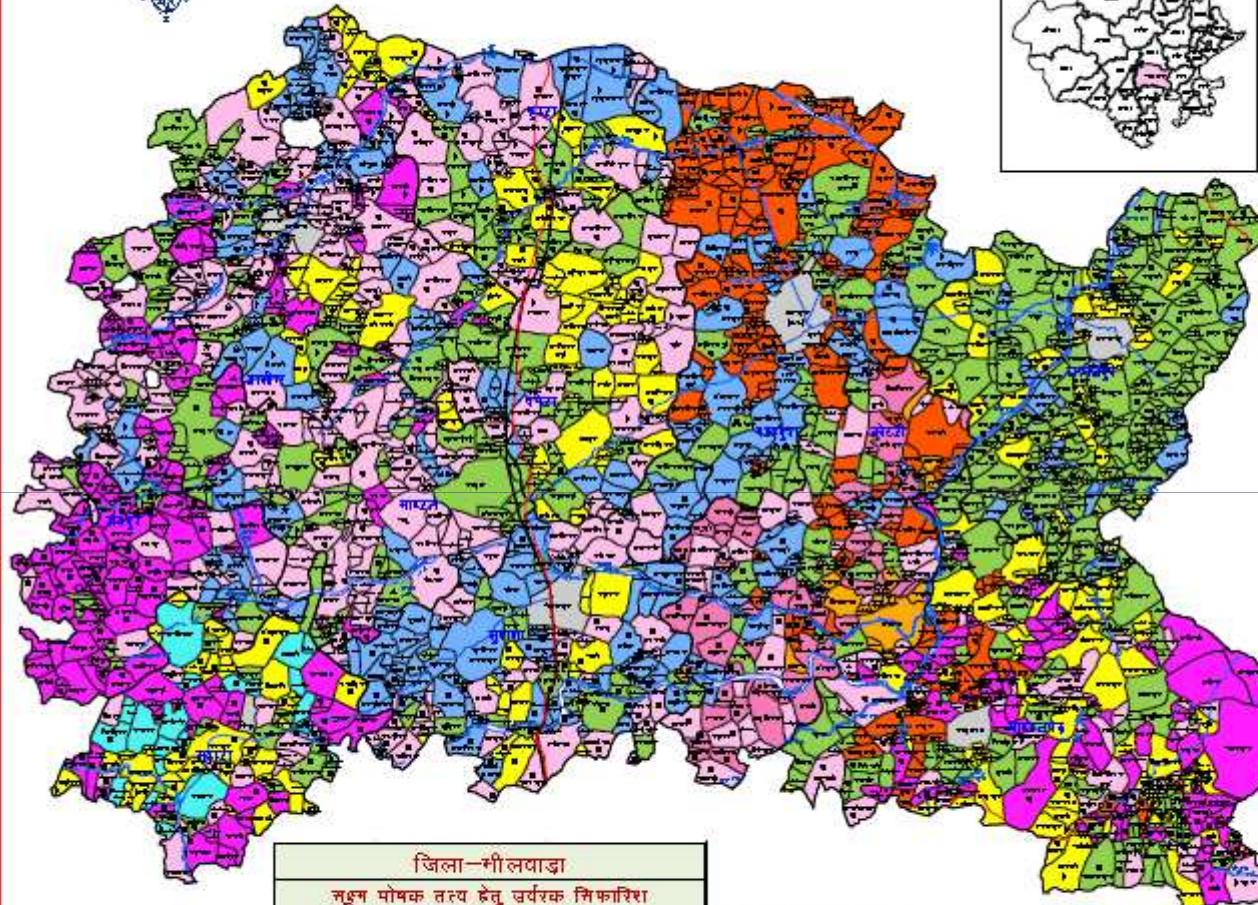
	नवजन	फास्फोरस	पोटाश
Red	कम	मध्यम	मध्यम
Orange	कम	मध्यम	उच्च
Green	मध्यम	मध्यम	उच्च
Blue	मध्यम	उच्च	उच्च
Yellow	उच्च	उच्च	उच्च
Green	नगरपालिका क्षेत्र		

द्वारा प्रकृत-स्टेट रिपोर्ट सेमिनार एप्लीकेशन सेन्टर विज्ञान एवं प्रौद्योगिकी विभाग, राजस्थान सरकार जोधपुर

जिला-भीलवाड़ा
मृदा पोषक तत्व स्तर

कृषि विभाग, राजस्थान

मृदा पोषक तत्व स्तर



जिला-भीलवाड़ा		
मृदा पोषक तत्व हेतु सर्वरक सिफारिश		
तत्व	सर्वरक सिफारिश	किलोग्राम/ हेक्टर
जिंक	जिंक सल्फेट	25
लोहा	फेरस सल्फेट	10
सिंचा	कोपर सल्फेट	10
सैगनीज	सैगनीज सल्फेट	10

- मृदा पोषक तत्व की कमी
- ▲ लोहा
 - लोहा
 - जस्ता
 - लोहा व लोहा
 - लोहा व जस्ता
 - लोहा व सैगनीज
 - लोहा व जस्ता
 - सैगनीज व जस्ता
 - लोहा सैगनीज व जस्ता
- राष्ट्रीय राजमार्ग
— राज्य राजमार्ग
- - - - - टोले लाइन
□ संभावित समिति सीमा
■ नगरपालिका क्षेत्र
□ मुख्य नदी/नाले

सर्वरक नाम	सर्वरक का प्रकार	सर्वरक की मात्रा (किलोग्राम/हेक्टर)	सर्वरक की लागत (रुपये/हेक्टर)					
			अवधि I	अवधि II	अवधि III	अवधि IV	अवधि V	अवधि VI
जिंक सल्फेट	25	1000	100	100	100	100	100	100
	25	1000	100	100	100	100	100	100
	25	1000	100	100	100	100	100	100
	25	1000	100	100	100	100	100	100
	25	1000	100	100	100	100	100	100
	25	1000	100	100	100	100	100	100
	25	1000	100	100	100	100	100	100
	25	1000	100	100	100	100	100	100
	25	1000	100	100	100	100	100	100
	25	1000	100	100	100	100	100	100
लोहा सल्फेट	10	400	40	40	40	40	40	40
	10	400	40	40	40	40	40	40
	10	400	40	40	40	40	40	40
	10	400	40	40	40	40	40	40
	10	400	40	40	40	40	40	40
	10	400	40	40	40	40	40	40
	10	400	40	40	40	40	40	40
	10	400	40	40	40	40	40	40
	10	400	40	40	40	40	40	40
	10	400	40	40	40	40	40	40

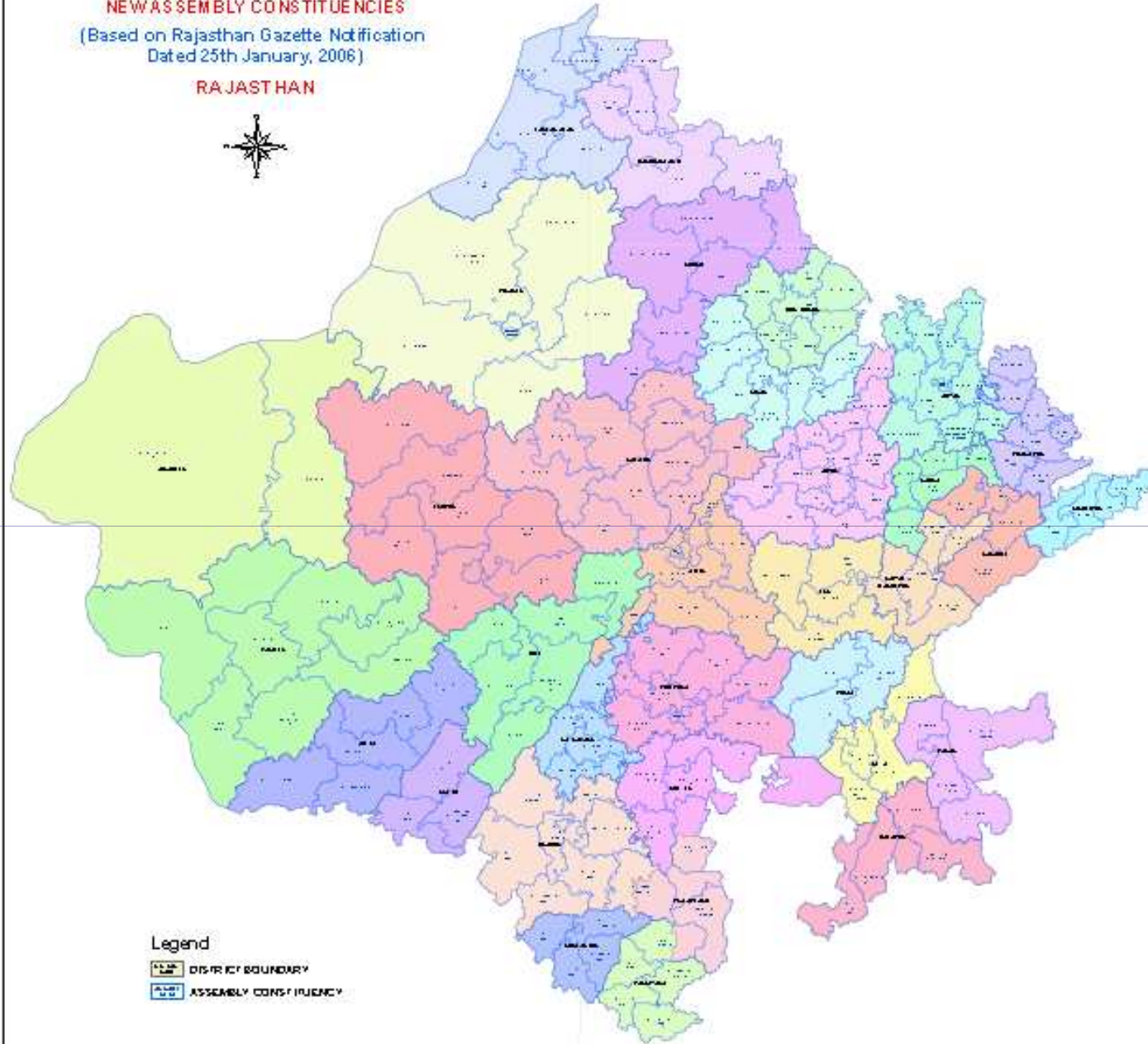
जिला-भीलवाड़ा, कृषि विभाग, राजस्थान

moZjd flQkfj'k

moZjd lewwg u=tu&QkLQksj&i&ksV' k	uke Qly	flafpr@ vflafpr	xkscj dh [kkn ¼Vu izfr gsDVj½	moZjd flQkfj'k ¼fdyks izfr gsDVj½					
				la;kstu&A			la;kstu&AA		
				;wfj;k	Mh,ih	,evksih	;wfj;k	,l,lih	,evksih
de&e;/e&de	ladj eDdk	flafpr	10	183	87	58	220	250	58
	ns'kh eDdk	vflafpr	10	78	22	17	87	62	17
	ladj Tokj	flafpr	10	176	76	50	206	218	50
	ns'kh Tokj	vflafpr	10	82	11	8	87	31	8
	ewax]eksB] mM+n	flafpr	10	14	76	17	43	218	17
		vflafpr	10	12	54	-	32	156	-
	ewaxQyh	flafpr	10	10	87	17	43	250	17
		vflafpr	10	8	65	-	32	187	-
	ladj xsgwı	flafpr	10	213	65	50	240	187	50
	ns'kh xsgwı	vflafpr	10	78	22	17	87	62	17
	ljiksa	flafpr	10	125	65	34	152	187	34
		vflafpr	10	67	22	17	75	62	17
	puk	flafpr	10	18	65	7	43	187	7
		vflafpr	10	15	43	-	32	125	-
tkS	flafpr	10	195	54	41	220	156	41	
	vflafpr	10	62	11	17	66	31	17	

NEW ASSEMBLY CONSTITUENCIES
(Based on Rajasthan Gazette Notification
Dated 25th January, 2006)

RAJASTHAN



Legend

- DISTRICT BOUNDARY
- ASSEMBLY CONSTITUENCY

Village Bhagwanpura

Tehsil Amet, District Rajsamand

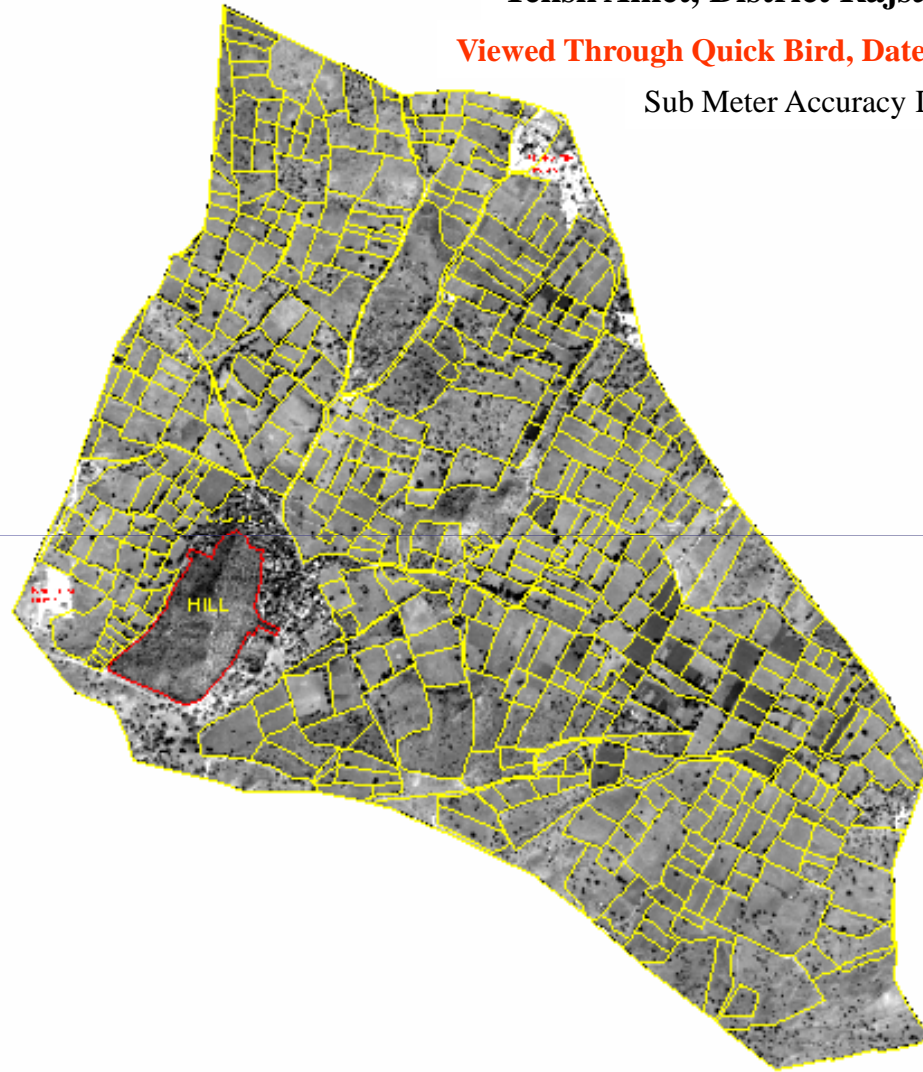
Quick Bird Data (Sub Meter Resolution)



**View of Bhagwanpura Village
Tehsil Amet, District Rajsamand**

Viewed Through Quick Bird, Dated 11/12/2003

Sub Meter Accuracy Data





Base Map Along with Spot Heights
Generated using GPS Survey and with the help of Quick Bird Satellite Data

SCALE 1:2,000

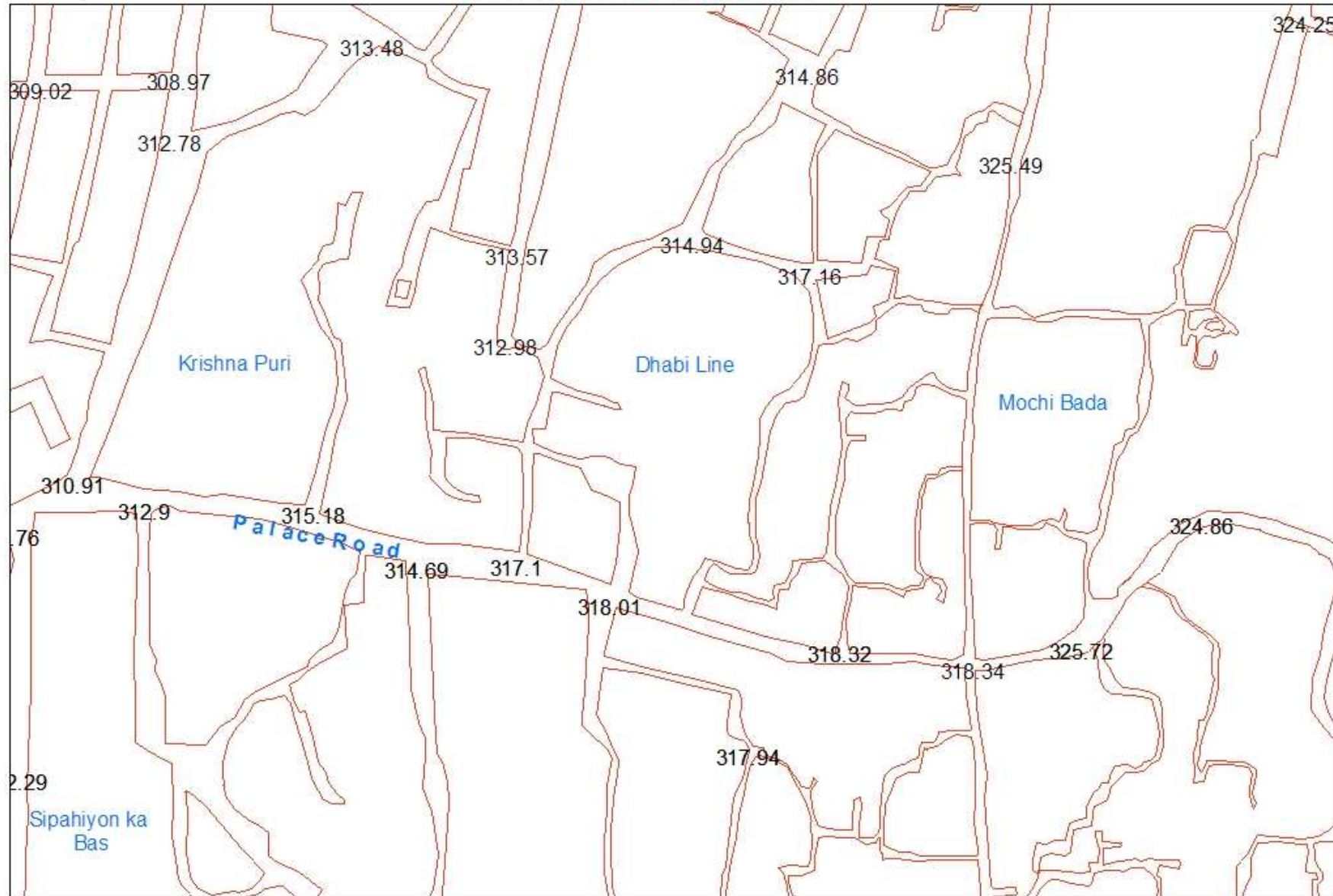


SRSAC, JODHPUR



Base Map Along with Spot Heights Part of Sirohi Town, Rajasthan

SCALE 1:2,000



Generated using GPS Survey and with the help of Quick Bird Satellite Data

SRSAC, JODHPUR

urban database creation projects

SNO.	Project	Data Used	Scale	Year	Agency
1	Digital Base Map for Master Plan Preperation				
	Rajsamand	Quick Bird	1:8000	2005	Town Plan
	Nimbahera	(0.60m)	1:8000	2007	Municipality
	Sanwar		1:8000	2007	Municipality
	Bhiwari Alwar		1:4000	2009	UIT
2	Base Map Preperation 16 Towns	Quick Bird	1:8000	2009	RUIDP
3	GIS database 5 Regional Head Quarters	<ul style="list-style-type: none"> •Cartosat-1+Pan Merged •Quick Bird 	1:10000 1:4000	2008	RUIS

Contd ..

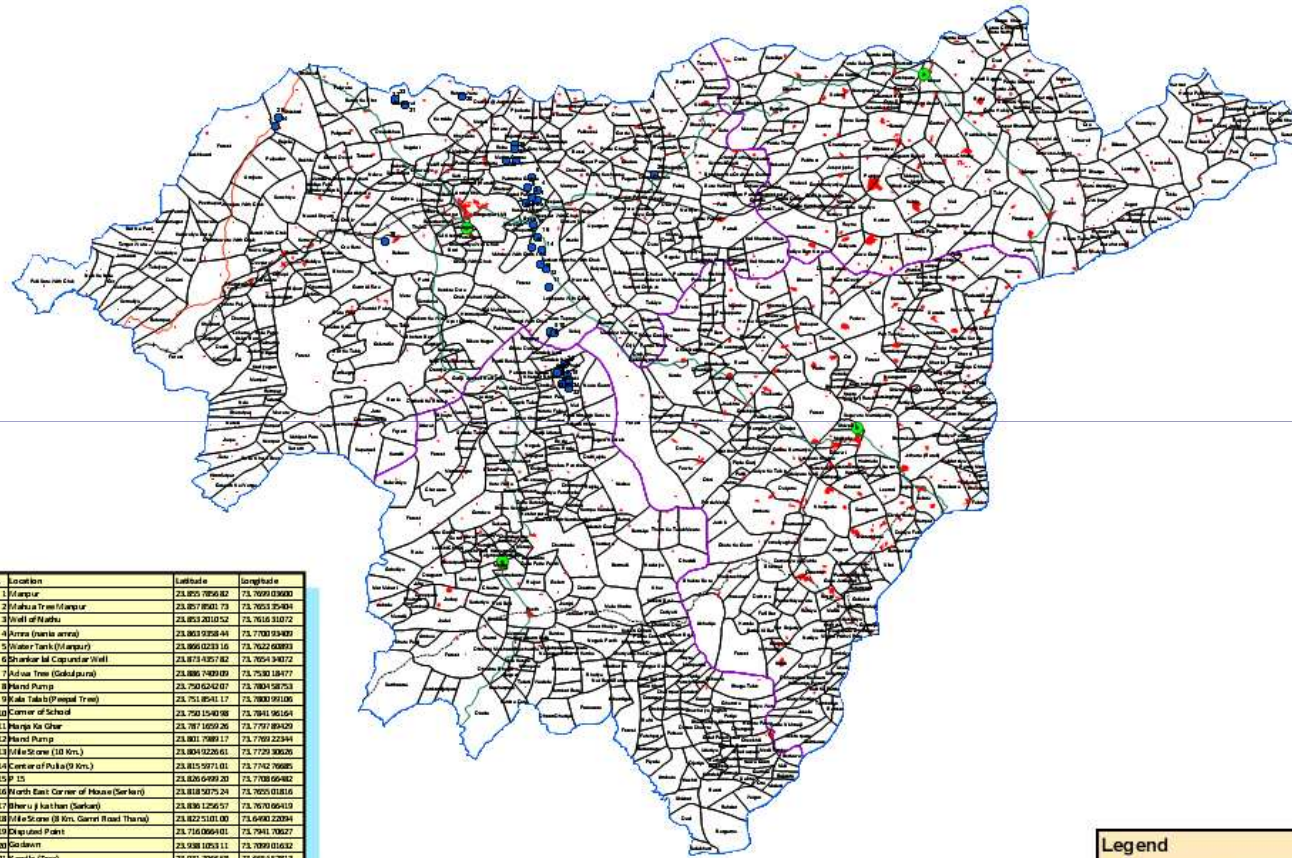
SNO.	Project	Data Used	Scale	Year	Agency
4	Urban Database for 4 Towns •Bandikui •Vijaynagar •Gulabpura •Makarana	Cartosat-1	1:10000	2009	NRSC
5	Vivek Vihar Yojana, Jodhpur	Quick Bird	1:4000	2010	UIT

FRP Point at Sagwara, Dungarpur



MAP SHOWING LOCATIONS OF TI/FRP POINTS DISTRICT DUNGARPUR

(SCALE 1:2,50,000)



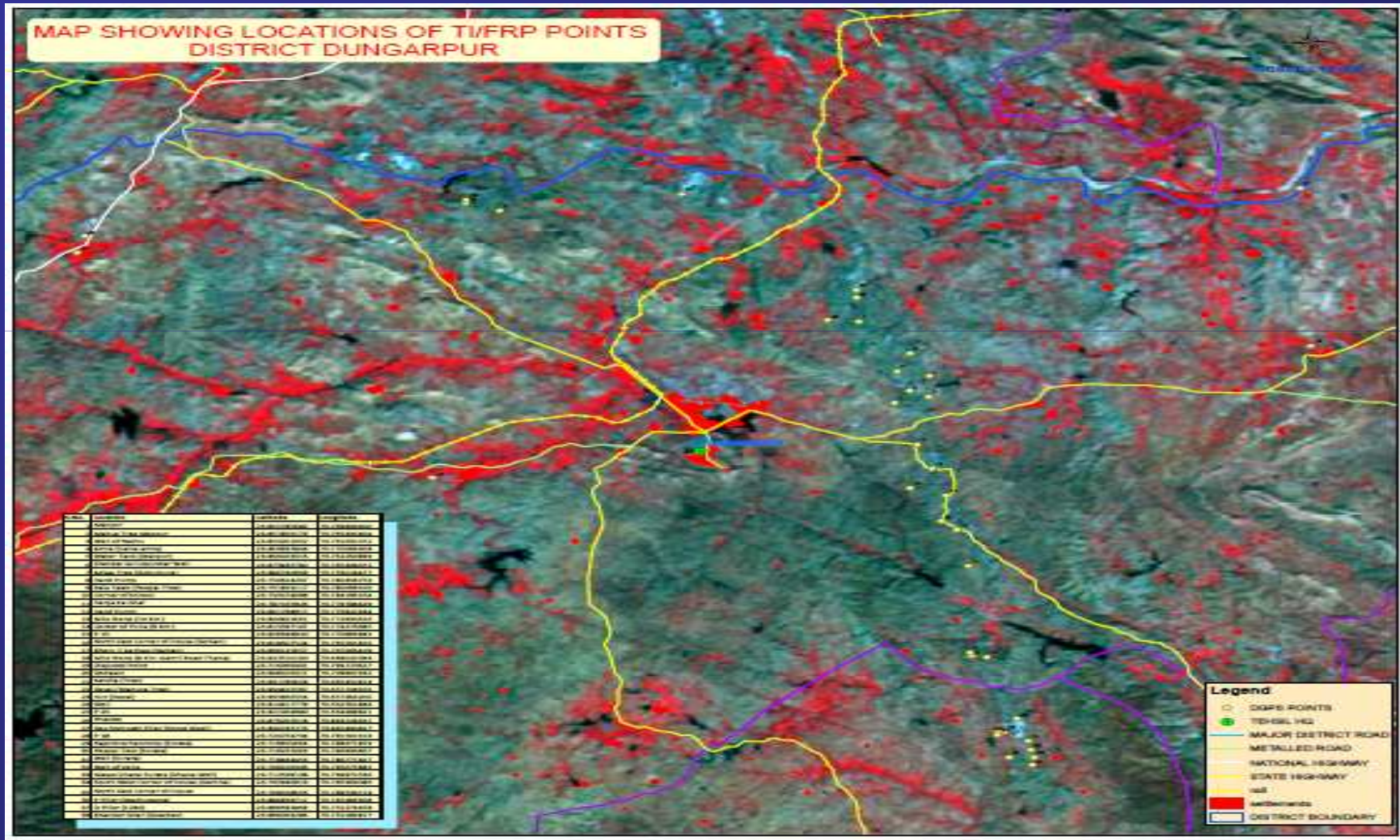
S.No.	Location	Latitude	Longitude
1	Dungarpur	23.825780682	75.709910060
2	Maha Trami/Mangur	23.857804173	75.705135404
3	Wall of Nathu	23.853201052	75.701631072
4	Arora (Dandi Arora)	23.863323844	75.770033409
5	Water Tank (Mangur)	23.866523116	75.702260893
6	Shankar Lal Capansar Well	23.873425782	75.705934072
7	Water Tank (Gokulpur)	23.886740009	75.753018477
8	Hand Pump	23.790624207	75.780458753
9	Kala Talab (Peepal Tree)	23.751854117	75.780030106
10	Corner of School	23.750154038	75.784196164
11	Suraj Ka Ghur	23.787142926	75.779789429
12	Hand Pump	23.801798917	75.778922944
13	Water Tank (10 Km.)	23.804522661	75.772930026
14	Center of Puka (9 Km.)	23.815307101	75.774276685
15	15	23.806699920	75.770866482
16	North East Corner of House (Serker)	23.818307523	75.782501816
17	Shree J. K. Jha (Serker)	23.830123657	75.767066419
18	Water Tank (8 Km. Gann Road Thana)	23.822150100	75.649022094
19	Disputed Point	23.716066401	75.794170827
20	Godown	23.988109311	75.709916532
21	Kavali (Tree)	23.931796638	75.660542813
22	Deul (Dhau or Tree)	23.934420597	73.657130266
23	Moti (Deul)	23.935866554	73.657936280
24	Deul	23.914417779	73.662501883
25	Deul	23.921080880	73.564388211
26	Water	23.876209518	73.863228311
27	Deo Saranath Pillar (Same River)	23.940746276	73.860490827
28	18	23.724754734	75.791501313
29	Agemra Panchde (Ganna)	23.719450664	75.788371853
30	Peepal Tree (Ganna)	23.719250013	75.789936667
31	Wall (Ganna)	23.718434453	75.788771827
32	Wall of Vaha	23.709226336	75.799675985
33	Maha Dhana Surata (Dhana Well)	23.712529138	75.794072530
34	South West Corner of House (Ganna)	23.705396913	75.795163086
35	North East Corner of House	23.709148856	75.789530114
36	Pillar (Mushgama)	23.886496711	75.746430668
37	Pillar (1.200)	23.889920809	75.752274458
38	Water Ghur (Gowdan)	23.894064286	75.752283817

Legend

- DGPS POINTS
- TEHSIL HQ
- MAJOR DISTRICT ROAD
- METALLED ROAD
- NATIONAL HIGHWAY
- STATE HIGHWAY
- RAILWAY LINE
- SETTLEMENTS
- DISTRICT BOUNDARY
- VILLAGE BOUNDARY

TI & FRP Points at Dungarpur District

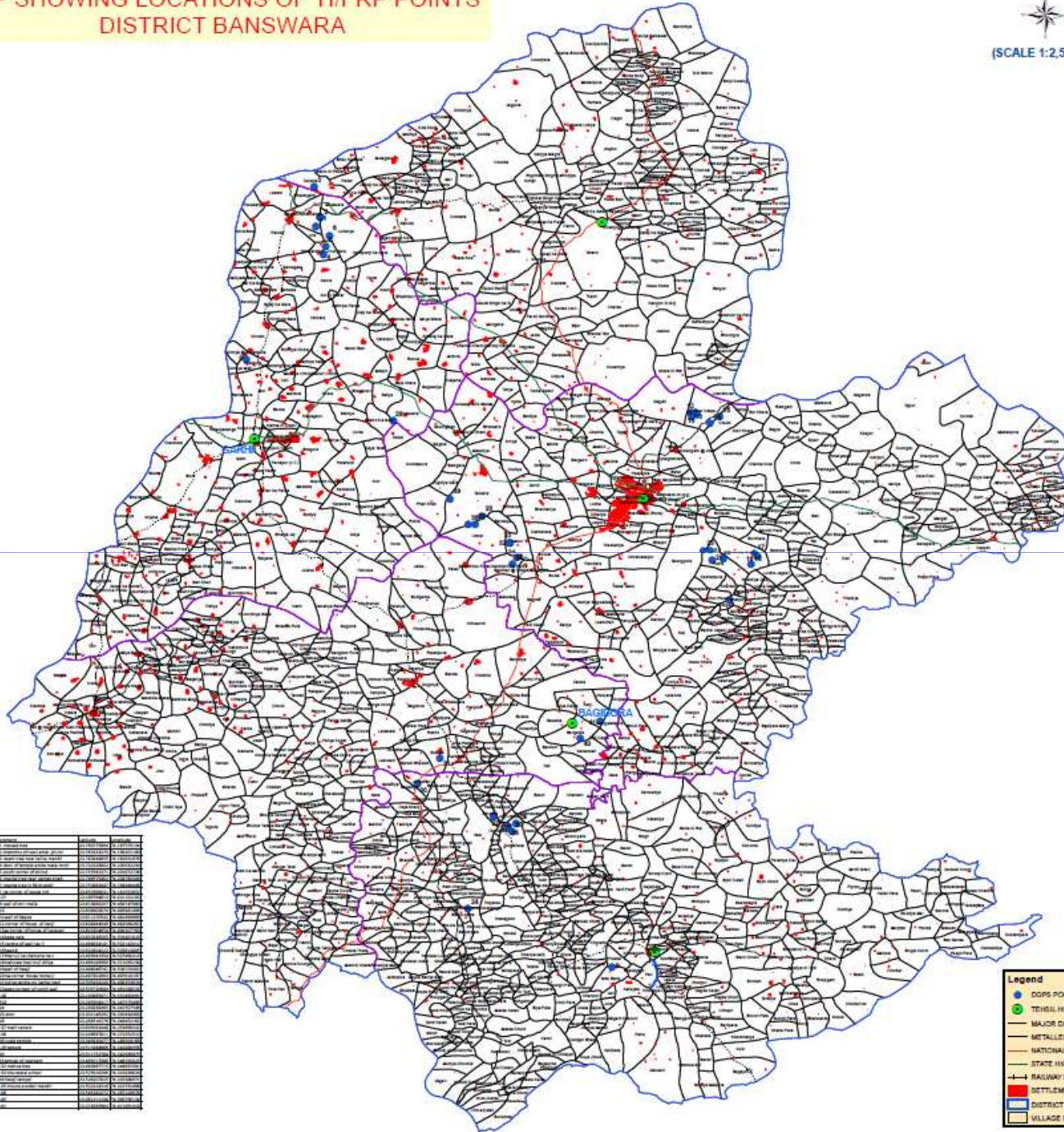
LISS - III



**MAP SHOWING LOCATIONS OF TI/FRP POINTS
DISTRICT BANSWARA**



(SCALE 1:2,50,000)



Sl. No.	Block	TI/FRP Point
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Legend

- DOPS POINTS
- TIBILLI HQ
- MAJOR DISTRICT ROAD
- METALLED ROAD
- NATIONAL HIGHWAY
- STATE HIGHWAY
- RAILWAY LINE
- SETTLEMENTS
- DISTRICT BOUNDARY
- VILLAGE BOUNDARY

List of TI & FRP Points at Dungarpur District

S.No.	Location	Latitude	Longitude
1	Manpur	23.855785682	73.769903600
2	Mahua Tree Manpur	23.857850173	73.765335404
3	Well of Nathu	23.853201052	73.761631072
4	Amra (nania amra)	23.863935844	73.770093409
5	Water Tank (Manpur)	23.866023316	73.762260893
6	Shankar Lal Copundar Well	23.873435782	73.765434072
7	Adwa Tree (Gokulpura)	23.886740909	73.753018477
8	Hand Pump	23.750624207	73.780458753
9	Kala Talab (Peepal Tree)	23.751854117	73.780099106
10	Corner of School	23.750154098	73.784196164
11	Hanja Ka Ghar	23.787165926	73.779789429
12	Hand Pump	23.801798917	73.776922344
13	Mile Stone (10 Km.)	23.804922661	73.772930626
14	Center of Pulia (9 Km.)	23.815597101	73.774276685
15	P 15	23.826649920	73.770866482
16	North East Corner of House (Serkan)	23.818507524	73.765501816
17	Bheru ji ka than (Sarkan)	23.836125657	73.767066419
18	Mile Stone (8 Km. Gamri Road Thana)	23.822510100	73.649022094
19	Disputed Point	23.716066401	73.794170627
20	Godawn	23.938105311	73.709901632
21	Kandla (Tree)	23.931796658	73.665452813
22	Deval (Mahuva Tree)	23.934425597	73.657139356
23	Hut (Deval)	23.935866554	73.657363200
24	Well	23.914417779	73.562561883
25	P 25	23.921063980	73.564389821
26	Phaloze	23.876265618	73.863228331
27	Dev Somnath Piller (Some River)	23.940745276	73.860490827
28	P 18	23.724754734	73.791501313
29	Rajendra Panchole (Surata)	23.719450664	73.788371853
30	Peepal Tree (Surata)	23.719255063	73.786936867
31	Well (Surata)	23.718434453	73.786771827
32	Well of Vella	23.709226336	73.795675985
33	Mawa Dhana Surata (Dhana Well)	23.712539138	73.794972536
34	South West Corner of House (Gamna)	23.705946913	73.795363086
35	North East Corner of House	23.709168656	73.789539114
36	P Piller (Mathugama)	23.886958711	73.745493608
37	D Piller (1290)	23.899592869	73.752274458
38	Bhandar Ghar (Gowdan)	23.896064286	73.752283817

SDI IN STATE

- CS Meeting of all user dept of state for utilization and sharing of geospatial data
- Consent for participation in NGIS mission given by state
- Establishment of Arc GIS Server(software)
- Approval for hardware purchase

THANK YOU