

# Empowering Decision Making Process Through e-MANCHITRA State Geo Portal

National Informatics Centre,  
DeitY, MoC&IT  
Government of India, Lucknow.

Dr. L.R. Yadav  
Senior Technical Director  
E-Mail : [lr.yadav@nic.in](mailto:lr.yadav@nic.in)

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# Introduction

- Since independence governments are trying to remove inter-regional disparities at macro/micro levels but it still persists in the society.
- Decentralization process began in early sixties and separate Planning & Rural Development Departments were created.
- Sankhyikiya Patrika (SP) having more than 4000 parameters in the form of more than 100 tables/subtables, published /maintained since 1973, 1977 & 1981 at block, district and divisional levels respectively in the state of Uttar Pradesh.
- Process of creating Local Level Databases (LLDs) was initiated by PC, GoI in Sep-1982 by setting a “Working Group on Districts Planning” under the Chairmanship of Prof. C.H. Hanumantha Rao, Member, PC.
- PC requested the State Governments to collect data at the village, block and district levels in prescribed, pre-coded schedule covering a very wide range of items in September 1989.
- These data were to be fed into the District Information System of National Informatics Centre for storage and retrieval on a regular basis.
- NIC had been making efforts to have an integrated information system required for district level planning & monitoring of plan programmes via NICNET under DISNIC-DISPLAN.

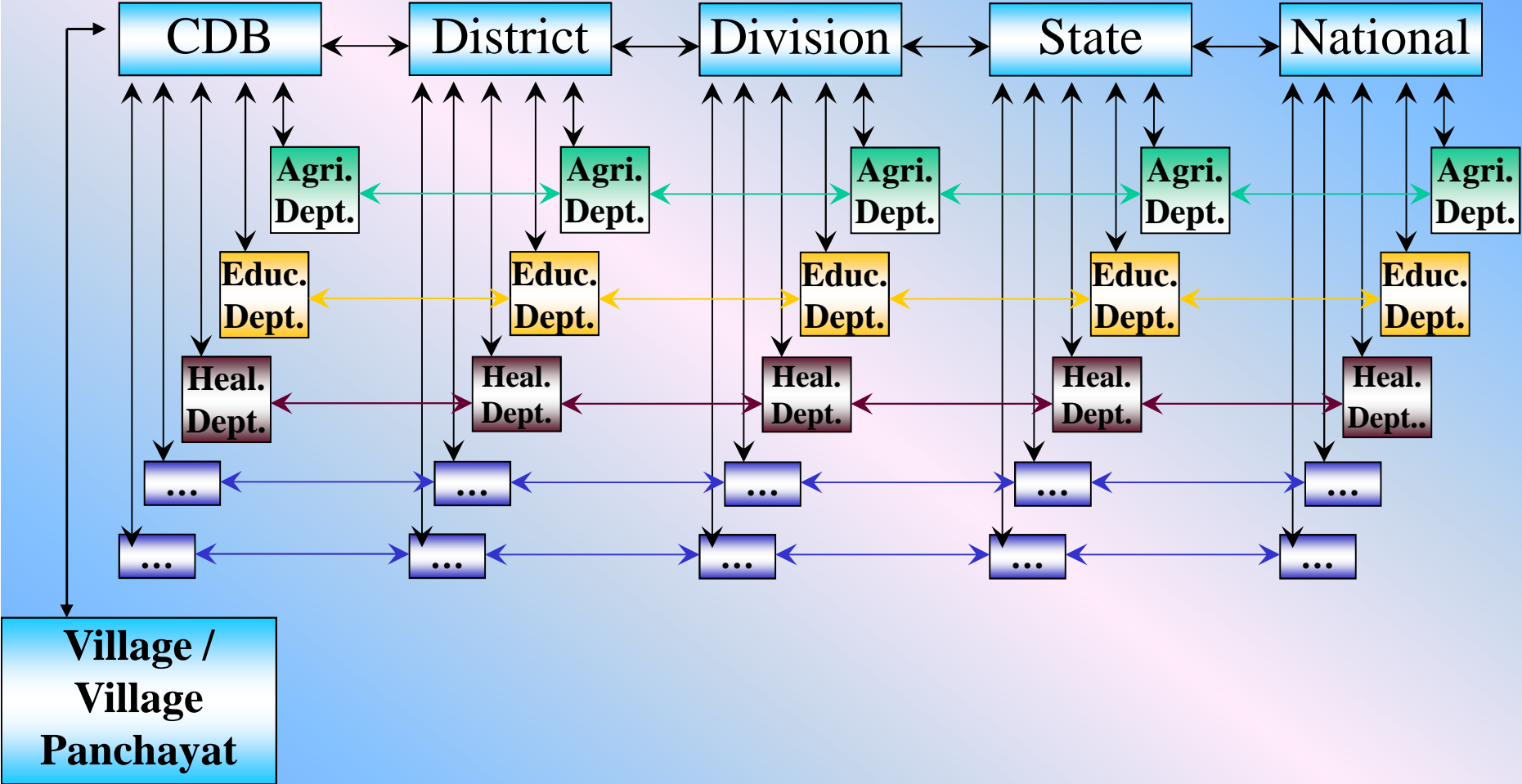


## Conti.....

- 73<sup>rd</sup> & 74<sup>th</sup> Indian Constitution Amendments bestowed greater responsibilities & powers to local bodies, positioning them as 3<sup>rd</sup> tier of governance , needs LLDs
- NIC-UP State Unit when interacted with State Planning Department during 1992-93 for implementation of DISNIC-PLAN, Planning Department suggested that they are already collecting information on >4000 parameters from various socio-economic sectors: Agriculture & Allied Activities, Industry, Social Sector, Power, Banking, Transport & Communication, Rural & Urban Facilities etc. at village, block & district levels in SP form.
- NSC 2001 and Expert Committee on “Basic Statistics for Local Level Development ” under the Chairmanship of Prof. Abhijit Sen, Member, PC, 2006 have also recommended the strengthening of LLDs.
- Earlier State Planning atlases were prepared through outsourced agencies & last state manual atlas available was for the year 2000. Computerized State Planning Atlas 2003 and Lucknow Planning Atlas 2006 using SPANS were prepared by NIC on the request of State Planning Department at the first time.
- A Rs. 5 Crore geospatial technology project for creating GIS infrastructure in the state and its applications was jointly initiated by the Planning Department and NIC during 2008-09.
- A localization study of Mau district is also being carried under this geospatial technology project on a pilot basis.



# Flow Diagram of Spatial & Aspatial Data



# e-MANCHITRA

- GIS cells have been created in all the districts and at headquarter level during the year 2009-10 with following items :
  - District** - 2 Clients, 1 Color Laser Printer, 2, 700 VA UPS, Arcview 9.x
  - HQ.** - Arc GIS Server, 5 Clients, 1 Color Laser Printer, 1 A0 Color Scanner and Plotter, one 5 KVA UPS, Windows Server Std. 2003, ArcInfo 9.x, Arcview 9.x, Arc GIS Publisher, Image Web Server
- GIS cells have been Networked in each other as well as with NIC GIS Network. for exchanging geospatial information.
- Digitized boundaries of state, districts, blocks & villages obtained from NIC-HQ. , modified as and where required on ground truthing basis.
- Gram Panchayat boundaries of Mau district have been created from village boundaries on a pilot basis
- Arc GIS Web ADF for Microsoft .NET is used in development of e-MANCHITRA Geo Portal.
- More than 10 thousand dynamic thematic maps of State, Regional, Divisional, Districts, Blocks and Gram Panchayats can be generated on equal/unequal intervals every year.
- e-MANCHITRA Geo Portal assists planners and administrators at great extent in identifying anomalies persisting in local level administrative boundaries and making decisions in favor citizens welfare.





# e-MANCHITRA

(Map Based Analytical Charting and Reporting Application) Geo Portal



Hon. CM's  
Profile

State Geo portal: A step towards g-Governance

Inter-regional disparities are persisting as a problem in the development process even after continuous efforts by the governments. State Planning Atlases were prepared manually from outsourced agencies periodically for which Planning Department, Government of Uttar Pradesh, was paying heavily. Last manual Atlas available with the department is for the year 2000 ..... [More](#)

## Atlas

### State Atlas

- ▶ State with Districts
- ▶ State with Divisions
- ▶ State with Regions

### Regional Atlas

- ▶ Region with Districts

### Divisional Atlas

- ▶ Division with Districts

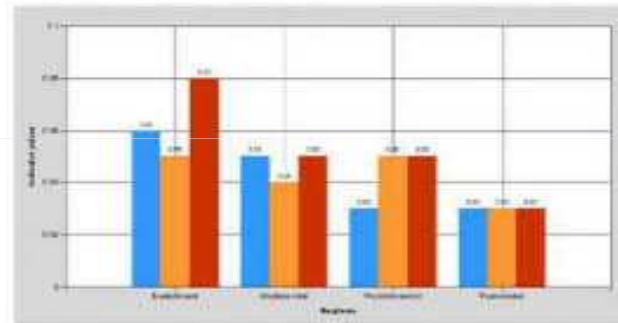
### District Atlas

- ▶ District with Blocks

### Block Atlas

- ▶ Block with Gram Panchayats

## Uttar Pradesh



## Graphs

### State Graph

- ▶ State with Districts
- ▶ State with Divisions
- ▶ State with Regions

### Regional Graph

- ▶ Region with Districts

### Divisional Graph

- ▶ Division with Districts

### District Graph

- ▶ District with Blocks

### Block graph

- ▶ Block with Gram Panchayats

## Articles/News

EAIT, 2012  
PC Quest Awards, 2012  
Geo spatial Today, 2011  
Arc India news, 2009  
Inaugural Function Atlas, 2006

## Links



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# SPIDER

- After the approval of DG (NIC) & Sub-Committee of NIC U.P. State Co-ordination Committee, Computerisation of SP in Uttar Pradesh was initiated in the year 1993 along with Rajasthan and Andhra Pradesh.
- In SP total data available annually at the state level is approx. 9.30 lakhs, out of which 3.20 lakhs calculated, 1.35 lakhs needed entry/checking only once (related to censuses) while 4.75 lakhs to be entered/checked every year.
- After analysis, SPIDER (Sankhyikiya Patrika : Internet based Data Entry and Retrieval) System was developed in Foxbase+ & Xenix platforms during the year 1993-94 at NIC-UP State Unit, Lucknow.
- On the request of State Planning Department, PC, GoI provided computer systems with necessary peripherals in all the district/divisional and head-quarter offices on pilot basis during 1998-99 and SPIDER system was converted into Visual Foxpro & Windows platforms.
- Integrated Unicode Compliant web based SPIDER system for data entry/updation and retrieval was made possible using ASP at the front-end and SQL Server at the back-end during the year 2003-04.



## Conti.....

- Annual Online data entry/updates are being done from all the districts and data are being centrally stored at NIC Data Centre, Lucknow .
- Till today SP databases are available for the years 1995-2011 and work is going on for 2012.
- For strengthening village panchayat and block levels data, 2 more modules Gram Panchayat-SP and Block-SP were added during the year 2007-08 and had been tested on 2009 real data of Mau & Mahoba districts.
- These modules implementation is still under the active consideration of the government.





# SPIDER

Sankhyikiya Patrika  
Internet based Data Entry & Retrieval System

## Contents

७	पत्रिका : एक परिचय
७	सांख्यिकीय पत्रिका
७	मानचित्र आधारित पत्रिका
७	पत्रिका आधारित क्वेरी सिस्टम
७	डाटा इण्ट्री / अपडेशन

## SPIDER

सांख्यिकीय पत्रिका नियोजन विभाग, उ.प्र. के अर्थ एवं संख्या प्रभाग द्वारा प्रकाशित एक महत्वपूर्ण वार्षिक प्रकाशन है। यह प्रकाशन विभाग के मण्डलीय उपनिदेशक, जिला अर्थ एवं संख्याधिकारी तथा विकास खण्ड स्तरीय कार्यालयों द्वारा किया जा रहा है। ग्राम, ग्राम पंचायत, विकास खण्ड,

ISO certified

PC Quest Award



EAIT - 2012

Search the Web for:

Search

## सांख्यिकीय पत्रिका



Website link : [UP AIDS Control](#)

## English Version



No. of hits

38996

Site designed and hosted by National Informatics Centre.

Contents provided & updated by Economics and Statistics Division, Planning Department, GoUP

This site is best viewed in 1024 x 768 resolution.

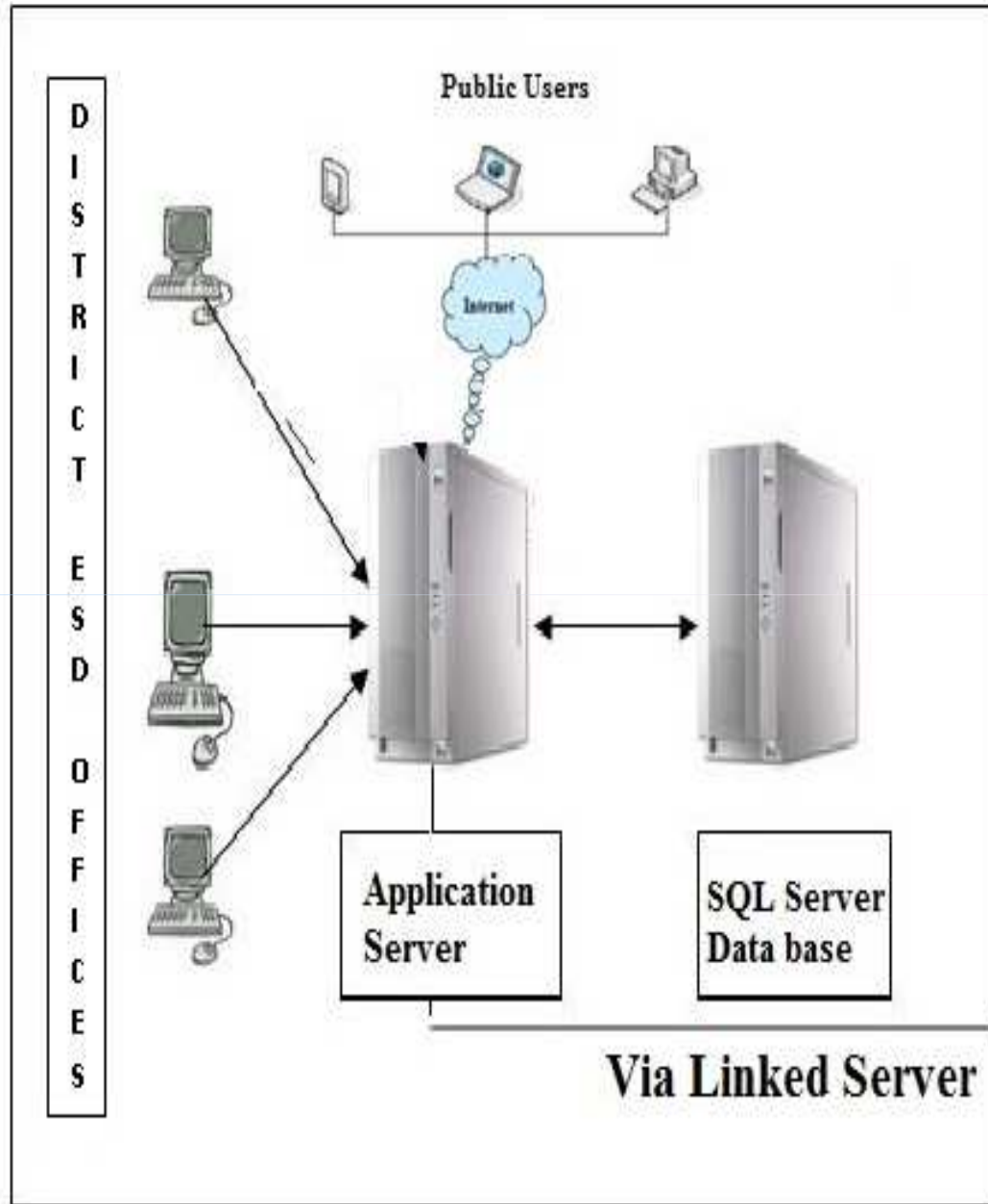


# Integrated Architecture of SPIDER & e-MANCHITRA

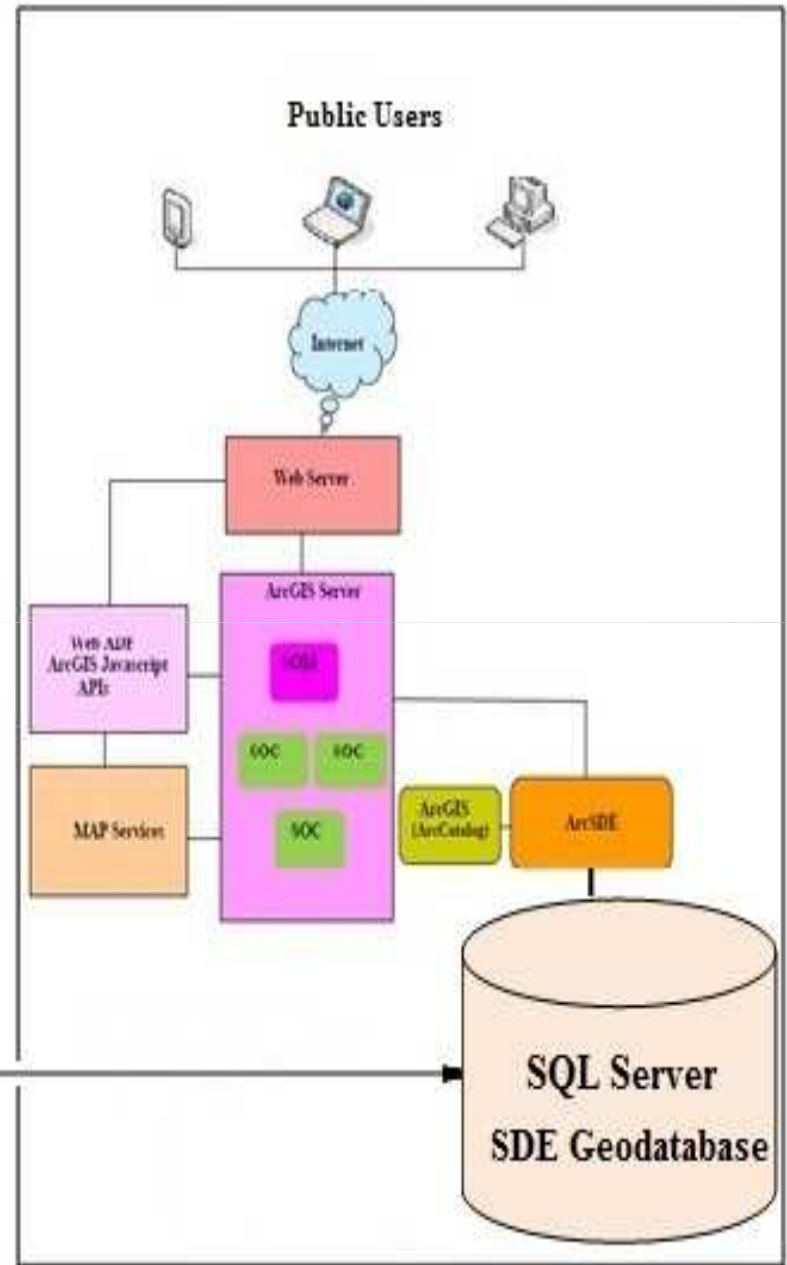
- Arc GIS Server Object Manager has been used for creating and managing Map Services using Server Object Container .
- Arc SDE is used to access the geospatial data stored in Microsoft SQL Server.
- In this system data and business logic have been kept separately on different servers to avoid malicious attacks.
- Indicators displayed on Dynamic Thematic Maps are automatically generated on SPIDER portal and through link server created on data server reaches to Geo-database of GIS server.
- Village panchayats, blocks, districts, divisional, regional and state boundaries imported through Arc Catalogue /Arc SDE command script in a Geo-database .
- Spatial views are created through Arc SDE command script for merging attribute indicators with the boundaries



### Online SPIDER Portal



### Online Geo Portal e-MANCHITRA



# Mau District Case Study





- Quick Bird Satellite Imagery has been procured for verification, rectification, extraction, analysis, visualization, interpretation etc. of ground features.
- 20 amenities out of 41 Village Level Basic Amenities (VLBA) available in VLBA databases of SP from 1995-2011 of Mau district have been considered for this case study.
- 20 selected VLBA in villages were confirmed from the existing VLBA databases.
- Point Features of available VLBA have been created in each village of Muhammadabad Gohna Block of Mau district without co-ordinates.
- Thematic layers have been created from these point features and stored in shape file formats.
- For analyzing, visualizing and interpreting the thematic layers with Satellite imagery, Erdas Apollo Image Web Server has been used.
- GPS survey has been planned for capturing location coordinates (latitudes & longitudes) with auxiliary information for settling the exact location of VLBA in the respective villages.





## Mau in a glance

Mau	Number
Parliamentary Constituency	1 (+ Rasra AC)
Assembly Constituency (AC)	4
Tehsil	4
Block	9
Nyay Panchayat	90
Gram Panchayat	596
Village	1622
Inhabited Villages	1499
Uninhabited Villages	123



# Blocks Of Mau District



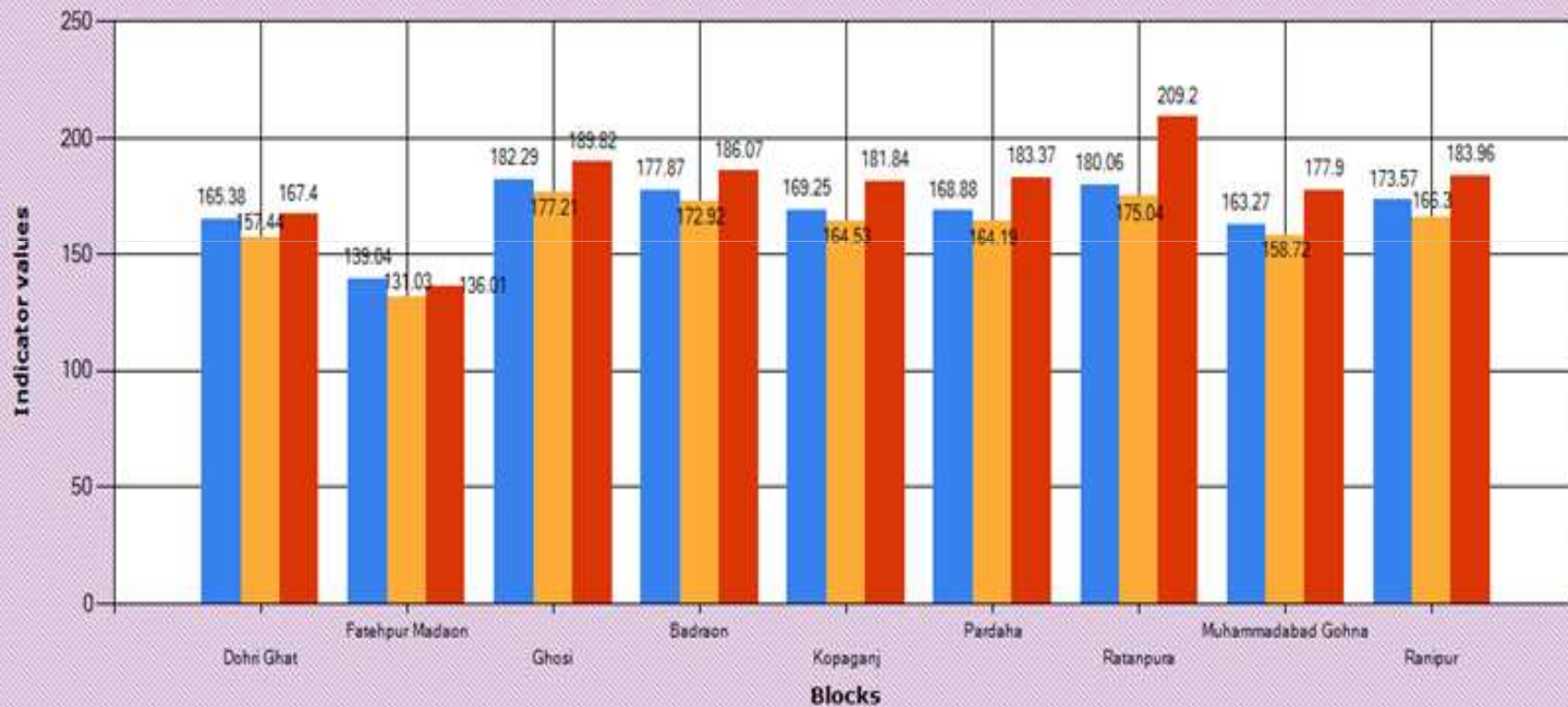
## MAU District with Block Graph

Year	Value	Year	Value	Year	Value
2009	168.61	2010	162.71	2011	178.91

Indicator :

PERCENTAGE OF GROSS IRRIGATED AREA TO GROSS AREA SOWN

[Home](#)



2009 2010 2011



जनपद - मऊ  
ग्राम - Lohra

विकासखण्ड- दोहरी घाट  
वर्ष - 2011

विकासखंड में कुल आबाद ग्राम : 154

जनपद में कुल आबाद ग्राम : 1499

सुविधाएँ	स्थिति	कितनी दूरी पर (कि.मी. में)
1 विकासखण्ड	नहीं है	0.2
2 ग्राम विकास अधिकारी केन्द्र	नहीं है	0.1
3 सस्तेगल्ले की दुकान	नहीं है	0.1
4 पेयजल स्रोत	है	0
5 कृषि सेवा केन्द्र	नहीं है	0.2
6 बाजार हाट	नहीं है	0.3
7 धोक मण्डी	नहीं है	2
8 शीत गोदाम	नहीं है	3
9 बीज विक्रय केन्द्र कीटनाशक भण्डार	नहीं है	0.2
10 उर्वरक विक्रय केन्द्र	नहीं है	0.2
11 कीटनाशक विक्रय केन्द्र	नहीं है	0.1
12 पशु चिकित्सालय पशुपालन केन्द्र	नहीं है	0.2
13 डी श्रेणी पशु औषधालय	नहीं है	22
14 पशु सेवा केन्द्र	नहीं है	0.2
15 कृत्रिम गर्भाधान केन्द्र/ उपकेन्द्र	नहीं है	0.2
16 सहकारी दुग्ध संग्रह केन्द्र	नहीं है	10
17 प्रारम्भिक कृषि ऋण सहकारी समितियाँ	नहीं है	0.3
18 क्रय/ विक्रय सहकारी समितियाँ	नहीं है	0.2
19 सरकारी क्रय केन्द्र	नहीं है	0.2
20 प्राथमिक विधालय (मिश्रित)	है	0
21 उच्च प्राथमिक विधालय (बालक)	नहीं है	0.1
22 उच्च प्राथमिक विधालय (बालिका )	नहीं है	0.3
23 माध्यमिक विधालय(बालक)	नहीं है	0.2
24 माध्यमिक विधालय(बालिका )	नहीं है	0.3
25 वैकल्पिक शिक्षा केन्द्र	नहीं है	10
26 एलोपैथिक चिकित्सालय औषधालय प्राथमिक स्वास्थ्य केन्द्र	नहीं है	2
27 आयुर्वेदिक चिकित्सालय एवं औषधालय	नहीं है	7
28 यूनानी औषधालय	नहीं है	20
29 होम्योपैथिक चिकित्सालय औषधालय	नहीं है	18
30 परिवार कल्याण केन्द्र उपकेन्द्र	नहीं है	0.2
31 मातृ शिशु कल्याण केन्द्र उपकेन्द्र	नहीं है	0.1
32 पक्की सड़कें	है	0
33 डाकघर	नहीं है	0.3
34 लेटर बॉक्स	नहीं है	0.3
35 तारघर	नहीं है	40
36 सार्वजनिक टेलीफोन	है	0
37 रेलवे स्टेशन हॉल्ट	नहीं है	1
38 बस स्टेशन स्टॉप	नहीं है	0.4
39 सहकारी कृषि एवं ग्राम्य विकास बैंक	नहीं है	0.3
40 व्यवसायिक ग्रामीण सहकारी बैंक	नहीं है	20
41 पोस्ट आफिस बचत बैंक	नहीं है	0.3



## Amenities Selected for Study Purpose

1. Block Head Quarter
2. Post Office
3. Post Office Saving Bank
4. Primary School Co-Education
5. Secondary School Girls
6. Secondary School Boys
7. Higher Primary School Girls
8. Higher Primary School Boys
9. Hospital
10. Veterinary Hospital
11. Seed Sale Centre
12. Fertilizer Sale Centre
13. Mau Rail
14. Mau Road
15. Mau Drain Line
16. Mau Drain Polygon
17. Mau Block
18. Mau Town
19. Mau Gram Panchayat
20. Mau Village





# Findings



# Block Planning Atlas 2009 : Ranipur



Indicators

COMPOSITE INDEX OF DEVELOPMENT (BASED ON 11 IMPORTANT INDICATORS)

Categories:

	< 60.43
	60.43 - 99.01
	99.01 - 137.59
	137.59 - 176.17
	> = 176.17

View MAP

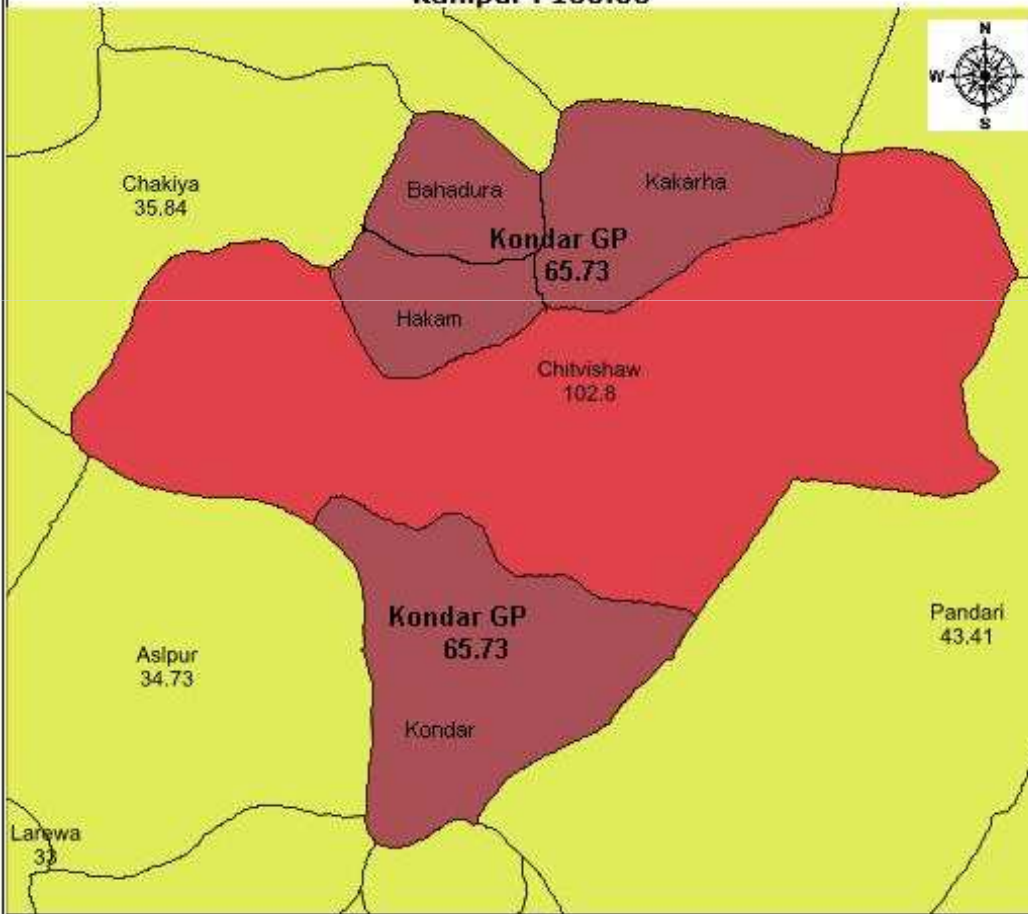
Color Range

Help:

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- Used to get back extent.
- Used to get forward extent.

ZoomIn 
 ZoomOut 
 FullExtent 
 Prev 
 Next 
 Pan

COMPOSITE INDEX OF DEVELOPMENT (BASED ON 11 IMPORTANT INDICATORS)  
Ranipur : 100.00



Panchayat Wise Ranking

Panchayat	Value	Ran
Baragawan	176.17	1
Amari	174.55	2
Khurahat	173.7	3
Kasari	136.69	4
Nasirpur	125.75	5
Kajha	118.66	6
Chitvishaw	102.8	7
Manajit	93.86	8
Ali Nager	86.22	9
Samaruddinpur	78.17	10
Bheryaghar	75.73	11
Usufabad	69.66	12
Khiriya	68.73	13
Katghar Sanjar	68.67	14
Durjepur	67.51	15
Babhanpurauttar	66.06	16
Kondar	65.73	17
Tajpur	64.56	18
Semri	62.97	19
Karmi	58.17	20
Sarsana	55.33	21
Daulsepur	53.57	22
Rampur Bakhariya	52.91	23
Chhapara Badruddinpur	52.68	24
Sirasa	52.62	25
Sohrabpur	52.6	26
Sachui Belbhadra	52.28	27

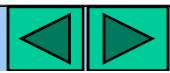
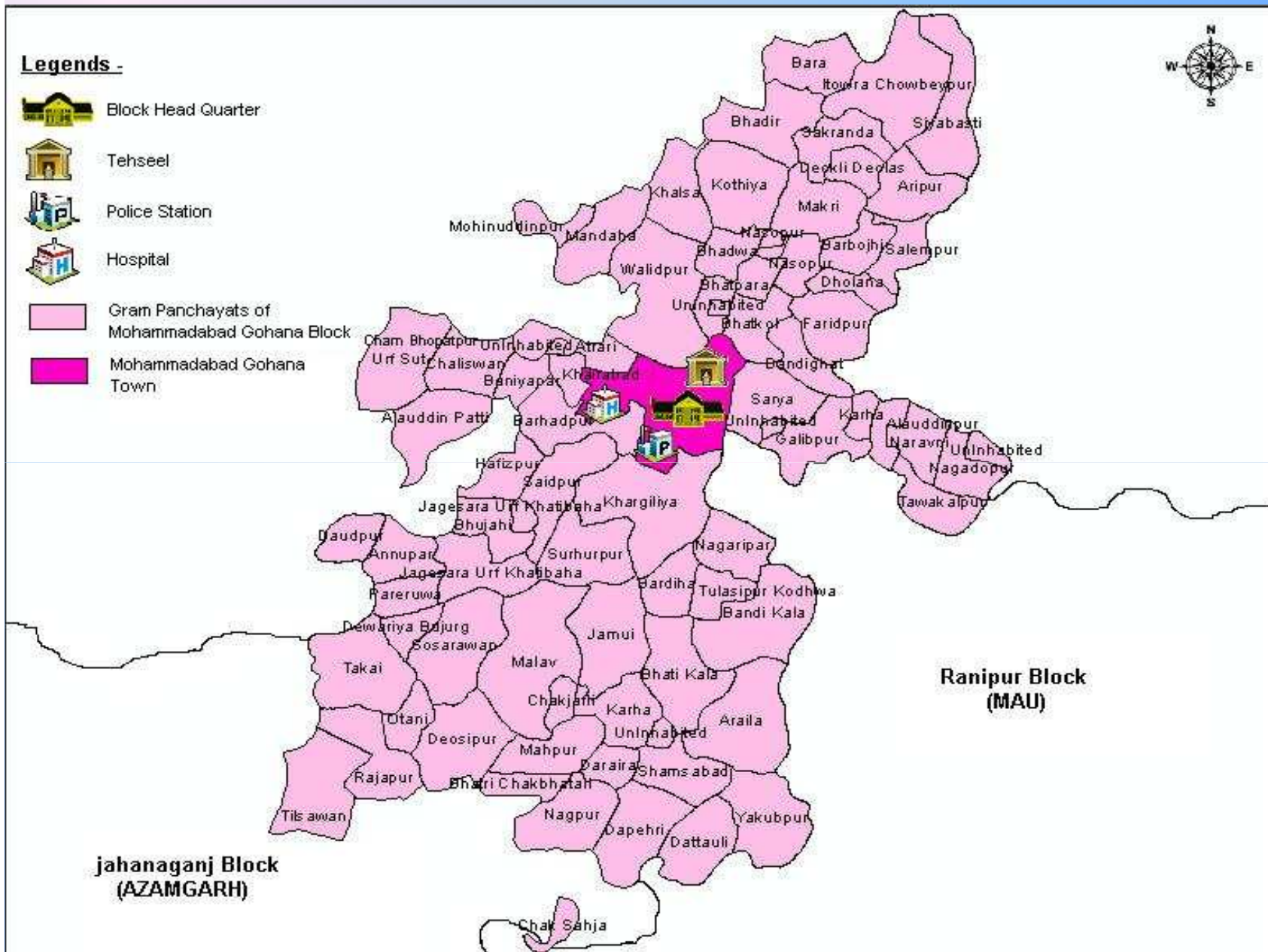


## Gram Panchayats of Mau district where village boundaries are non-adjacent

Block	Gram Panchayat	Villages
1. Badraon	I. Madhopur	Karanpur, Madhopur, Khirizpur, Patkhauli
2. Dohrighat	I. Jamunipur	Jamunipur, Mishrauli
3. Ghosi	I. Dharmpur urf Kasawar	Anwarpur, Mataiba, Jiwapar, Dharmpur urf Kasawar
	II. Barauli Chak Abdulrahm	Rasulpur Jagdeo, Barauli Chak Abdulrahm, Mishrauli Ramnidhi
4. Fatehpur Madaun	I. Lauasadh	Talratoy, Lauasadh, Kalayanpur
	II. Daraucha Mdhopur	Bhawarapur, Daraucha Madhopur
	III. Bhatauli	Bhatauli, Harihar, Rampur Tiwari, Sultanpur
	IV. Pardaha Zamin Pardaha	Chachaipar, Kamalapur Tiwari, Pardaha
5. Ranipur	I. Semri	Sultanpur, Sausar Patti, Semri Paharpur , Semri
	II. Khirkhand	Prempur, Khirkhand, Prabhutanda
	III. Kondar	Kondar, Bhadaura, Hakam, Kakarha
	IV. Amarsepur	Amarsepur, Gaganpur, Khakhun Jalim, Khurd Karm, Mardanpur
	V. Barwa	Bamhur, Barwa, Dwarikapur
	VI. Hafizpur	Rasulpur, Hafizpur, Fatehpur
	VII. Jamin Burhan	Jamin Burhan , Jamin Ataullah, Atte Chak, Ausatpur, Chak Bano, Kmaluddinpur, Jamin Kamaluddinpur
	VIII. Usufabad	Mubarakpur, Rakawa Sukurullah, Usufabad, Molna Ganj, Taiyabpur



# Chaksahaja GP's Citizens Difficulties in Availing Common Facilities





# Block Planning Atlas 2009 : Ghosi



Indicators

COMPOSITE INDEX OF DEVELOPMENT (BASED ON 11 IMPORTANT INDICATORS)

Categories:

	< 48.50
	48.50 - 69.17
	69.17 - 89.84
	89.84 - 110.52
	>= 110.52

View MAP

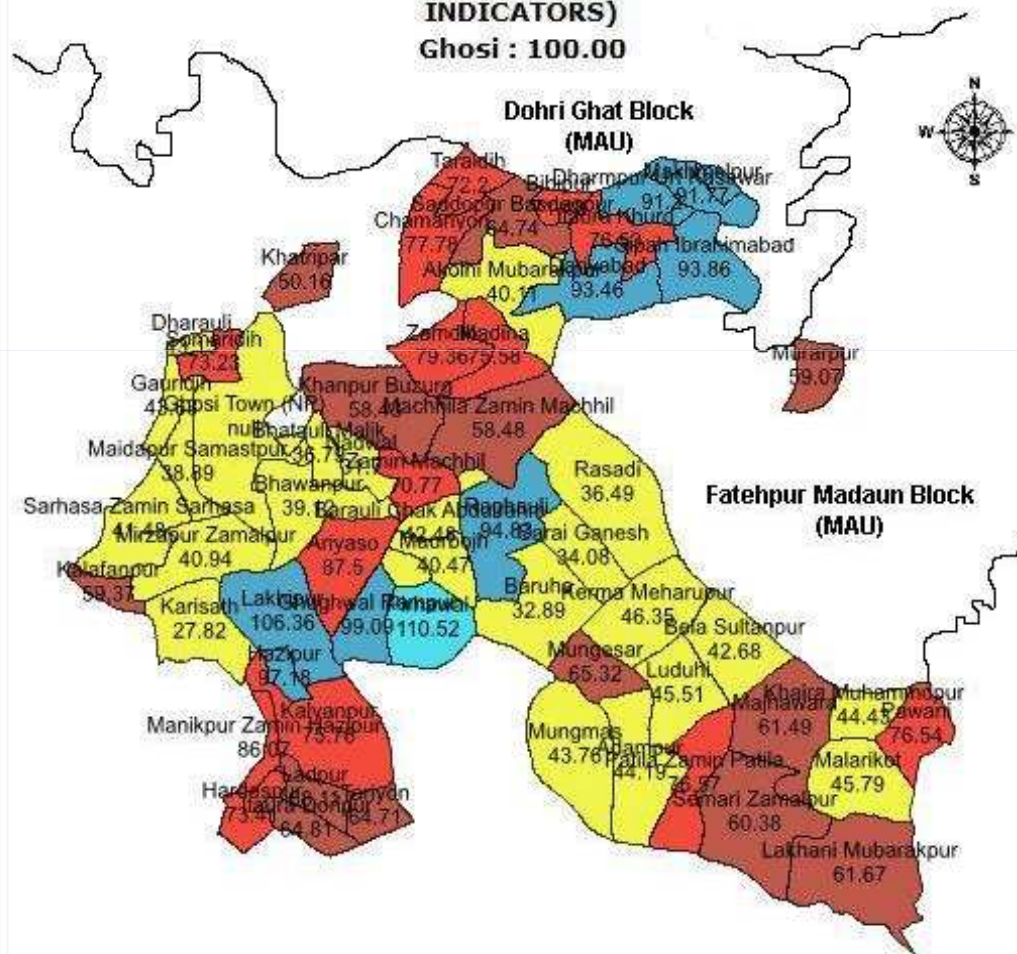
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ZoomIn 
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 FullExtent 
 Prev 
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 Pan

## COMPOSITE INDEX OF DEVELOPMENT (BASED ON 11 IMPORTANT INDICATORS) Ghosi : 100.00



### Panchayat Wise Ranking

Panchayat	Value	Ran
Pirhawal	110.52	1
Lakhipur	106.36	2
Ghughwal Rampur	99.09	3
Hazipur	97.18	4
Raghauli	94.83	5
Sipah Ibrahimabad	93.86	6
Dariyabad	93.46	7
Makhmelpur	91.77	8
Dharpur Urf Kasawar	91.2	9
Ariyaso	87.5	10
Manikpur Zamin Hazipur	86.07	11
Zamdih	79.36	12
Chamariyon	77.78	13
Patila Zamin Patila	76.57	14
Pawani	76.54	15
Itaura Khurd	76.53	16
Kalyanpur	75.76	17
Madina	75.58	18
Hardaspur	73.41	19
Somaridih	73.23	20
Taraidih	72.2	21
Bibipur	71.48	22
Zamin Machhil	70.77	23
Ladpur	68.11	24
Mungesar	65.32	25











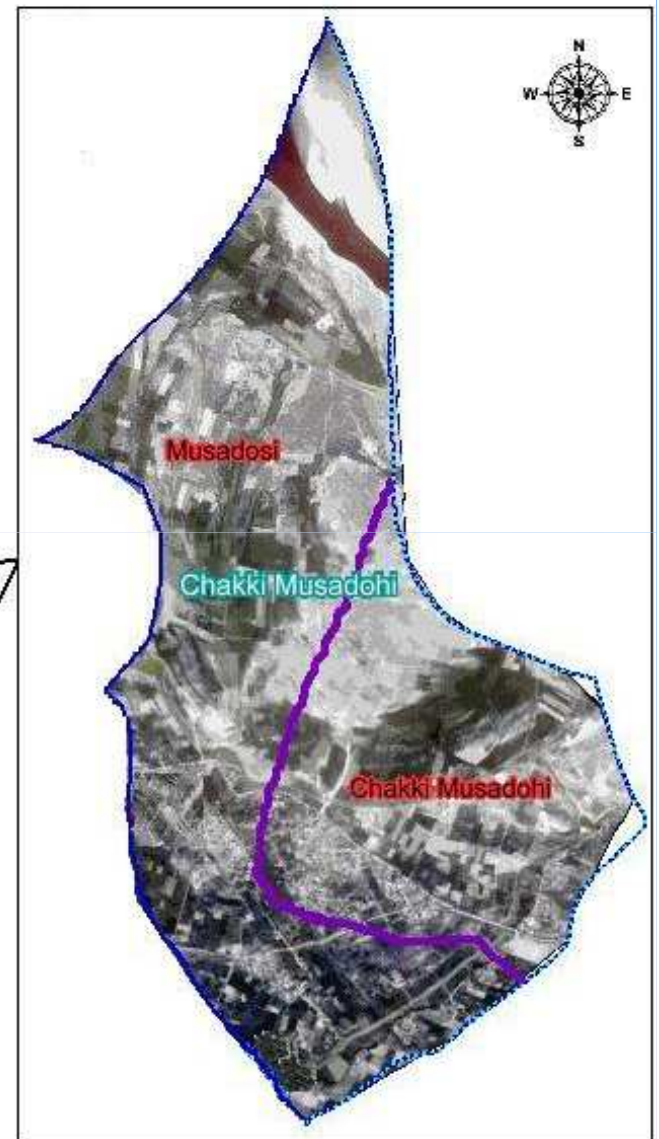
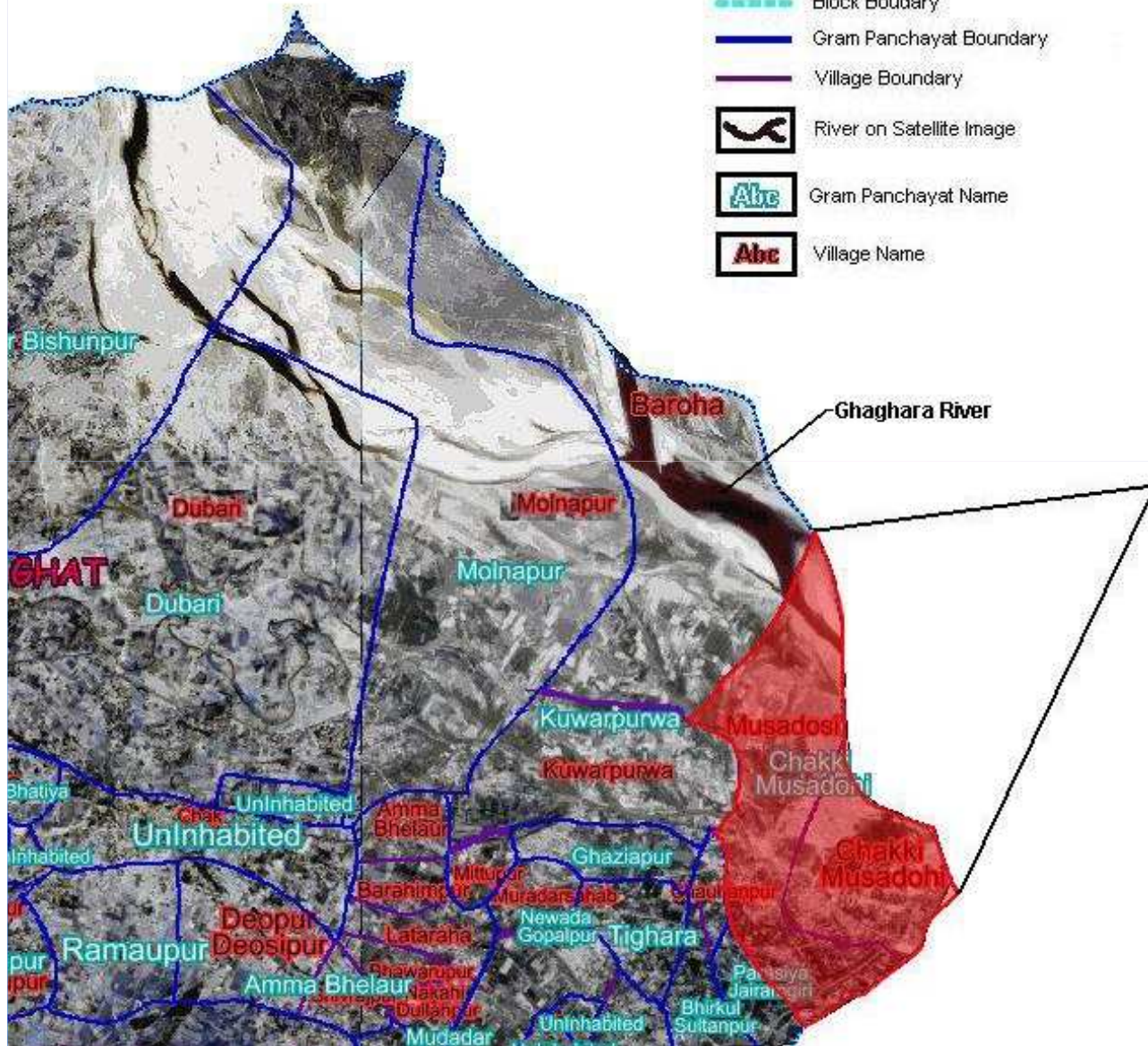




# Satellite View of Ghaghara River and Surrounding Gram Panchayats

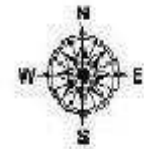
## Legends -

-  Block Boudary
-  Gram Panchayat Boundary
-  Village Boundary
-  River on Satellite Image
-  Gram Panchayat Name
-  Village Name






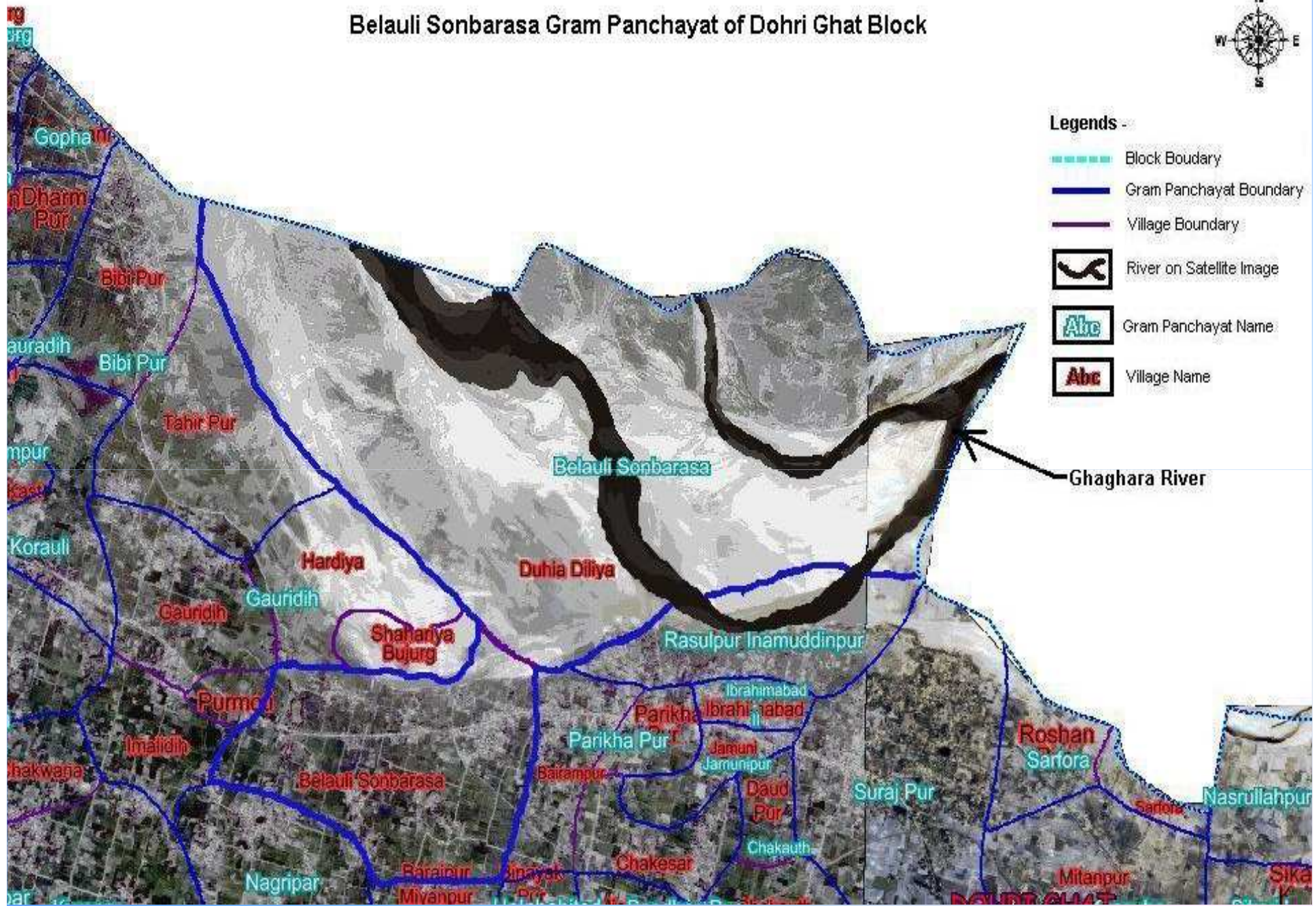


# Belauli Sonbarasa Gram Panchayat of Dohri Ghat Block



## Legends -

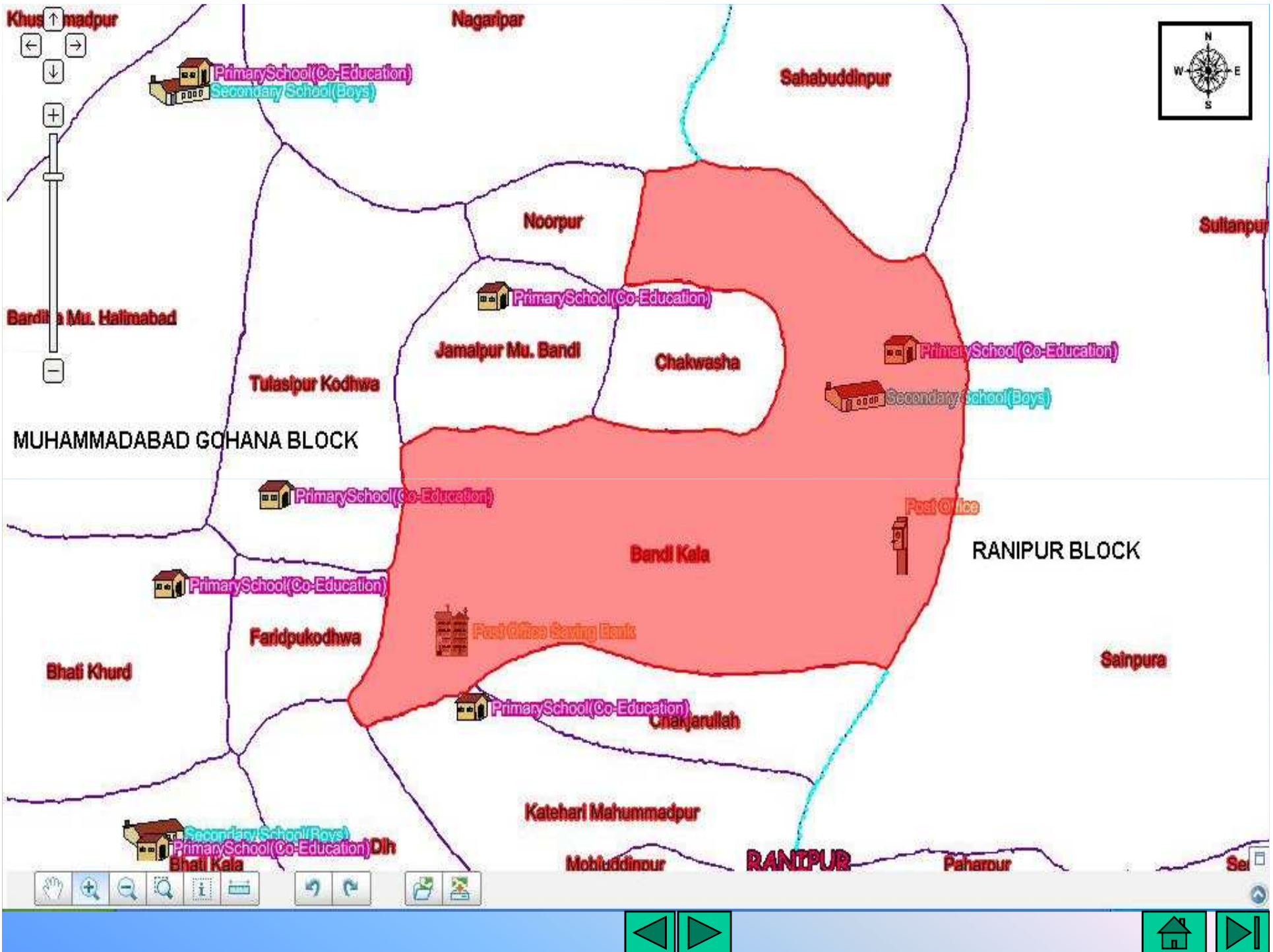
-  Block Boudary
-  Gram Panchayat Boundary
-  Village Boundary
-  River on Satellite Image
-  Gram Panchayat Name
-  Village Name



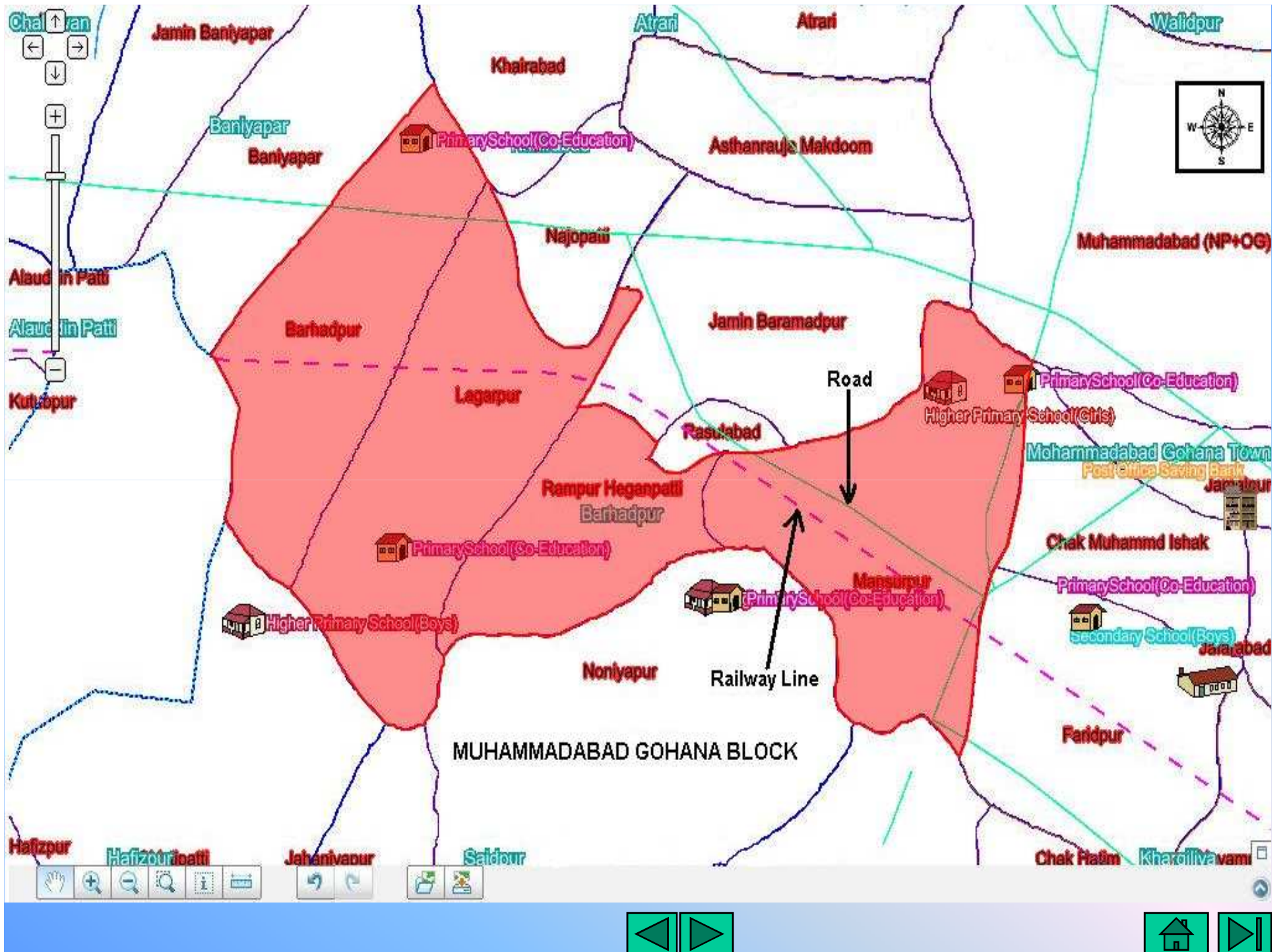
Ghaghara River











# Milestones

- Successful Computerization of Population Census-1991 and utilization of Census Codes in SPIDER & e-MANCHITRA Portals.
- Central government has now made mandatory the utilization of Census Codes 2011 in all e-Governance Projects.
- Coming together of State Planning Department and NIC, GoI for jointly initiating SPIDER & e-MANCHITRA projects.
- Software was developed by NIC-State Unit and successfully implemented on NIC District systems while data entry/updation/validation and report generations were done by Planning personnel.
- Realizing the success of the project, PC, GoI provided necessary hardware/software in 1998-99 to all State Planning Offices in consultation with NIC for further expediting this project in a special case.
- Software were converted form time to time to cope up with technological changes as : (Foxbase+,Xenix),(VisualFoxPro,Windows),(ASP,SQLServer)&Geospatial Technology.
- Creation of ICT & Geospatial Technology Infrastructure in planning set-up of the state.
- Development of human resources in ICT & Geospatial Technology in planning set-up.
- Mainstreaming the planning process by applying ICT & Geospatial Technology.



# Challenges Faced

- Official data captured from censuses (Population, Agriculture, Live-stock, Educational, Economic Census etc.), surveys & as a by-product of government departments had different formats.
- Variations in parameters, formats, years, tables and levels.
- Rectification of inconsistent, redundant, duplicate, erroneous spatial and non-spatial data received from different sources and their integration was a challenge.
- Creation of GIS infrastructure, procurement of hardware/software, spatial data and geospatial technology know how was a challenge.
- Geography/Fine Art Graduates/Post Graduates, Cartographers/ Artists were in all the district/divisional and HQ. offices but there was resistance and fear among the staff to adopt ICT/Geospatial technologies in the beginning.
- To overcome the resistance and fear of officials, a number of trainings on ICT/Geospatial technologies & on their applications were conducted.
- SPIDER & e-MANCHITRA portals were modified from time to time to accommodate the technological changes as well as changes in tables, parameters & formats as per demand and GoI guidelines.



# Conclusion

- Horizontal and vertical online data entry/updation and sharing of information have become possible by integrating SPIDER & e-MANCHITRA portals on 24X7 basis.
- Parameters, years, levels, tables, Maps and Charts have been standardized.
- Three way data visualization in the form of tables, maps and charts have become possible.
- Citizens, public representatives, administrators, planners, NGOs, etc. have been empowered in identifying the inter-village panchayat, inter-block, inter-district, inter-divisional and inter-regional disparities.
- Transparency in the system has also brought demand for developing, under developed areas.
- These portals are also helping in planning and decision making in panchayati raj institutions.
- Government is saving annually about Rs. 5 crore after implementation of these portals.
- Localization issues in Mau districts are under development.





Thank You

