

GEOMATICS FOR DIGITAL INDIA -Requisites for successful implementation of Geomatics in Digital India

GE  **MATICS FOR GE**  **SMART PUNJAB**



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**DIRECTOR
PUNJAB REMOTE SENSING CENTRE (PRSC)
LUDHIANA, INDIA**



- **A BRIEF ABOUT PRSC**
- **GEOMATICS Vs GIS**
- **GOVERNANCE Vs SMART GOVERNANCE**
- **APPROACH & APPLICATIONS**
- **GEOSMART PUNJAB – Towards Good Governance**
- **TANGIBLE BENEFITS**
- **DISCUSSION**

A brief about Punjab Remote Sensing Centre (PRSC)

- Established in 1987, an autonomous and nodal agency of the Govt. of Punjab for Applications of Remote Sensing, Geographic Information System (GIS), Global Positioning System(GPS) and allied technologies in the state
- Worked under the umbrella of National Natural Resource Management System (NNRMS), Govt. of India
- A Partner Institute (PI) of ISRO/DoS for countrywide mission mode project execution wrt Punjab State
- Multidisciplinary team of experienced, young and enthusiast scientists
- Comprising five divisions
 - Agriculture and crop modeling (ACM)
 - Forestry and Land Use (FLU)
 - Geology, Water Resource and Geo-Informatics (GWG)
 - Land Resource, Utilities and Infrastructure management (LRU&I)
 - Natural Resource and Environment (NRE)
- ➡ For more details please visit www.prsc.gov.in

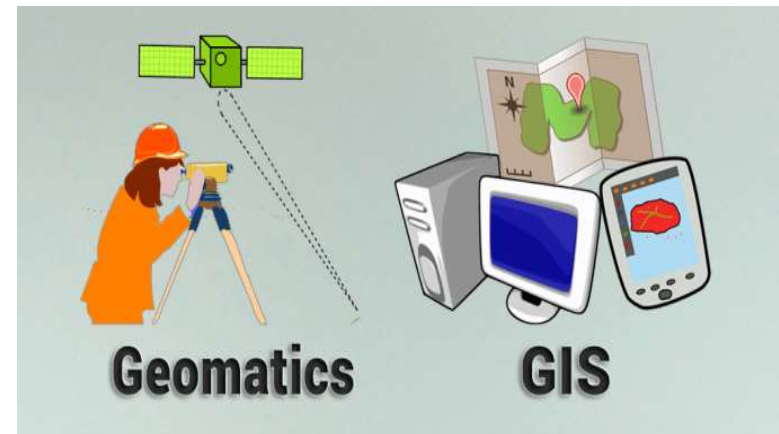
GEOMATICS Vs GEOGRAPHIC INFORMATION SYSTEM GIS

Roger Tomlinson - recognized importance of accurate and relevant data by creating the Canadian Land Inventory and the first **GIS**. A tool to respond to land planning and decision making

Michel Paradis - a every method and tool for geographic data acquisition. From photogrammetry to land surveying, **Geomatics** a scientific term in response to modern data acquisition techniques in these fields.

Roots of the definitions of **Geomatics** and **GIS**.
The definitions can evolve and encompass latest technological development

The term **Geomatics** was introduced in 1981 and **GIS** in 1968.

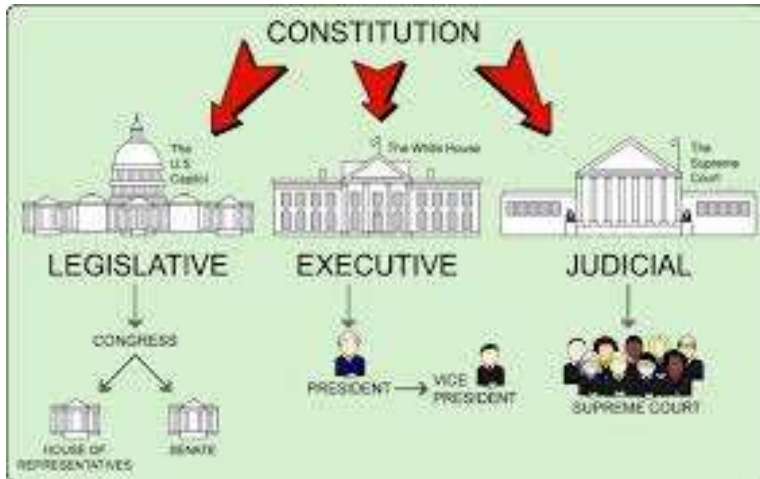


... both are progressing exponentially with new, exciting developments

Filed Surveys, aerial photographs satellite imaging, GPS, LIDAR, smart phones- UAVsCollecting, measuring, analyzing and computing for decision making and serving the cause meant for.....

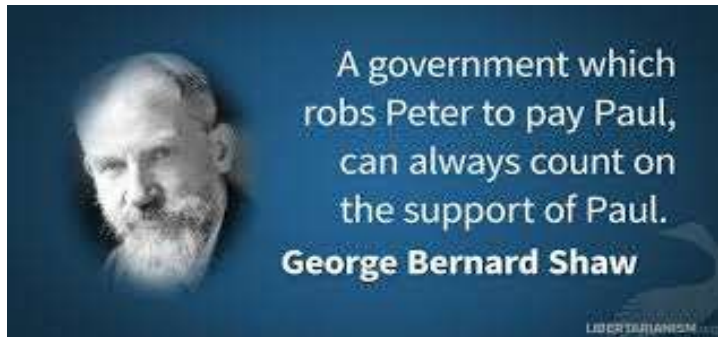
GOVERNANCE Vs SMART GOVERNANCE

Democratic system of Governance



GOVERNANCE

- Formed by vote bank of caste, colour, religion, region etc...
- Lack of transparency
- Plan with inadequate informed facts and figures
- With a objective to win election to rule
- Work for ruling not governing to serve

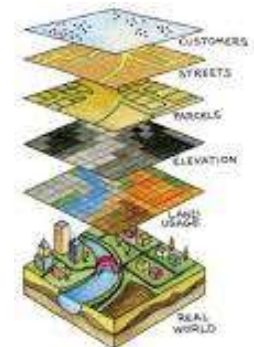
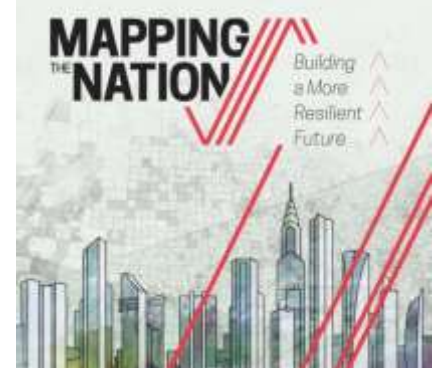


MOBOCRACY (The Tribune-29Feb16)

GOVERNANCE Vs SMART GOVERNANCE

SMART GOVERNANCE

- Elected on wisdom of voters and not by fear, favour or compulsion
- Transparent system
- Well informed, plan ahead with effective and efficient system
- Ensure to win with good governance
- Work for good governance to serve



APPROACH & APPLICATIONS

PPP- POWER PROJECTS PROPERTY



Elected
Head of
Govt

Public
Representatives



PUBLIC

APPROACH & APPLICATIONS

PPP - PEOPLE PRIORITIES POWER



Elected Head
of Govt

Public
Representatives



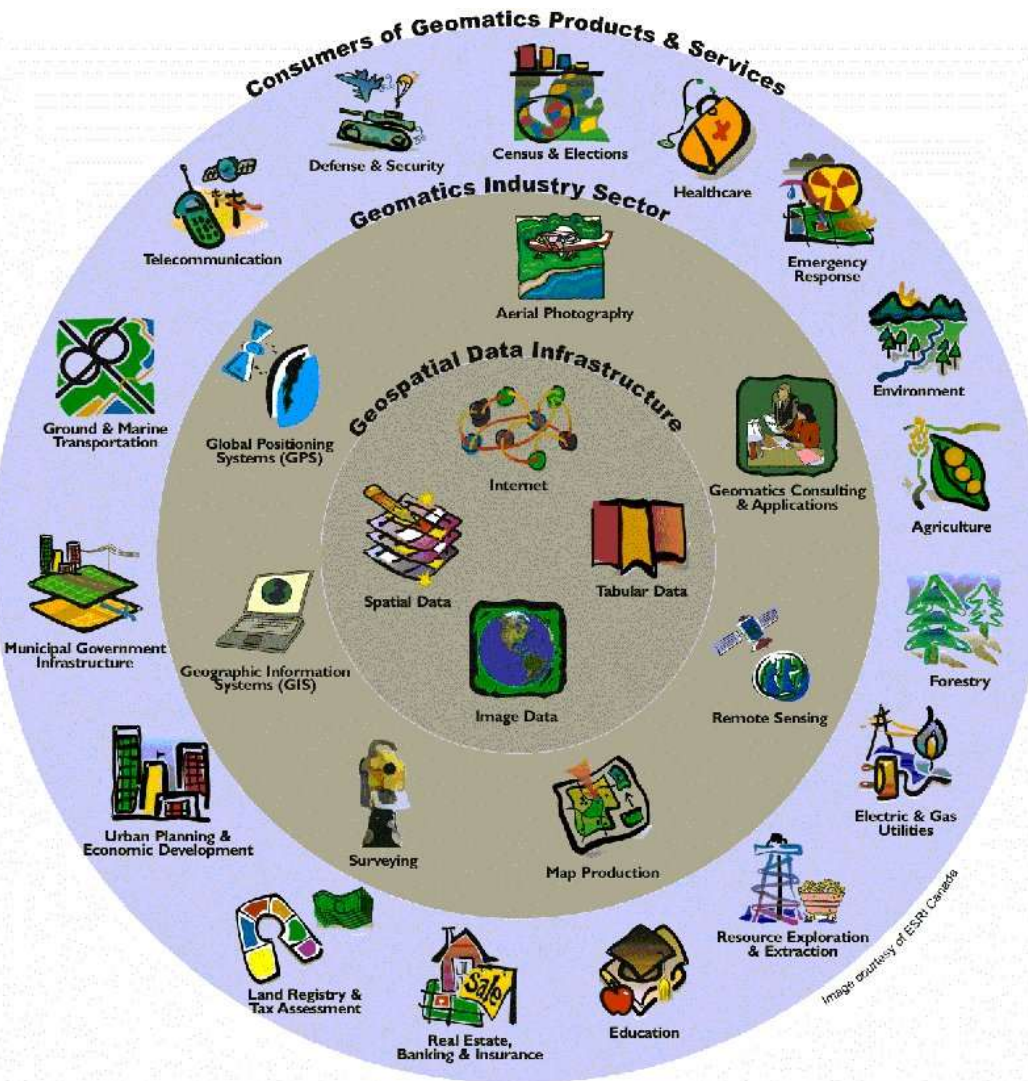
PUBLIC

BEST PRACTICES OF GOVERNANCE-

GEOMATICS - A way forward

GEOSMART – To see the change , development , well being and prosperity

BEST PRACTICES OF GOVERNANCE- GEOMATICS - A WAY FORWARD



Are government services prepared for the digital age?

ON THE POSITIVE SIDE: More services available online for

- Starting entrepreneurs: +7% points
- Unemployed & jobseekers: +4% points
- Students: +9% points

HOWEVER: use and user experience remain insufficient

- 47% of users interact with public authorities online
- Ease and speed of use remain unchanged for two years - at average rating of 6.3
- only 26% sit in online forms

3 challenges for government services to match rising customer expectations

1 Mobile-friendly

Only **1 in 4** public services in Europe (27%) is 'mobile-friendly', creating a smooth experience when visiting public websites on your mobile device.

UK leads the way: For government services, the mobile web is a winner, both from a **user** and a **cost** perspective.

2 Open & transparent

2 out of 5 websites (41%) are transparent about service process, duration and response times, thereby causing people to drop off.

Only **1 in 3 websites (35%)** informs visitors about their ability to participate in policy making processes.

3 Personalised & simplified

Proactive information provided about personal data held by the governments (in 33 countries):

- Entrepreneurs: 6
- Students: 10
- Unemployed/job-seekers: 4

45% of cases, online forms pre-filled with personal data are used.

Once-only registration simplifies registration and customises services for multiple use by public authorities - however:

- In only **4%** of cases, services are proactively delivered to the user.

APPROACH & APPLICATIONS

Action
Changes
Things



GEOSMART PUNJAB - Towards Good Governance

- Natural Resource
- Public Utility & Facility



□ LUDHIANA – SMART CITY

Application Areas of g- Governance in Punjab

- GEOSAMRT **Punjab** - Action Plan
- **User departments covered:**
 - Department of Agriculture
 - Department of Animal Husbandry
 - Department of School Education
 - Department of Governance Reforms
 - Department of Health & Family Welfare
 - Department of Higher Education
 - Department of Irrigation
 - Department of Local Government
 - Department of Planning
 - Department of Rural Development & Panchayats
 - Department of Science, Technology & Environment
 - Department of Technical education & Industrial Training
 - Department of Tourism & Cultural Affairs

Application Areas of g-Governance

Public Utility & Facility

- Animal Husbandry
- Cadastral Mapping
- Census GIS
- Education : School, Technical Education and College
- Health
- Irrigation : Water Resources and Canal
- MGNREGA
- MPLAD
- Municipal (Mapping of property using Remote Sensing & GIS)
- SUWIDHA GIS
- Tourism

Natural Resource

- Agriculture - Crop Soil water
- Punjab Carbon Accounting System
- Wetland GIS

Conceptual Framework for Application of g-Governance

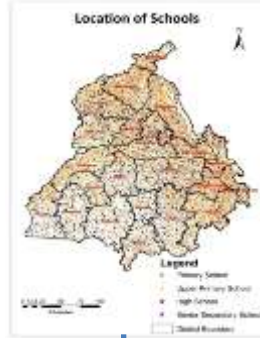
Census GIS



Suwidha GIS



Education GIS



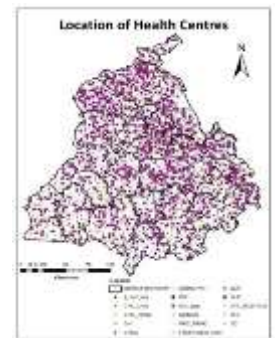
Animal Husbandry GIS



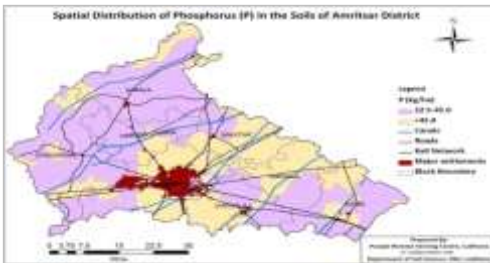
Tourism GIS



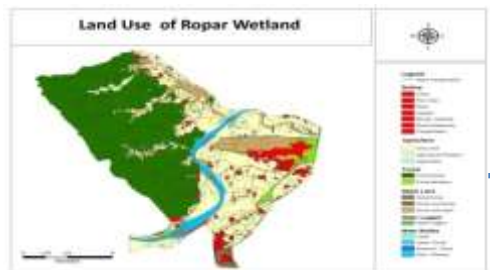
Health GIS



Agriculture GIS



Wetland GIS



Web GIS



Users



Cadastral Mapping



Irrigation GIS

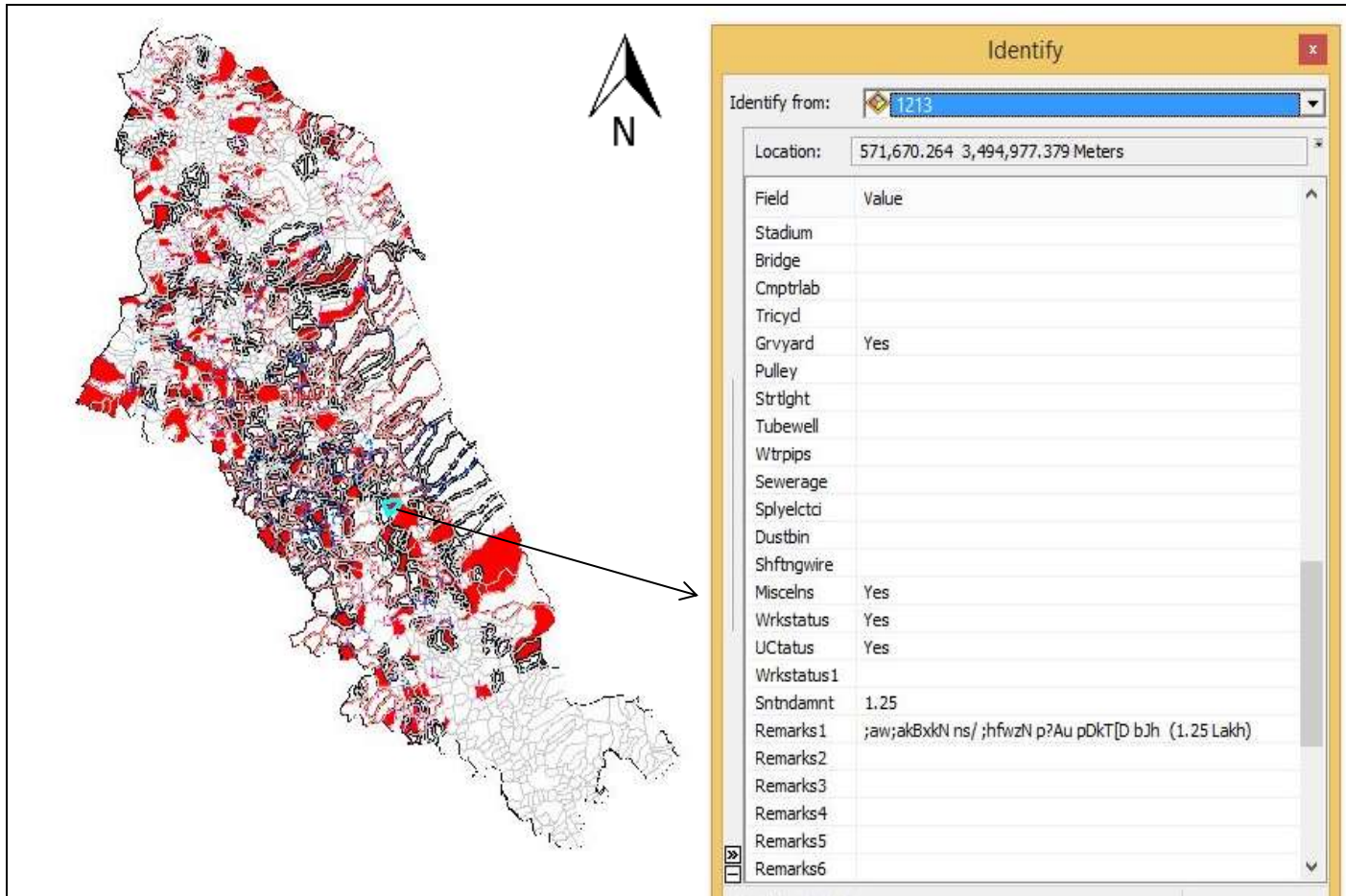


MPLAD GIS



MPLAD GIS

(Member of Parliament Local Area Development Scheme)



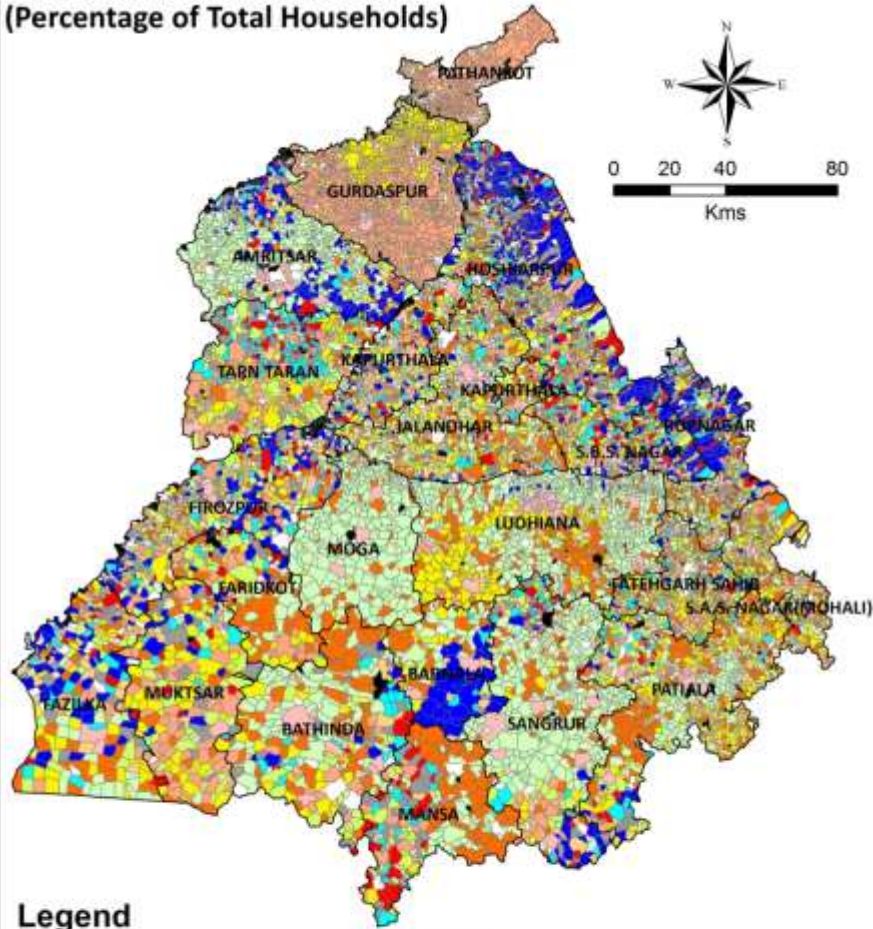
Each MP has the choice to suggest to the District Collector for, works to the tune of Rs.5 Crores per annum to be taken up in constituency.

Development of SDSS – details of work

- funds released for particular work
- duration

Sanitation GIS

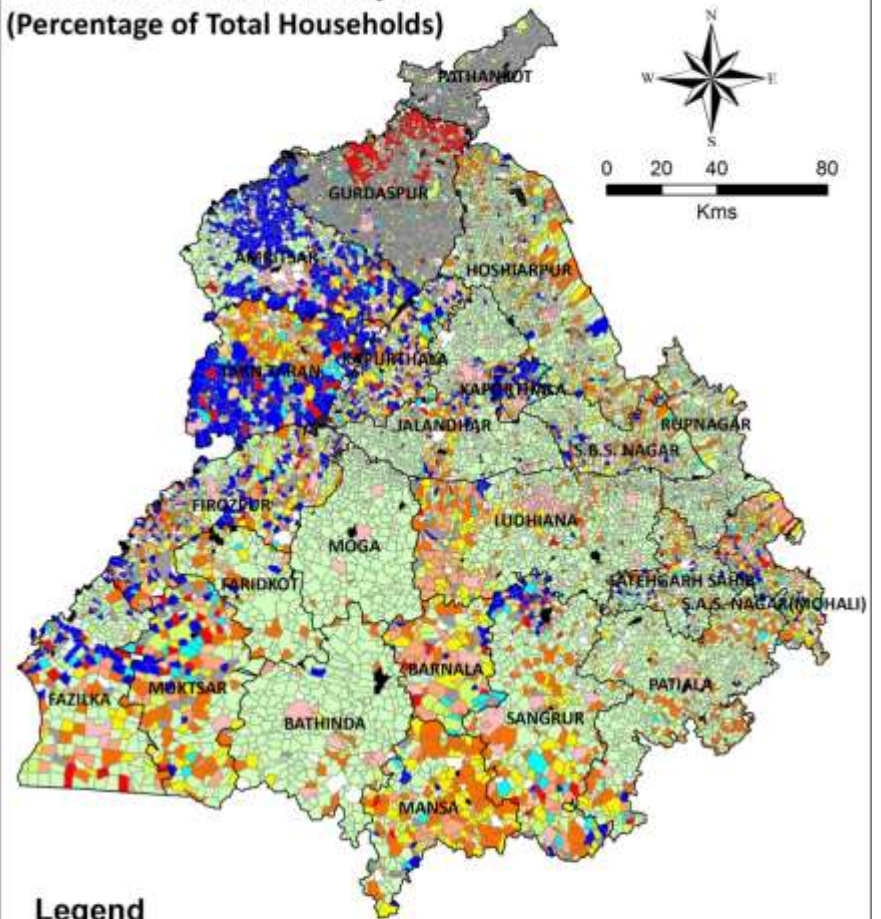
**APL with No Toilets in Punjab
(Percentage of Total Households)**



Legend



**BPL with No Toilets in Punjab
(Percentage of Total Households)**

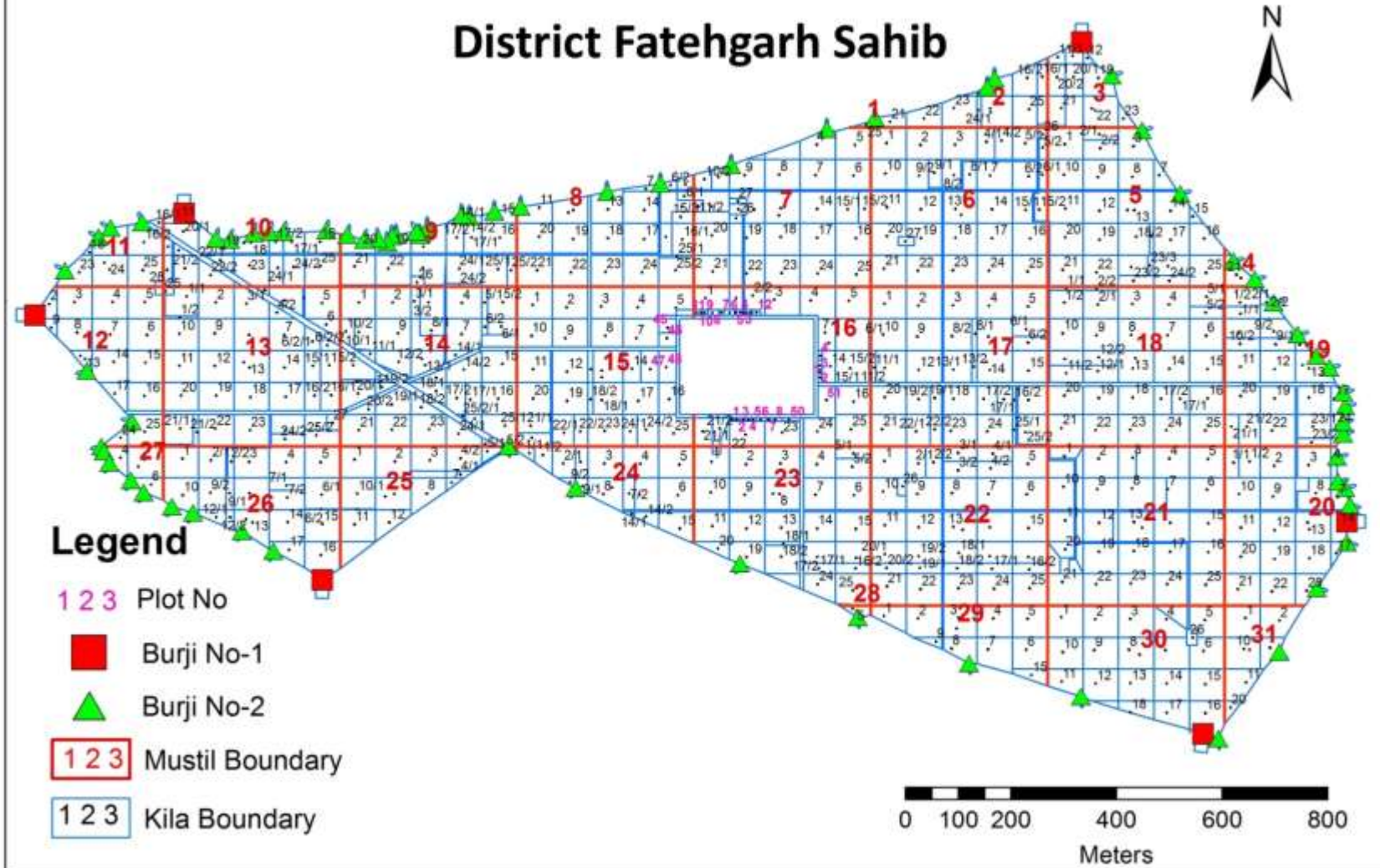


Legend



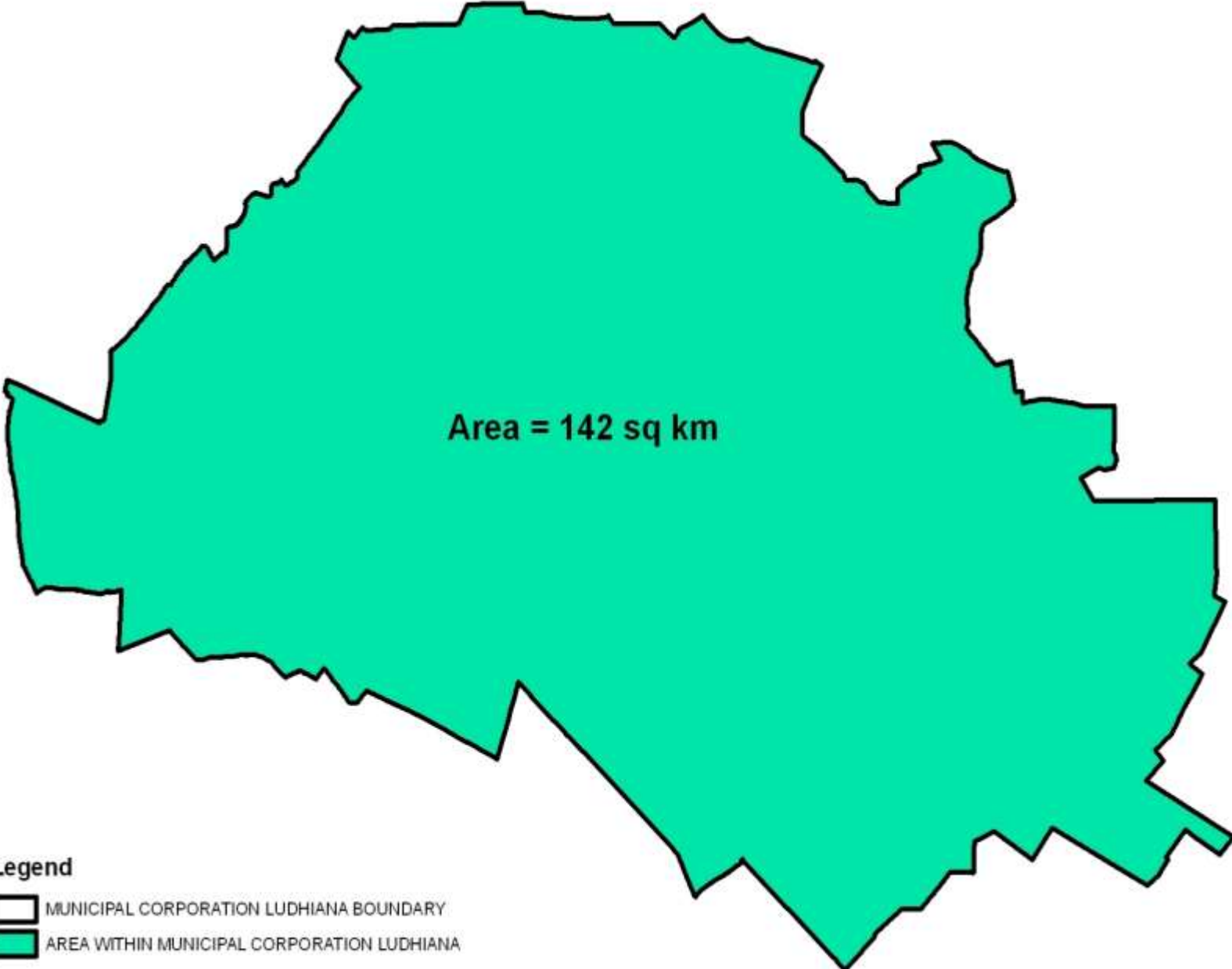
Cadastral Mapping

Cadastral Mapping of Rashidpura Village District Fatehgarh Sahib





Using Worldview-2 Satellite

MUNICIPAL CORPORATION LUDHIANA (SELECTED UNDER SMART CITY SCHEME OF GOI



Legend

-  MUNICIPAL CORPORATION LUDHIANA BOUNDARY
-  AREA WITHIN MUNICIPAL CORPORATION LUDHIANA

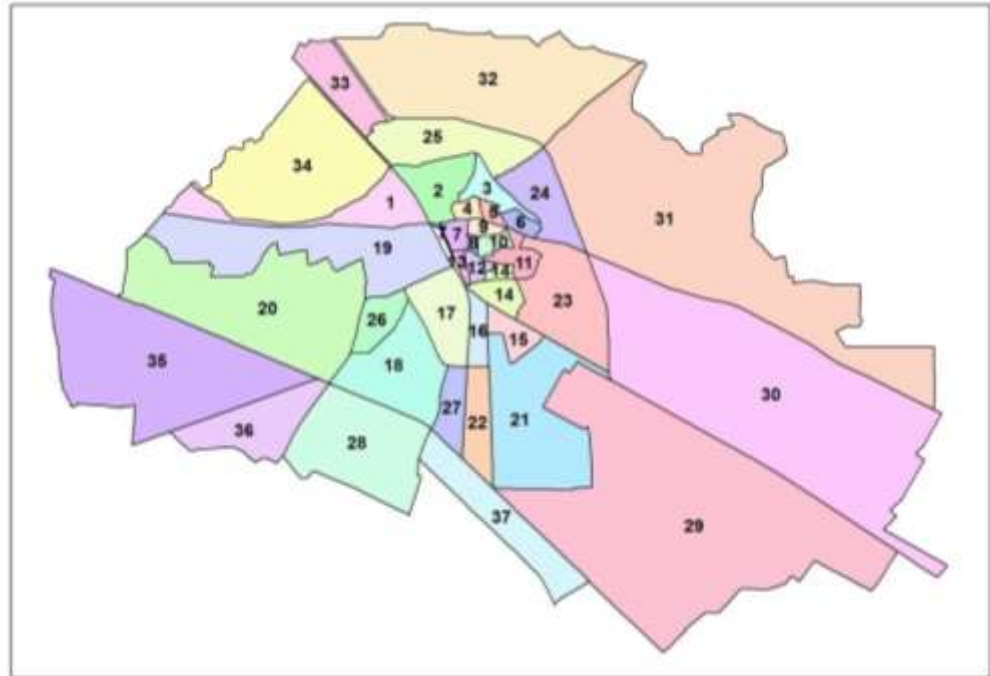
ADMINISTRATIVE UNITS

ZONE BOUNDARY

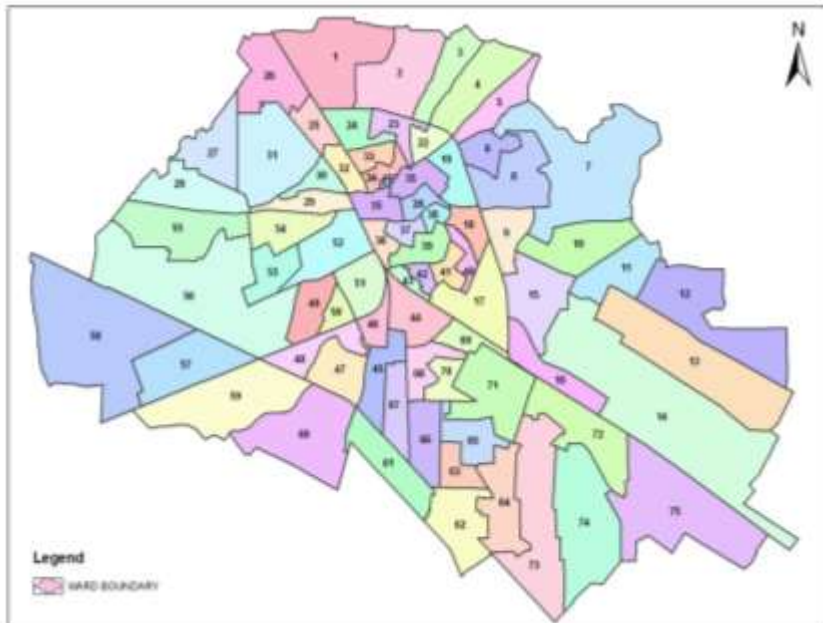
ZONE BOUNDARY



BLOCK BOUNDARY



WARD BOUNDARY



- Layers
- ANNOTATION
- MCL_LU_LC
 - <all other values>
- WARD_BOUNDARY
- BLOCK_27_B
- ZONE_BOUND
- MC_BOUND
- MCL_LU_LC
- New Group L



C:\Ludhiana_Karam\BLOCK27\video\04-027-XXXXX-01877-XXX.JPG

Display Source Select

640 x 480 x 24 BPP 2054/2227 100 % 23.03 KB / 900.04 KB 22-08-2013 / 14:52:07

Drawing

1906994.51 11212121.465 Feet 8.68 13.19 Inches

PERFORMA FOR DATA COLLECTION

MUNICIPAL CORPORATION, LUDHIANA PROPERTY TAX SURVEY PROFORMA (Information required U/s 108 of PMC ACT, 1976)

1. Block No. _____
(Serial No. of the Block fixed by MCL)
2. Property I.D No. _____
(Serial No. in the Block generated by P.R.S.C)
3. U.I.D No. _____
(Unique No. for each property in the city generated by P.R.S.C)
4. Owner Name _____ Son/wife/daughter of _____
5. Plot Size _____ Sq. yds. Actual Plot Size at site _____ Sy. Yds
(Generated by P.R.S.C) (To be given by Surveyor)
6. Property Address:-
House No. _____ Street No. _____
Name of the Mohalla _____
7. Water/Sewerage ID No. _____
- Status: or (a) Water (b) Sewerage (c) Disposal
8. Trade License (a) Yes (b) No
Nature of Work _____

9. Correspondence Address:-

House Number	Street No.
Mohalla/Area	
Telephone No.	Mobile No.

10. Year of Construction _____
(Date of sanctioned plan, Electricity Bill, Date of Water Connection or any other documents)
11. Type of Structure
- A) Pucca (cemented bricks walled & load bearing roof) _____
- B) Semi Pucca (cemented bricks walled or non-cemented bricks walled but non load bearing roof); _____
- C) Kacha (Non-Cemented or non-bricks walled and non load bearing roof.) _____

12. Use of Property Total Covered Area _____ (Sq. Feet)
(1 Sq. Yds = 9 Sq. Feet)

		Basement	Ground Floor	First Floor	Second Floor	Third Floor	And Others
Residential	Independent House	Self					
		Rental					
	Flats	Self					
		Rental					
Government, Institutions including Educational and Health Institutions;		Self					
		Rental					
Private Institutions, including Hospital, Nursing Homes, Educational & Industrial;		Self					
		Rental					
Commercial buildings including Restaurants and Hotels upto two stars;		Self					
		Rental					
Malls including Hotels with three and four stars and Marriage Palaces and Resorts;		Self					
		Rental					
Hotel with Five Stars and above		Self					
		Rental					
Other Buildings (Religious purpose, cremation ground, gaushala, stray animal care center, historical and heritage building (notified by state, center govt. or UNESCO) charitable institutions (as exempted under I.T Act, 1961), Building & Land used by the Municipal Corporation, lands used for religious functions & Festival).							

Note: Refusal to disclose the information attracts penal action u/s 108 (3) of PMC Act, 1976.

Name of Surveyor _____ Signature _____

Name of Supervisor _____ Signature _____

Date: _____

I hereby declare that the above furnished information is true to the best of my knowledge and belief

(Sign of Respondent)

Name.....

Contact No.....

BLOCK 27



MUNICIPAL CORPORATION LUBIANA
 ZONE D
 BLOCK 27

LEGEND

ADMINISTRATIVE BOUNDARIES

- Municipality Administrative Boundary
- District Boundary
- Ward Boundary

RESIDENTIAL

- Residential
- Single-Family Detached
- Residential Medium Density

COMMERCIAL

- Office, Professional, Executive Office
- Retail, Wholesale, Service, Restaurant
- Office, Professional, Executive Office

INDUSTRIAL

- Industrial

NOT BUILT UP

- Vacant Land

PUBLIC & SEMI-PUBLIC

- Public, Semi-Public
- School
- Public, Semi-Public
- Public, Semi-Public
- Public, Semi-Public

GOVERNMENTAL

- Government
- Government

RECREATIONAL

- Park
- Park

UTILITIES & SERVICES

- Utility
- Utility
- Utility
- Utility
- Utility
- Utility
- Utility
- Utility

TRAFFIC AND TRANSPORTATION

- Road
- Road
- Road
- Road
- Road
- Road
- Road

RURAL AND AGRICULTURAL

- Rural
- Rural

WATER BODIES

- Water
- Water

Map 1, 2021

Prepared by:
 LUBIANA MUNICIPAL CORPORATION
 PLANNING AND ZONING DEPARTMENT
 1000 W. 10th Street, Lubiana, PA 15066
 Tel: 724-294-6100 Fax: 724-294-6101 Email: info@lubiana.com

DATA HOSTED ON BHUVAN

bhuvan-noeda.nrsc.gov.in/projects/municipal/municipal.php

bhuvan Beta
Indian Earth Observation Visualisation

Ludhiana Municipal GIS

Welcome Bhuvanite Amenity Property Tax Performa

Municipal GIS for **Ludhiana, Punjab**

[Services](#) [Information](#) [Downloads](#)
(By Municipal Corporation Ludhiana)

Know Your UID

Search by Ward

Zone

Block

Ward

Use ⓘ to get UID on click

Search by Locality

Enter Locality name

Search by House No.

Enter House No. (Eg.146-A)

[Legend](#) [Contact Us](#) [Disclaimer](#) [Feedback](#)


Map **Satellite** Hybrid

111

DATA HOSTED ON BHUVAN

← → ↻ 🏠 bhuvan-staging.nrsc.gov.in/events/municipal/municipal.php

📄 Apps 📧 Gmail 📧 NICEmail Version 7 📧 Rediffmail 📧 Yahoo! 📧 Entry Status Laborat... 📧 NRDWP ReportsHo... 📧 www.mdws.gov.in 📧 Financial Year wise S... 📄 IJCST 📄 e-Filing Home Page 📄 DGSD_Items

 **Ludhiana Municipal GIS**
Updated Data for Block-27 of Zone – D Added

Welcome Bhuvanite Amenity Downloads Tools

Municipal GIS for Ludhiana, Punjab ▾

[Services](#) [Information](#) [Downloads](#)
(By Municipal Corporation Ludhiana)

Know Your UID

Search by Ward
Zone D ▾
Block 27 ▾
Ward 45 ▾

[Legend](#)


Use ⓘ to get UID on click

Search by Locality
Enter Locality name

Search by House No.
Enter House No. (Eg.146-A)

[ContactUs](#) [Disclaimer](#) [Feedback](#)

Map **Satellite** **Hybrid**



Zone No:	ZONE-D
Block No:	027
Ward No:	45
UID No:	04-027-XXXXX-00584-XXX
House No:	NA

H.NO-41
krishan Senior Sec. School
H.NO-67
H.NO-653

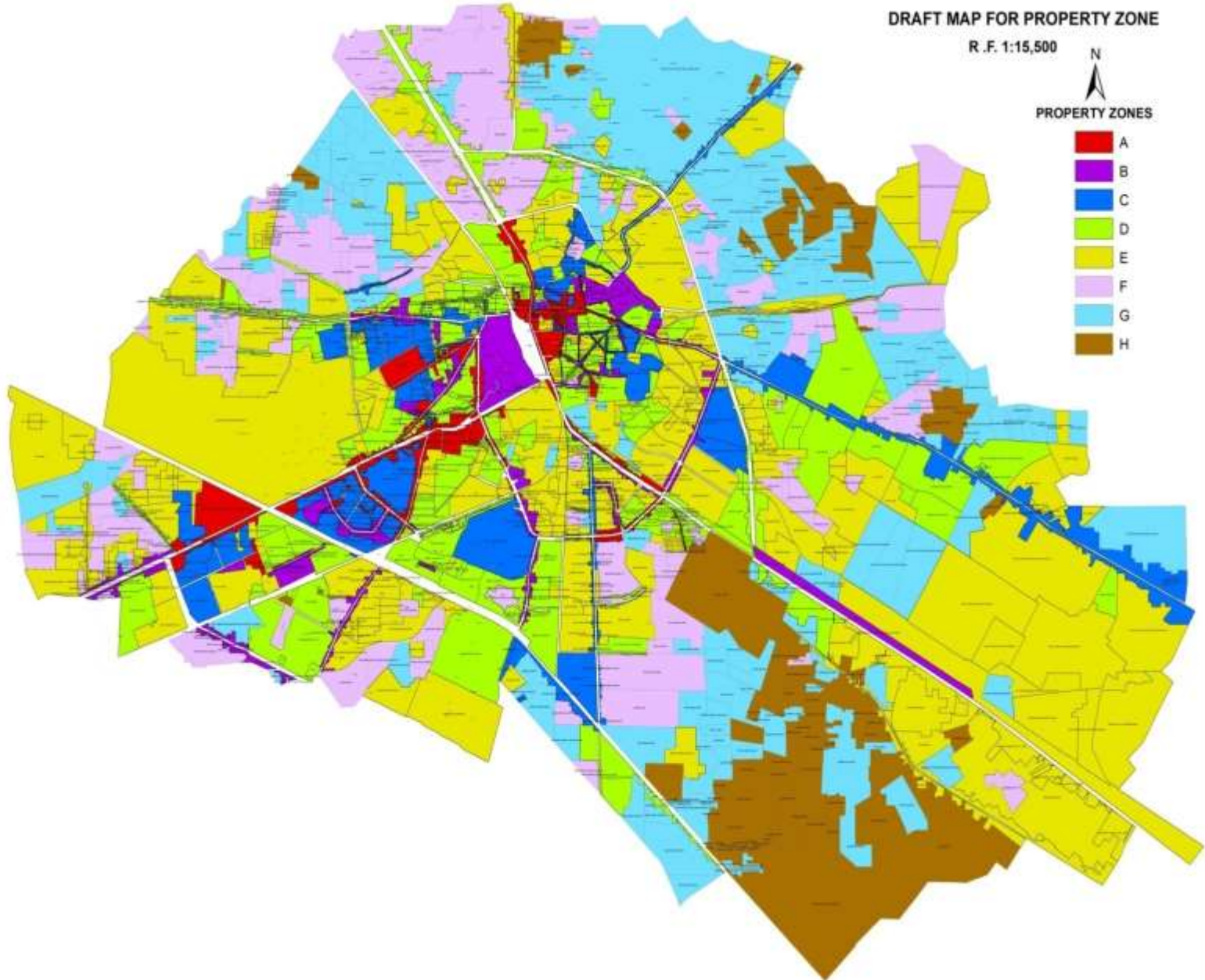
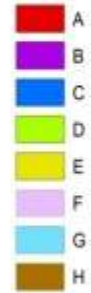
PROPERTY ZONES

DRAFT MAP FOR PROPERTY ZONE

R. F. 1:15,500



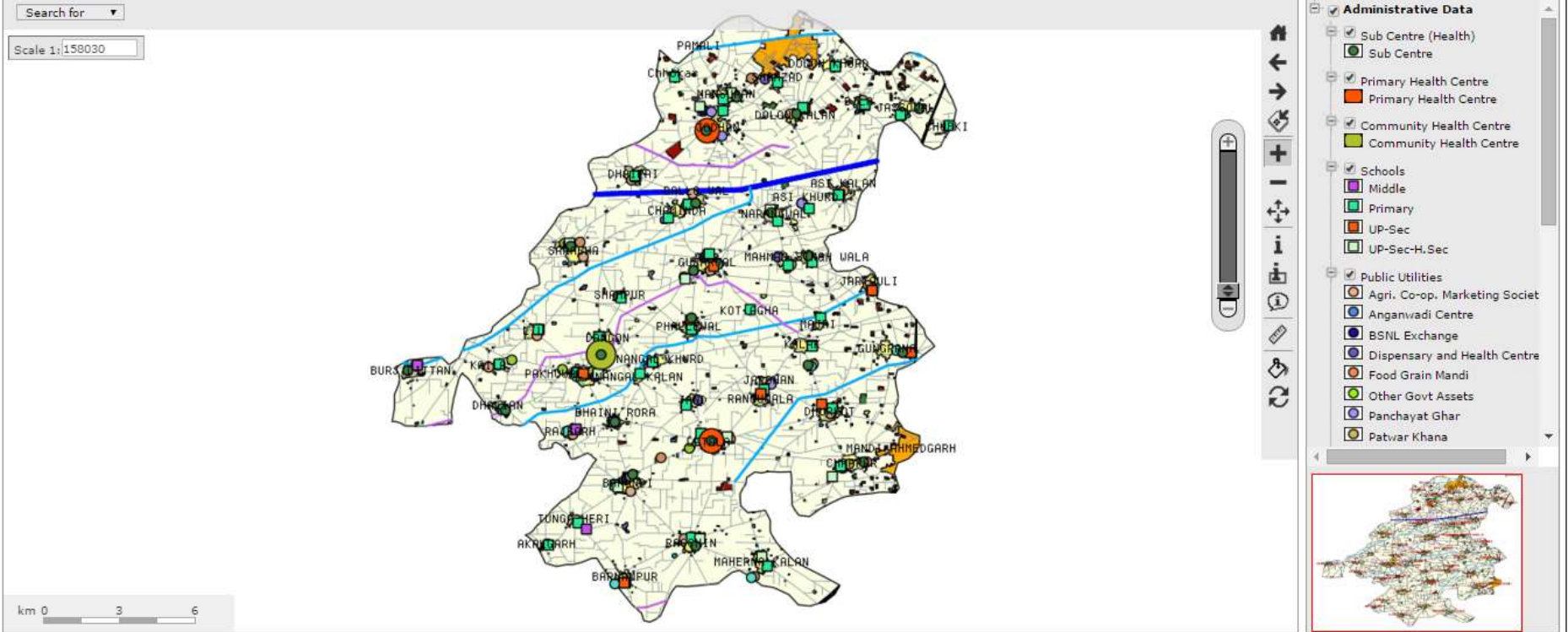
PROPERTY ZONES



MICRO LEVEL PLANNING: Pakhowal Block

Pakhowal Web GIS

Print Download

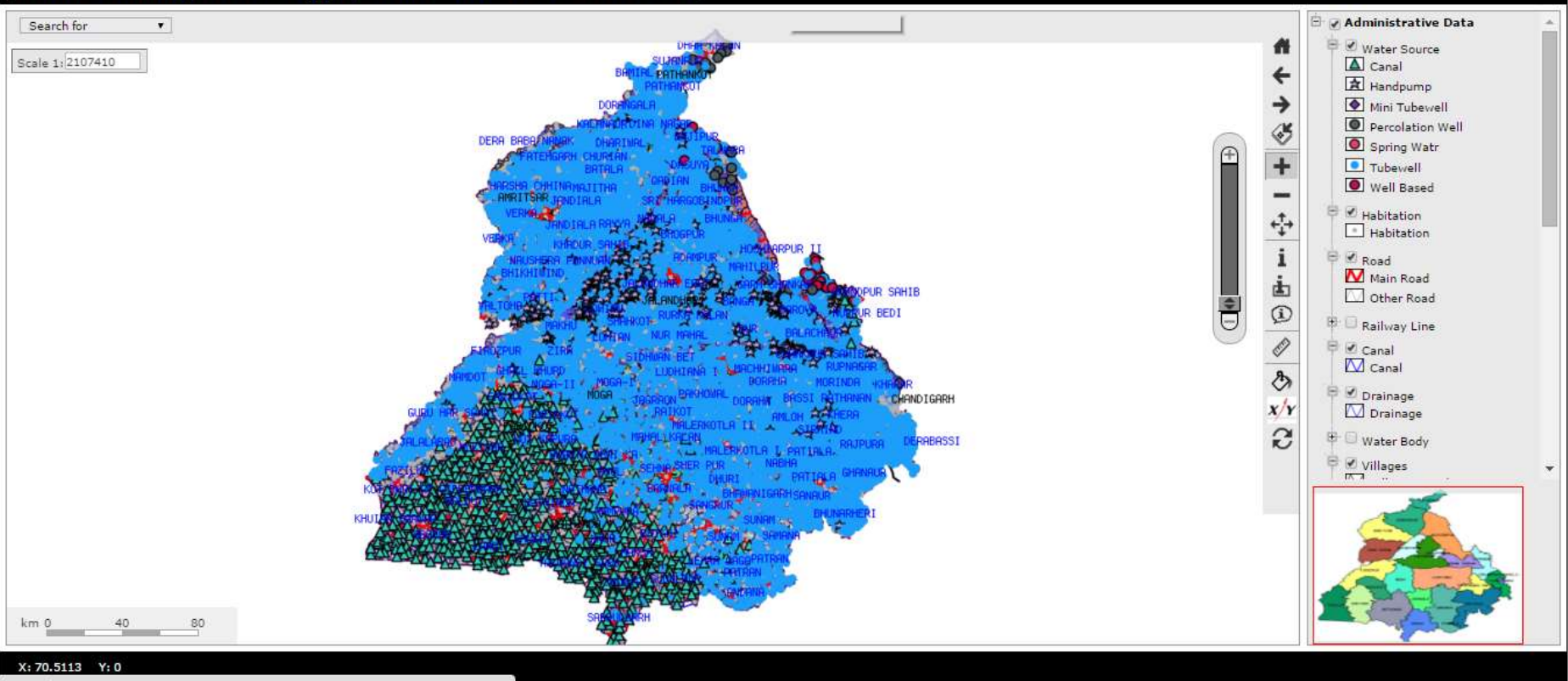


X: 0 Y: 0

Rural Drinking Water Supply Sources

Rural Drinking Water Supply Sources of DWSS-Web GIS

Print Download



Rural Drinking Water Supply Sources of DWSS-Web GIS

Search for Search

Scale 1:237570

- AMRITSAR
- BARNALA
- BATHINDA
- CHANDIGARH
- FARIDKOT
- FATEHGARH SAHIB
- FAZILKA
- FIROZPUR
- GURDASPUR
- HOSHIARPUR
- JALANDHAR
- KAPURTHALA
- LUDHIANA
- MANSA
- MOGA
- MUKTSAR
- NAWAN SHEHAR
- PATHANKOT
- PATIALA

Administrative Data

- Water Source
 - Canal
 - Handpump
 - Mini Tubewell
 - Percolation Well
 - Spring Watr
 - Tubewell
 - Well Based
- Habitation
 - Habitation
- Road
 - Main Road
 - Other Road
- Railway Line
- Canal
 - Canal
- Drainage
 - Drainage
- Water Body
- Villages

Result

Layer: Water Source

@	Village Name	Source	Date Of Commisioning	Program	Scheme Type	No. of Villages	PC_FC_NC	TW Size	TW Depth(m)	Leng
	Lohar Majra Khurd	Tubewell	October-2010	NRDIWP SWAP	SVS	1	FC	250x150mm	115.40	1

Layer: Habitation

@	Settlement Name
	Lohar Majra Khurd

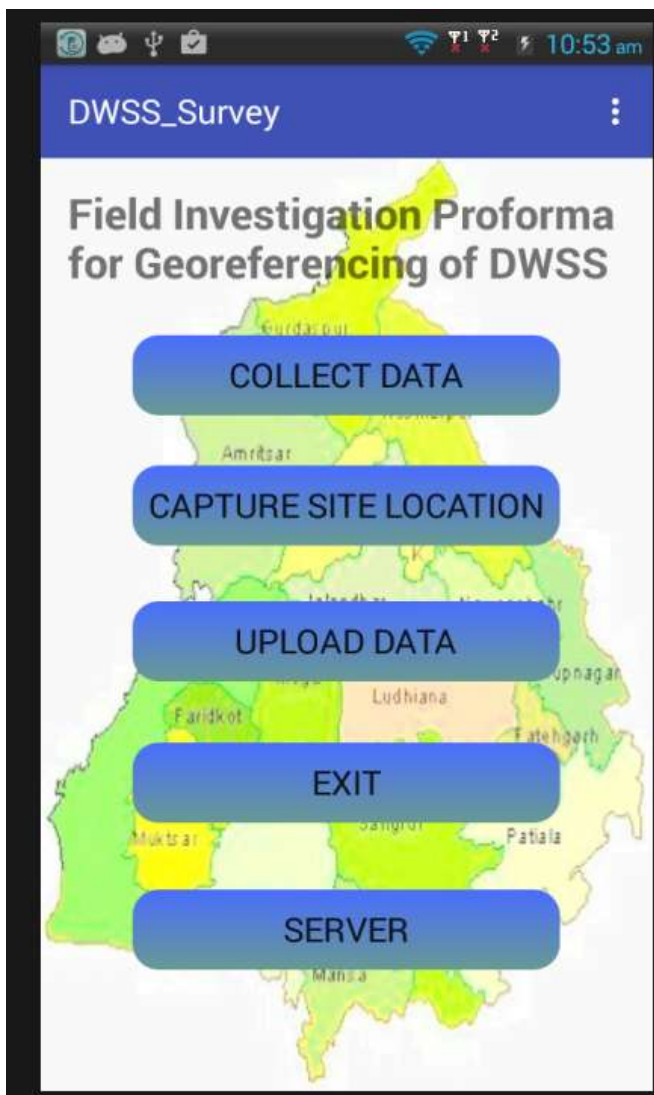
Layer: Road

@	Category
	Other Road
	Other Road
	Other Road
	Other Road
	Other Road
	Other Road
	Other Road
	Other Road

X: 76.0213 Y: 30.939



Geomatics Applications - Real Time Mapping and Monitoring system



Field Investigation Proforma for Georeferencing of Water Sources of DWSS

Name of Scheme _____

District _____

Block _____

Location of Scheme

30.9129102 _____

75.8119787 _____

Source

TubeWell Canal HandPump

Sample No. _____

Number of Villages Covered _____

Name of Villages Covered _____

Commissioning Date of original Scheme

2014 Nov 08

LATITUDE
LONGITUDE
(GPS)

Machinery Details

HP _____

Head _____


Pump Discharge _____

Canal Based

Name of Canal _____

Availability of raw water in a year _____

Remarks _____

Enter Site Location 

Detail of PRSC Officer

Name of Officer _____

Designation _____

Detail of Person in Field

Name of Person _____

Designation _____

Submit Cancel

PAU



Exit



DELETE



DELETE



Message:

CANCEL

UPLOAD

PERVIEW

ID 1

Name_Scheme PAU Farm Power

District Ludhiana

Block Ludhiana 1

Lat 30.9129221

Long 75.8119707

Source TubeWell

Sample PAU_IRG_TWN1

Villages_Number

Villages_Name

Date 20/9/2015

Programme

type1 Augmented

Message:

CANCEL

UPLOAD

PERVIEW

emarks

mage PAU

erson_name_officer Palki

erson_desg_officer JRF

erson_name_field Ramchander

Ranch Andre Ramchander Ranch and et

q w e r t y u i o p

a s d f g h j k l

z x c v b n m

?123 , . ←

Field Investigation Proforma for Georeferencing of DWSS

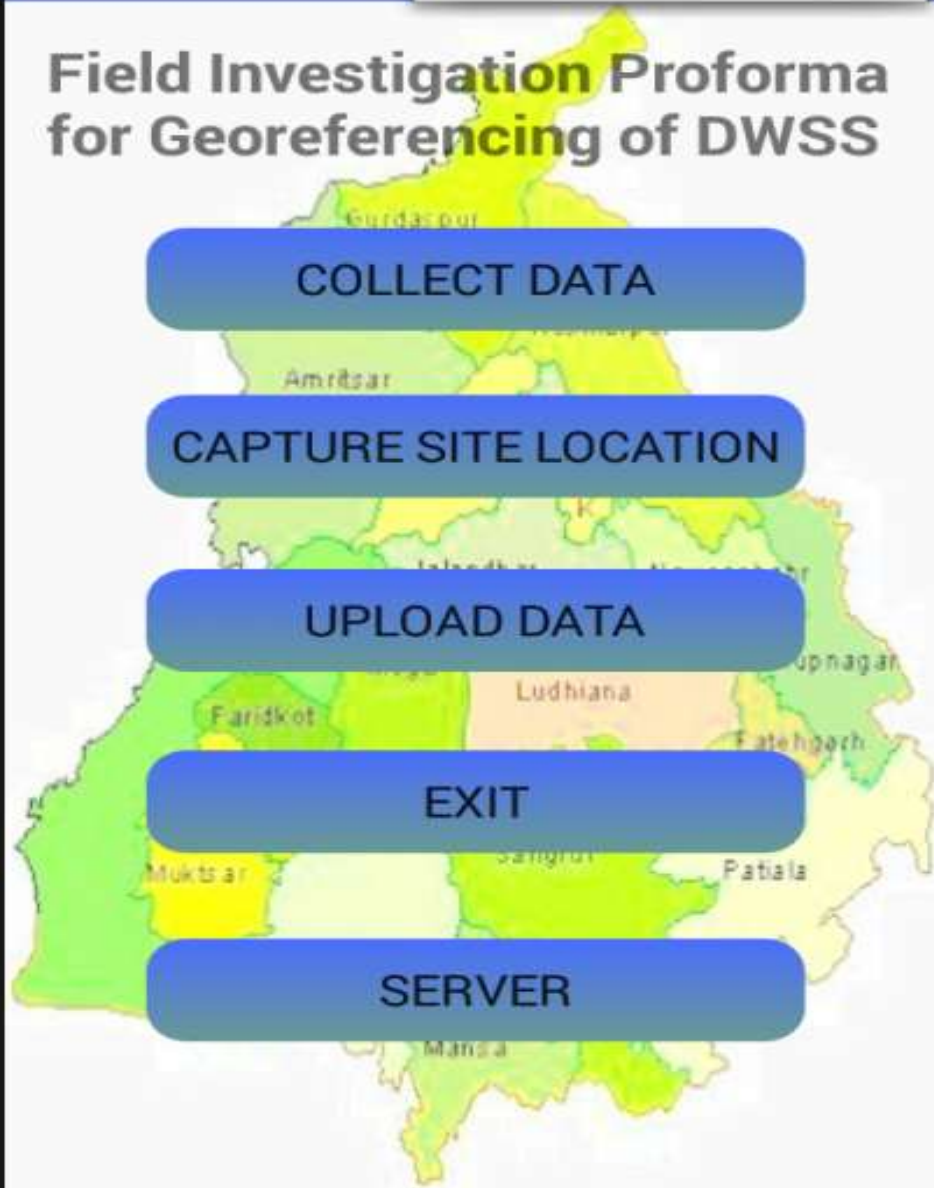
COLLECT DATA

CAPTURE SITE LOCATION

UPLOAD DATA

EXIT

SERVER



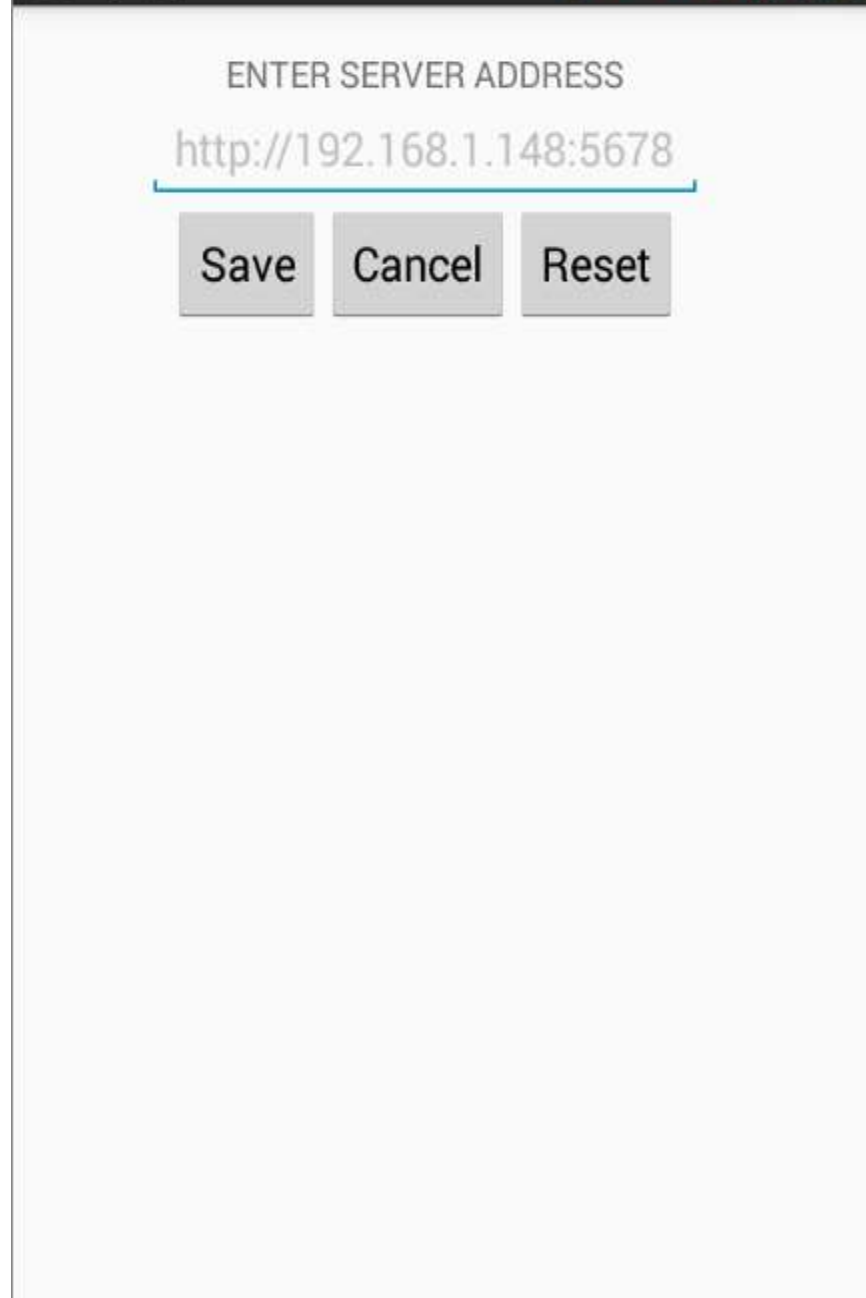
ENTER SERVER ADDRESS

http://192.168.1.148:5678

Save

Cancel

Reset





10:53 am

DWSS_Survey



Field Investigation Proforma for Georeferencing of DWSS

COLLECT DATA

CAPTURE SITE LOCATION

UPLOAD DATA

EXIT

SERVER



2:13 pm

Message:

UPLOAD

SUCCESS

CANCEL

UPLOAD

PERVIEW



Uploading DATABASE and Site
Images

Name	Date	Type	Size	Tags
PAUTWN1	23-11-2015 AM 11:24	File folder		
PAUTWN2	23-11-2015 AM 11:24	File folder		
PAUTWN3	23-11-2015 AM 11:24	File folder		
PAUTWN4	23-11-2015 AM 11:24	File folder		
PAUTWN5	23-11-2015 AM 11:24	File folder		
PAUTWN6	23-11-2015 AM 11:24	File folder		
PAUTWN7	23-11-2015 AM 11:24	File folder		
PAUTWN8	23-11-2015 AM 11:24	File folder		
PAUTWN9	23-11-2015 AM 11:24	File folder		
PAUTWN10	23-11-2015 AM 11:24	File folder		
PAUTWN11	23-11-2015 AM 11:24	File folder		
PAUTWN12	23-11-2015 AM 11:24	File folder		

- ★ Favorites
 - Desktop
 - Downloads
 - Recent Places
 - Creative Cloud Files
- Libraries
 - Documents
 - Music
 - Pictures
 - Videos
- Computer
 - OS (C:)
 - HP_RECOVERY (D:)
 - HTC Desire 516 dual
- Network



Table: DWSS_SURVEY

New Record

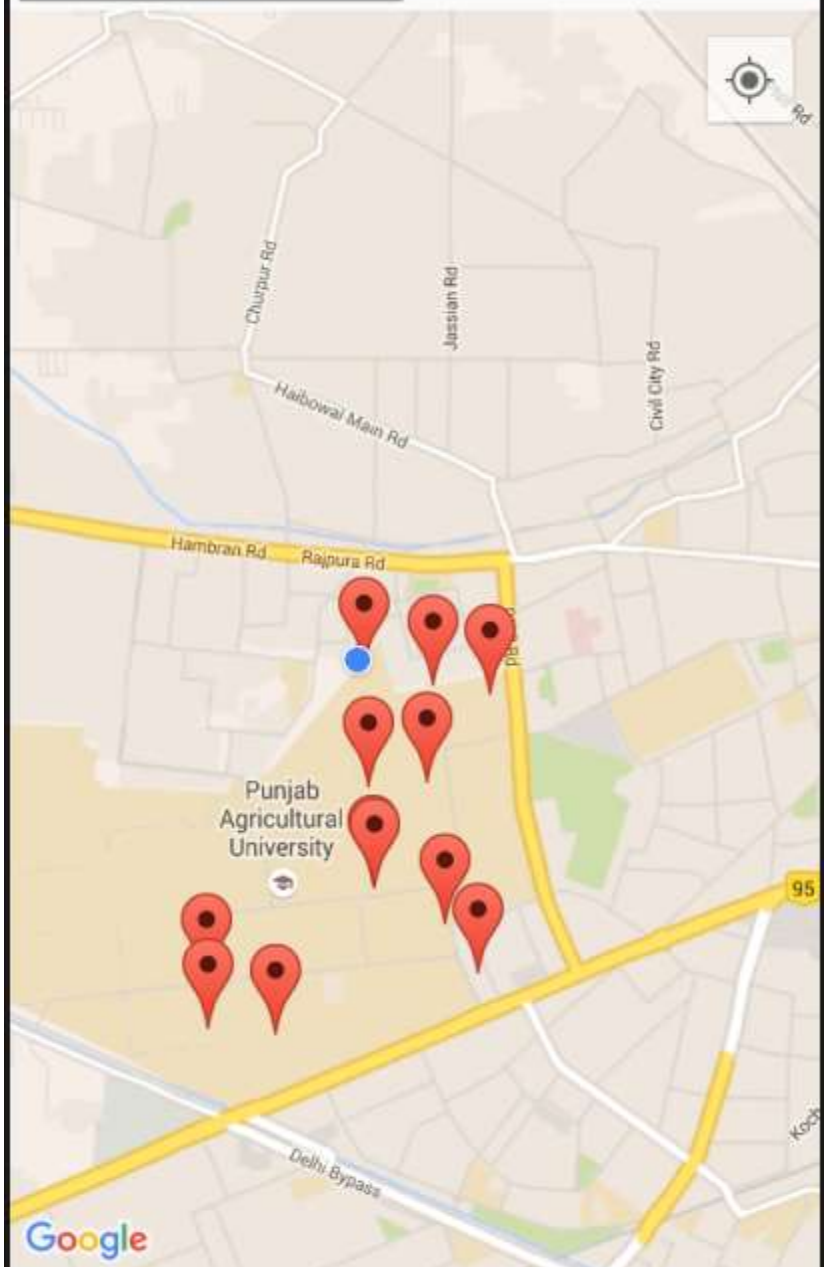
Delete Record

	ID	Name_Scheme	District	Block	Lat	Long	Source	Sample	Villages_Num
	Fil...	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
1	10	PAU oil seeds	Ludhiana	Ludhiana	30.89650608	75.80833571	TubeWell	PAU_IRG_TWN10	
2	11	PAU WATER SUPPLY8	Ludhiana	Ludhiana	30.89857482	75.80498064	TubeWell	PAU_IRG_TWN11	
3	3	PAU WATER SUPPLY	Ludhiana	Ludhiana1	30.90255779	75.81307412	TubeWell	PAU_IRG_TWN3	
4	4	PAU WATER SUPPLY	Ludhiana	Ludhiana1	30.90266997	75.8130303	TubeWell	PAU_IRG_TWN4	
5	8	PAU TEACHER HOME	Ludhiana	Ludhiana	30.90106134	75.81648207	TubeWell	PAU_IRG_TWN8	
6	6	PAU SOIL AND WATER	Ludhiana	Ludhiana	30.91102432	75.81591838	TubeWell	PAU_IRG_TWN6	
7	9	PAU NURSERY	Ludhiana	Ludhiana	30.89900392	75.81808395	TubeWell	PAU_IRG_TWN9	
8	12	PAU NEAR VENTER DEPARTMENT	Ludhiana	Ludhiana	30.89673387	75.80501282	TubeWell	PAU_IRG_TWN12	
9	5	PAU HOSTEL NO 10	Ludhiana	Ludhiana	30.90695303	75.81565789	TubeWell	PAU_DWSS_TW...	
10	2	PAU Forestry department	Ludhiana	Ludhiana	30.90676863	75.81276247	TubeWell	PAU_IRG_TWN2	
11	1	PAU Farm power	Ludhiana	Ludhiana1	30.91175144	75.81254494	TubeWell	PAU_IRG_TWN1	
12	7	PAU FARM POWER MACHINERY	Ludhiana	Ludhiana	30.91068254	75.81864833	TubeWell	PAU_IRG_TWN7	

SHOW LOCATIONS



SHOW LOCATIONS



Automation of Sewa Kendra Application

SewaKendras [Compatibility Mode] - Microsoft Excel

Sr. No	District	Identified Sewa Kendra Name	Urban/Rural	Type of Sewa Kendra	Street/Locality	Village	Tehsil	Block	Pin Co
31	Amritsar	Suwidha Centre, Attari	Urban	Type II			Amritsar-II		
32	Amritsar	Suwidha Centre, Lopoke	Urban	Type II			Ajnala		
33	Amritsar	Suwidha Centre, Majitha	Urban	Type II			Amritsar-II		
34	Amritsar	Suwidha Centre, Tarsikka	Urban	Type II			Baba Bakala		
35	Amritsar	Ajnala	Rural	Type II	Back side of Nagar Panchayat Ajnala Office	Ajnala	Ajnala	143102	Ajnala
36	Amritsar	Ramdass	Rural	Type II	Govt Elementry School Ramdas, Ward No. 2	Ramdass	Ajnala	143603	Ramdass
37	Amritsar	Market Committee Rayya Office	Rural	Type II			Baba Bakala		
38	Amritsar	ULB Office, Rayya	Rural	Type II			Baba Bakala		
40	Amritsar	BDPO Office, Rayya	Rural	Type II			Baba Bakala		
41	Amritsar	Suwidha Centre, Rajasansi	Rural	Type II	Weaver Complex, Ward no 7	Ajnala	Harsha Chhina	143102	Rajasansi
42	Amritsar	Suwidha Centre, Rajasansi	Rural	Type II	MPHC Ward No 3, Rajasansi	Ajnala	Harsha Chhina	143102	Rajasansi
43	Amritsar	Sohian Kalan	Rural	Type III			Majitha		
44	Amritsar	Bhangawa	Rural	Type III			Majitha		
45	Amritsar	Wadala Viram	Rural	Type III			Majitha		
46	Amritsar	Kotla Sultan Singh	Rural	Type III			Majitha		
47	Amritsar	Jijjeani	Rural	Type III			Majitha		

Final List of Sewa Kendras

Ready

100%

PM 01:03
10-12-2015

Sewa Kendras

Proforma for Mapping of Sewa Kendra

GPS ACCURACY: 26.0 m



SEWA KENDRA FORM



UPLOAD DATA

Developed By




Punjab Remote Sensing Centre (PRSC)
PAU Campus, Ludhiana Punjab
(India) – 141004

Phone: 91-161-2303484, Email: contact@prsc.gov.in

Sewa Kendras

Proforma for Mapping of Sewa Kendra

Wait



Form loading

Developed By



Punjab Remote Sensing Centre (PRSC)
PAU Campus, Ludhiana Punjab
(India) – 141004

Phone: 91-161-2303484, Email: contact@prsc.gov.in

Sewa Kendra Mapping for Citizen services

The image displays three sequential screenshots of a mobile application interface for 'Sewa Kendras' mapping. The interface is designed for data entry and selection.

Screenshot 1 (Left): Shows the main form with the following fields:

- DISTRICT: --
- BLOCK: BLOCK
- TEHSIL: TEHSIL
- URBAN/RURAL: Urban / Rural
- TYPE: TYPE
- VILLAGE: VILLAGE
- PINCODE: PINCODE
- ADDRESS: Street /Locality

Screenshot 2 (Middle): Shows a dropdown menu for DISTRICT with 'ALI PUR' selected. The list of options includes:

- Amritsar
- Barnala
- Bathinda
- Faridkot
- Fatehgarh Sahib
- Fazilka
- Ferozepur
- Gurdaspur
- Hoshiarpur
- Jalandhar
- Kapurthala
- Ludhiana
- Mansa
- Moga
- Mohali
- Muktsar
- Pathankot
- Patiala
- Ropar
- SBS Nagar
- Sangrur
- Tarn Taran

Screenshot 3 (Right): Shows a dropdown menu for DISTRICT with 'Ferozepur' selected. The list of options includes:

- ALI PUR
- BHAGO KE
- Civil Hospital, NH-15, Near Main Bus Stand M
- Fatehgarh Sabra
- GURUHARSAHAI
- Ghuddu Wala
- HARDASA
- Joge Wala
- KHOSA DAL SINGH
- KOHALA
- Kamal Wala
- Khadoor
- LOHKE KALAN
- MAIHAN WALA KALAN
- Market Committee Zira
- Market Committee office Mallan Wala
- Mor kusu Wala
- Municipal council, The Mall, Ferozepur city
- Office of the Punjab W/s & Sewarge Board Fa
- PHERO KE
- Pir Mohamad
- SANTU WALA
- SEKHWAN

3:10 pm

Sewa Kendras

DISTRICT Ferozepur

ALI PUR

BLOCK zira

TEHSIL Zira

URBAN/RURAL Rural

TYPE Type III

VILLAGE ali pur

PINCODE 142047

ADDRESS Link Road

12:14 pm

Sewa Kendras

ASSEMBLY CONSTITUENCY

PARLIAMENTARY

POPULATION

REMARKS

if | the

q w e r t y u i o p

a s d f g h j k l

⬆ z x c v b n m ⬅

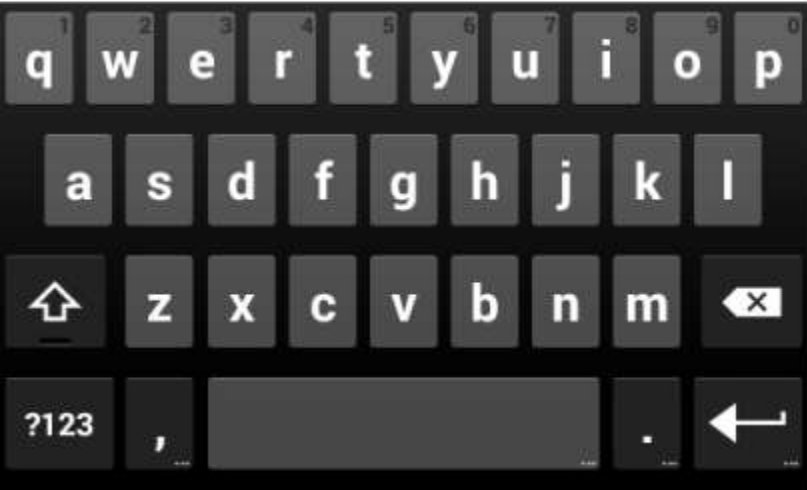

?123 , . Next

Sewa Kendras

LATITUDE

LONGITUDE

Enter Site Location




Sewa Kendras


30.91222022

75.81259316


PAU



DELETE



DELETE



LATITUDE
LONGITUDE
GPS

Sewa Kendras

ACCOMPANIED PERSON NAME

ACCOMPANIED PERSON DESIGNATION

PRSC OFFICER NAME

PRSC OFFICER DESIGNATION

SUBMIT

EXIT



MESSAGE:

PREVIEW UPLOAD EXIT

ID	1
District	Hoshiarpur
Name	SUB TEHSIL COMPLEX
Block	Tanda
Tehsil	DASUYA
Urban_Rural	Urban
Type	Type II
Village	
Pincode	144203
Address	SUB TEHSIL COMPLEX TANDA
Assembly_Constituency	
Parliamentary	
Population	
Latitude	30.9129345
Longitude	75.8119701

MESSAGE:

PREVIEW UPLOAD EXIT

Latitude	30.9129221	30.9129221
Longitude	75.8119707	75.8119707
person_name	ab	
person_desg	b	
officer_name	c	
officer_desg	d	
remarks	Good	
image	BLOCK4	PAU

q w e r t y u i o p
a s d f g h j k l
↑ z x c v b n m ↵
?123 , . ←

Health Centres Mapping

93% 3:28 pm

HEALTH CENTRE


PREVIEW/UPLOAD

Choose Type of Health Centre

URBAN RURAL

SLUM KIOSK

Developed By



Punjab Remote Sensing Centre (PRSC)
PAU Campus, Ludhiana Punjab
(India) – 141004
Phone: 91-161-2303484, Email: contact@prsc.gov.in

92% 3:20 pm

Health Centre

Amritsar

-

Facility Name

City Amritsar

Type of Facility Type of Facility

Managing Authority Managing Authority

Location of Facility Location of Facility

Building Status Building Status

Remarks Remark by Health Centre

Health Centre

Muktsar

Pathankot

Patiala

Ropar

Sangrur

SAS Nagar

SBS Nagar

Tarn Taran

others

Health Centre

others

District

Facility Name

City

City

Type of Facility

Type of Facility

Managing Authority

Managing Authority

Location of Facility

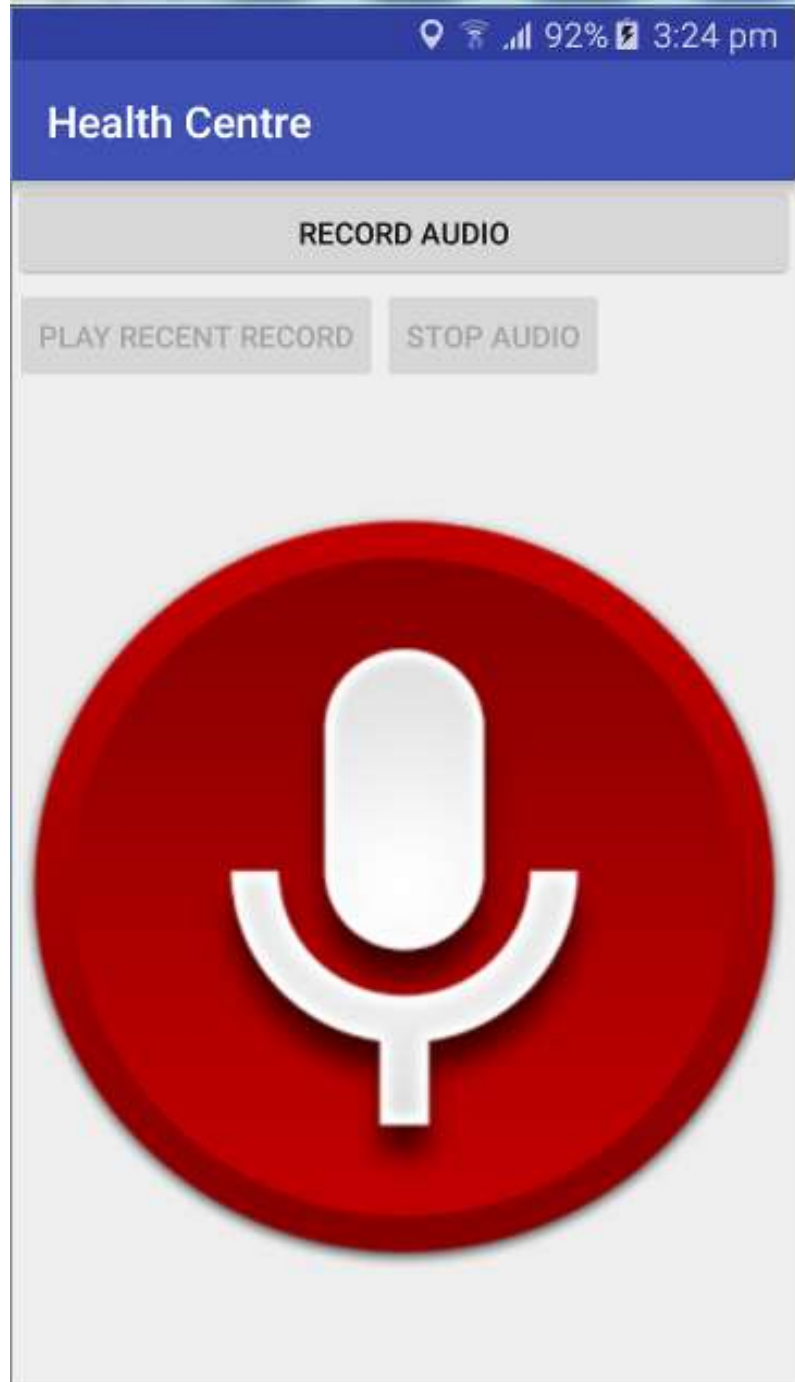
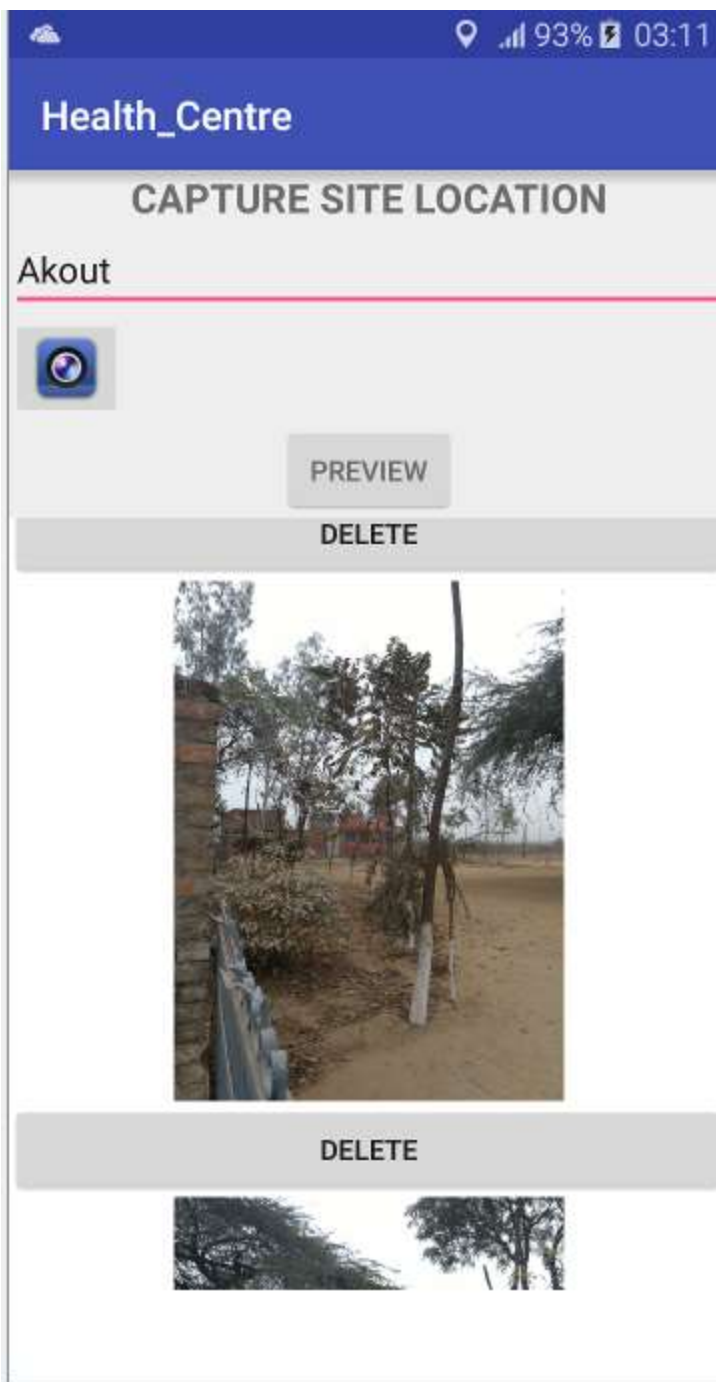
Location of Facility

Building Status

Building Status

Remarks

Remark by Health Centre



CANCEL

DONE

- REC_20160226_123432
26 February 2016 00:02:35
- REC_20160224_151120
24 February 2016 00:01:05
- Voice 017
24 February 2016 00:00:09
- REC_20160224_142024
24 February 2016 00:00:57
- REC_20160224_134421
24 February 2016 00:02:27
- REC_20160224_125250
24 February 2016 00:01:07
- REC_20160224_122401
24 February 2016 00:02:24
- REC_20160224_121708
24 February 2016 00:00:46



Voice 019



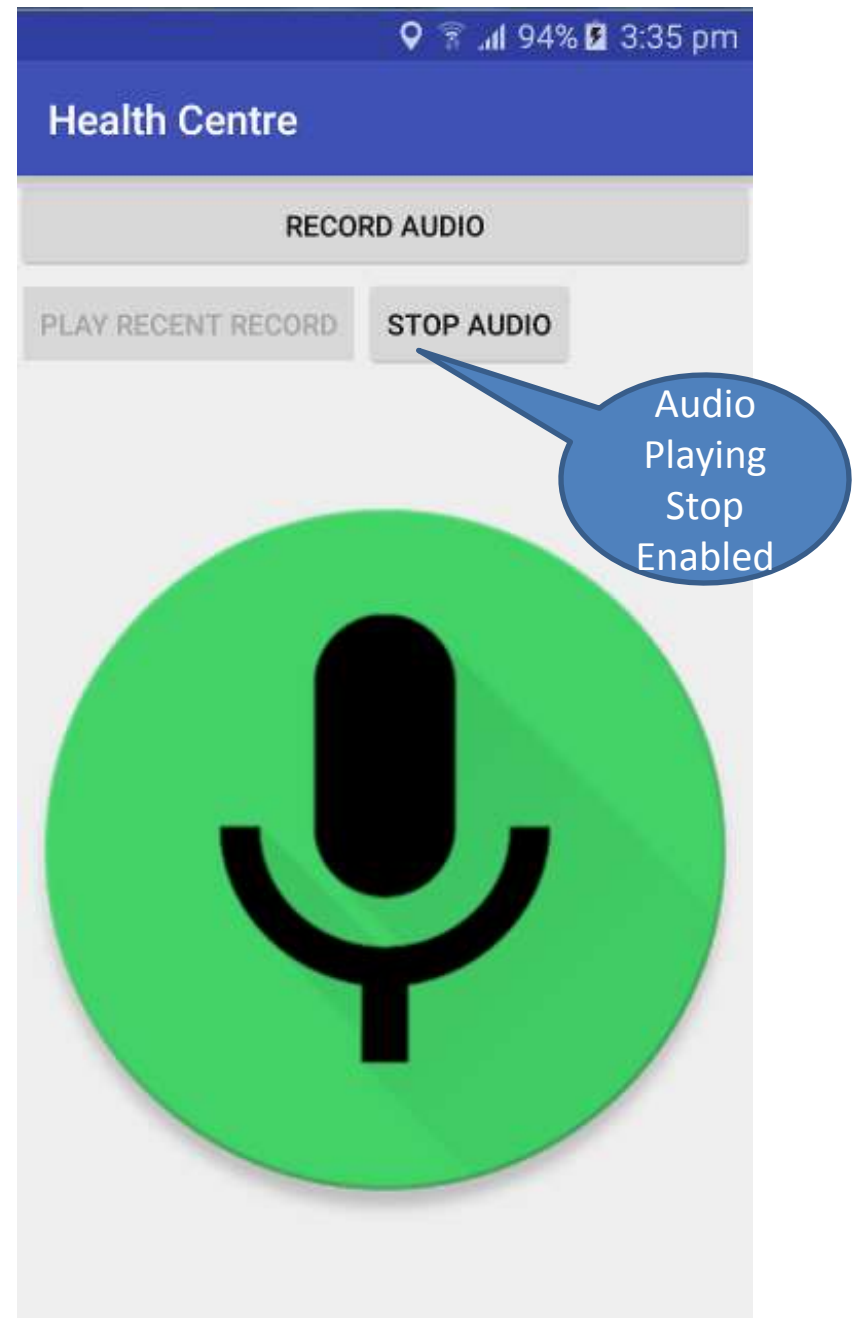
10:53



Call rejection



Pause



Health_Centre

LOCATION DETAILS

30.91221544

75.81229909

17.0 m

356823071988377

LATITUDE
LONGITUDE
GPS

Health_Centre

ACCOMPANIED PERSON NAME

ACCOMPANIED PERSON DESIGNATION

PRSC OFFICER NAME

PRSC OFFICER DESIGNATION

TEAM DETAIL

TEAM NUMBER

TEAM LEADER

Mobile Number

REMARKS

SUBMIT **EXIT**

Health Centre

ACCOMPANIED PERSON NAME

ACCOMPANIED PERSON DESIGNATION

-
- Amardeep Singh
- Dheeraj Gambhir
- Harpinder Singh
- Palki Sharma
- Pardeep
- Sashikant Sahoo
- Saurabh Sharma

Health Centre

ACCOMPANIED PERSON NAME

ACCOMPANIED PERSON DESIGNATION

Palki Sharma

JRF

TEAM DETAIL

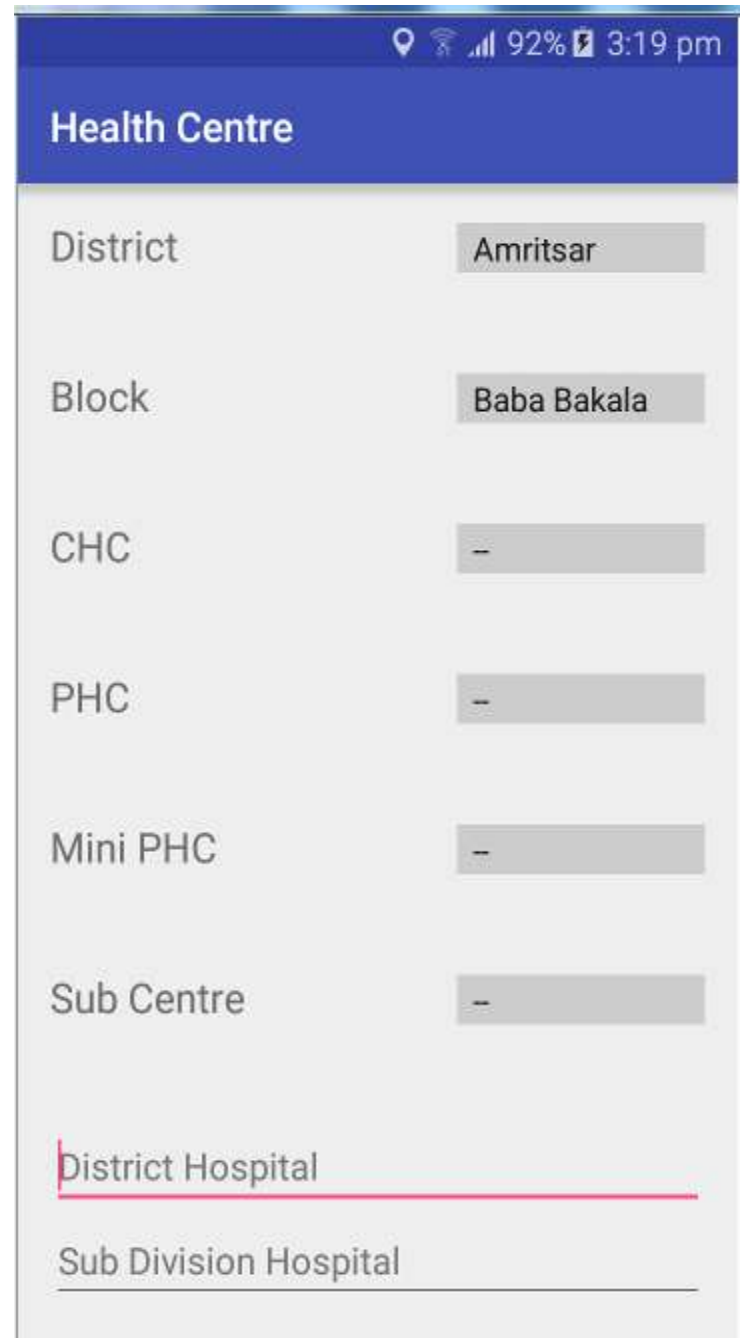
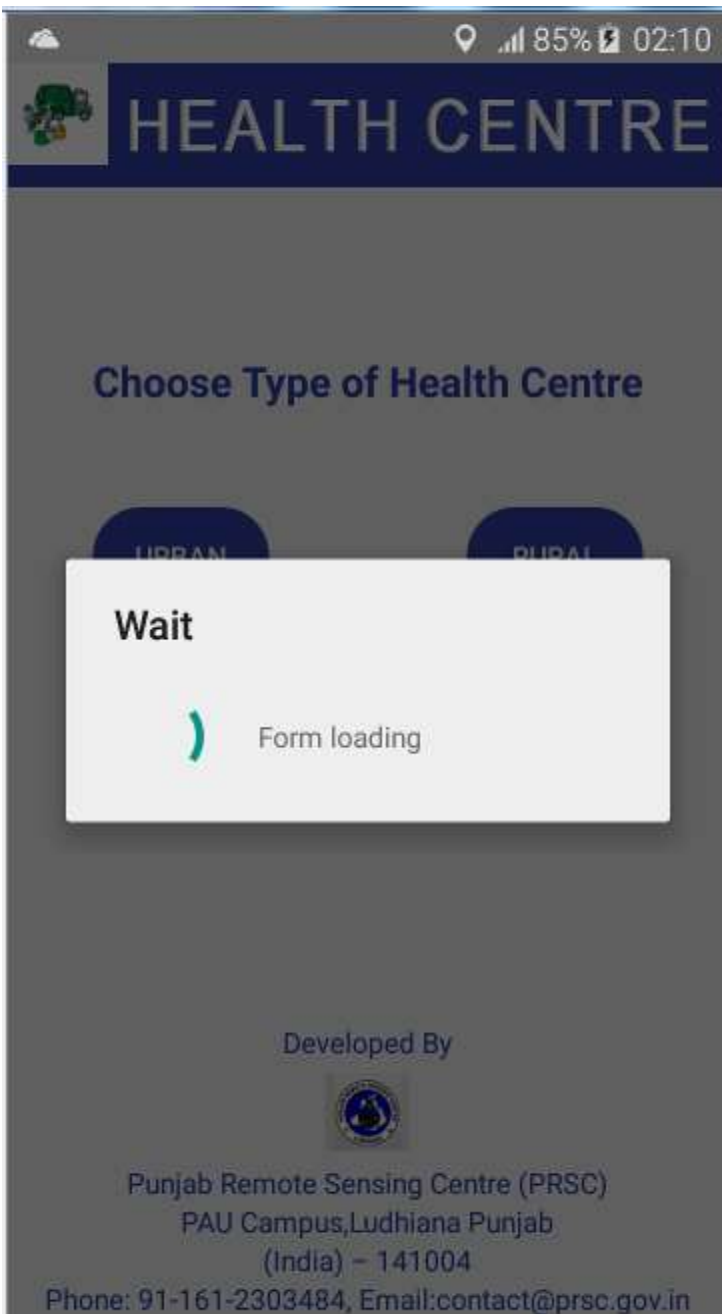
TEAM NUMBER

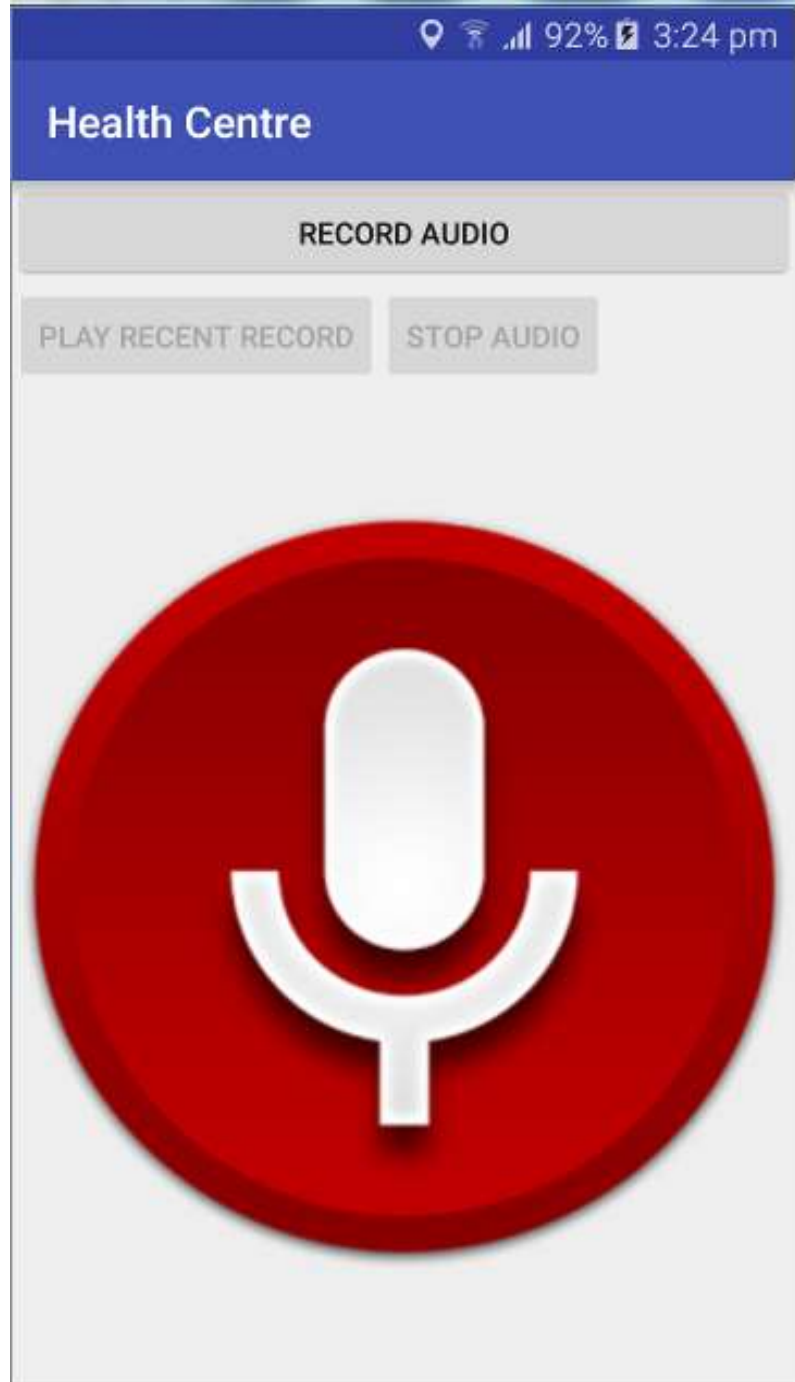
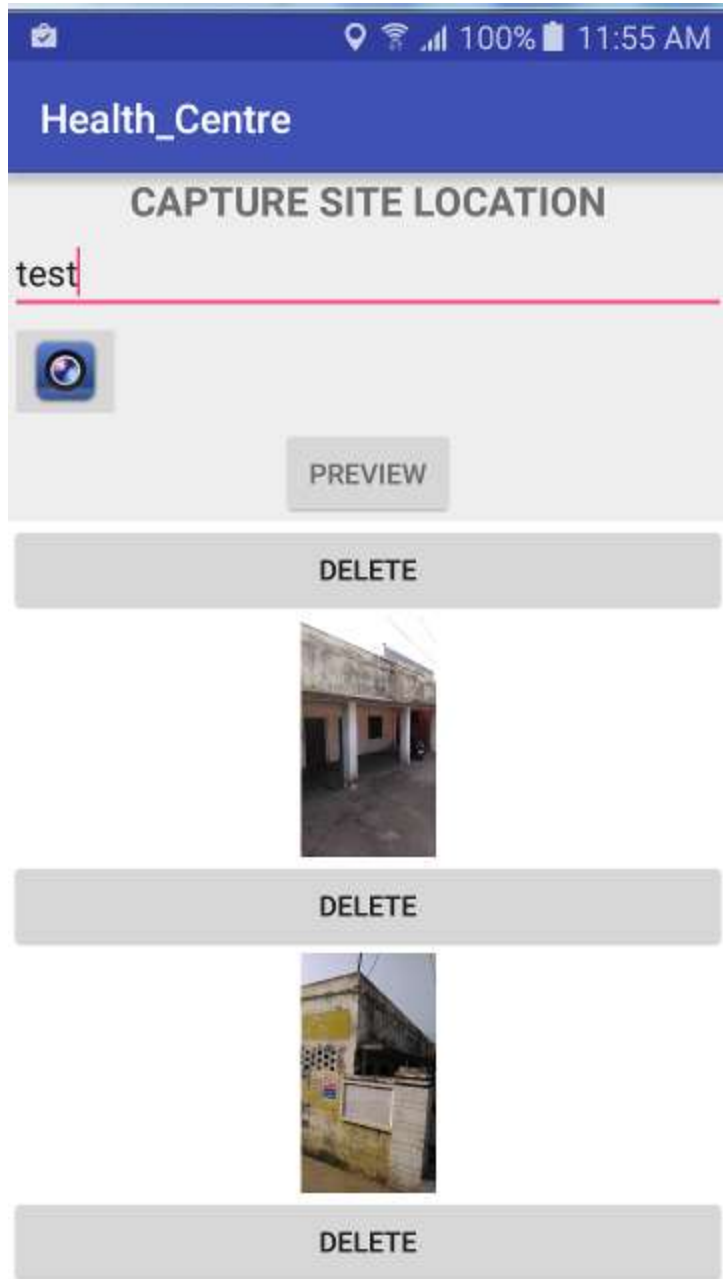
TEAM LEADER

Mobile Number

REMARKS

SUBMIT EXIT





CANCEL

DONE

- REC_20160226_123432
26 February 2016 00:02:35
- REC_20160224_151120
24 February 2016 00:01:05
- Voice 017
24 February 2016 00:00:09
- REC_20160224_142024
24 February 2016 00:00:57
- REC_20160224_134421
24 February 2016 00:02:27
- REC_20160224_125250
24 February 2016 00:01:07
- REC_20160224_122401
24 February 2016 00:02:24
- REC_20160224_121708
24 February 2016 00:00:46



Voice 019



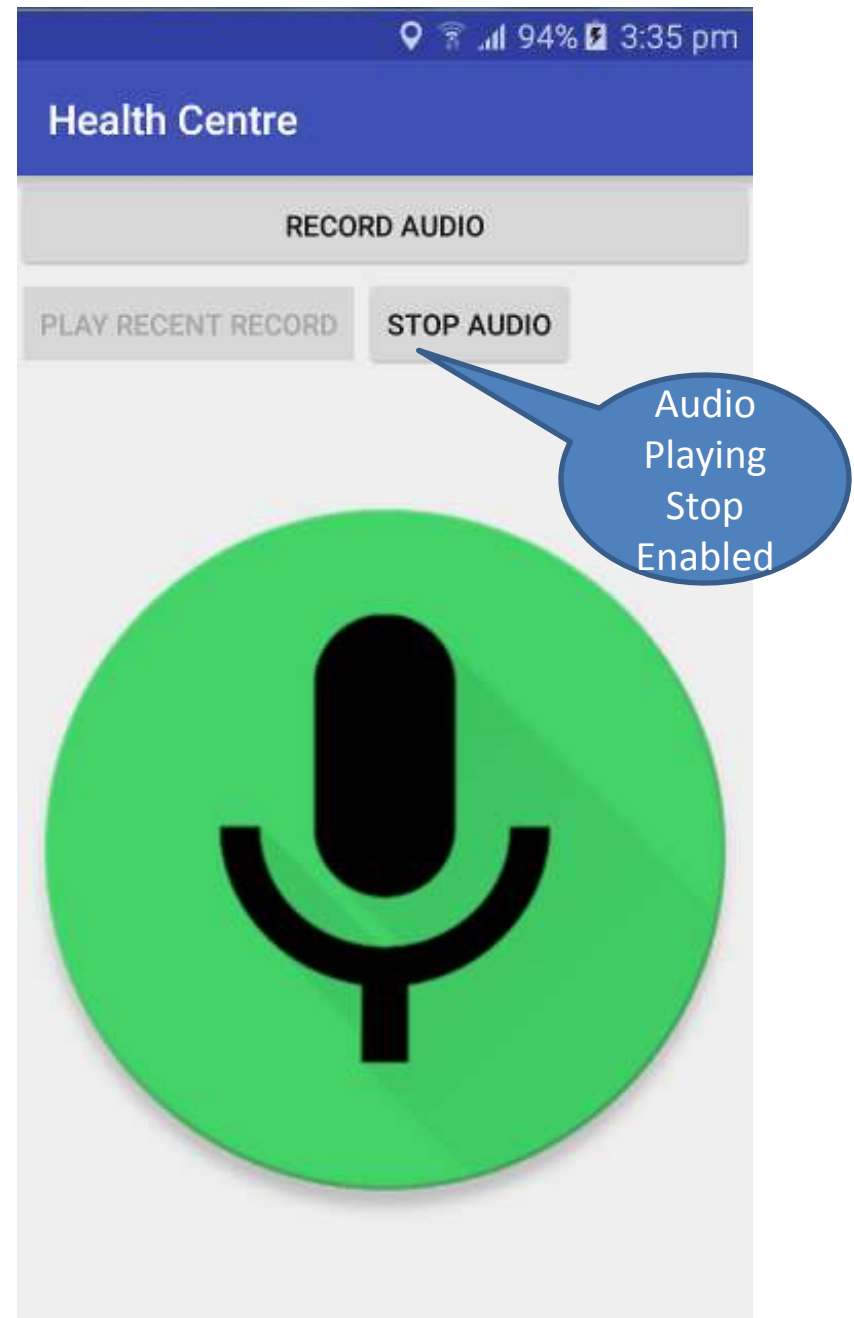
10:53



Call rejection



Pause



Health_Centre

LOCATION DETAILS

30.91221544

75.81229909

17.0 m

356823071988377

Location by GPS

Health_Centre

ACCOMPANIED PERSON NAME

ACCOMPANIED PERSON DESIGNATION

PRSC OFFICER NAME

PRSC OFFICER DESIGNATION

TEAM DETAIL

TEAM NUMBER

TEAM LEADER

Mobile Number

REMARKS

SUBMIT EXIT

Health Centre

ACCOMPANIED PERSON NAME

ACCOMPANIED PERSON DESIGNATION

-
- Amardeep Singh
- Dheeraj Gambhir
- Harpinder Singh
- Palki Sharma
- Pardeep
- Sashikant Sahoo
- Saurabh Sharma

Health Centre

ACCOMPANIED PERSON NAME

ACCOMPANIED PERSON DESIGNATION

Palki Sharma

JRF

TEAM DETAIL

TEAM NUMBER

TEAM LEADER

Mobile Number

REMARKS

SUBMIT EXIT

Health Centre

DISTRICT

Ludhiana

NAME OF KIOSK

--

Name of Slum

Health Centre

DISTRICT

Ludhiana

NAME OF KIOSK

--

Jamalpur

Khanna

Rajiv Gandhi Colony

Sanjay Gandhi Colony

Sherpur

Health Centre

Amritsar

NAME OF SLUM

--

Name of Slum

CITY	<u>CITY</u>
WARD NO.	<u>WARD NO.</u>
POPULATION	<u>Population</u>

Health Centre

Amritsar

NAME OF SLUM

--

21 Quarter

Amrik Singh Wala

Angarh

Arjun Nagar

Baba Deep Singh Avenue

Baba Deep Singh Colony

Balmiki Mohalla, Bhegetanwala

MESSAGE:

Urban Rural Slum Kiosk

PREVIEW

UPLOAD

EXIT

PREV

NEXT

RESET

NO DATABASE FOUND

MESSAGE:

Urban Rural Slum Kiosk

PREVIEW

UPLOAD

EXIT

PREV

NEXT

RESET

ID	1
Device	356823071988229
District	Amritsar
NameSlum	Baba Deep Singh Colony
City	Amritsar
Ward	4.0
Population	5825.0
Latitude	30.91223213
Longitude	75.81236888
Accuracy	6.0 m
person_name	
person_desg	
officer_name	Palki Sharma
officer_desg	JRF
Team_Number	
Team_Leader	
Mobile_Number	

Table: Health_Center_Rural

New Record Delete Record

	Device	Block	SubCenter	District	ctHo	riect	munity+	aryH	MiniPHC	SubsidiaryHC	Latitude	Longitude
	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
1	352465063972128	Nandpur Kalour	Lakhan Pur	FG Sahib	FG...						30.83263118	76.31873211
2	352465063972128	Nandpur Kalour	Nanowal	FG Sahib	FG...			na...			30.85682809	76.31274285
3	352465063972128	Nandpur Kalour	Maneli	FG Sahib	FG...						30.85716689	76.35510004
4	352465063972128	Nandpur Kalour	Hawara Kalan	FG Sahib	FG...						30.84170505	76.39073218
5	352465063972128	Nandpur Kalour	Gaggarwal	FG Sahib	FG...						30.81819482	76.39879226
6	352465063972128	Nandpur Kalour	Sanghol	FG Sahib	FG...			sa...			30.78421571	76.39208966
7	352465063972128	Nandpur Kalour	Khant	FG Sahib	FG...						30.78302113	76.42382913
8	352465063972128	Nandpur Kalour	Lohar Majra	FG Sahib	FG...						30.76425064	76.40014382
9	352465063972128	Nandpur Kalour	Dhunda	FG Sahib	FG...						30.73097585	76.39646554
10	352465063972128	Nandpur Kalour	Hargana	FG Sahib	FG...						30.74790513	76.36746836
11	352465063972128	Nandpur Kalour	Raipur Majri	FG Sahib	FG...						30.72324192	76.33223498
12	352465063972128	Nandpur Kalour	Bhari	FG Sahib	FG...			bh...			30.74392595	76.31010889
13	352465063972128	Nandpur Kalour	Bhari	FG Sahib	FG...						30.74860188	76.30549403
14	352465063972128	Nandpur Kalour	Ajner	FG Sahib	FG...						30.72991918	76.2973746
15	352465063972128	Nandpur Kalour	Raya	FG Sahib	FG...						30.77343325	76.32389652
16	352465063972128	Nandpur Kalour	Bhambri	FG Sahib	FG...						30.79242054	76.33512216

1 - 17 of 257

Go to: 1

DB Schema

Name Type

- Tables (3)
 - Health_Center_Rural
 - Health_Center_Urban
 - sqlite_sequence
- Indices (0)
- Views (0)
- Triggers (0)

SQL Log Plot DB Schema

Network > psc > test > Health_Center > RURAL > Jalandhar > Bara Pind





Organize ▾ New folder

Name	Date modified	Type	Size
Apra	23-01-2016 AM 10...	File folder	
Atta	23-01-2016 AM 10...	File folder	
Bara Pind	23-01-2016 AM 10...	File folder	
Bharat Singh Pura	23-01-2016 AM 10...	File folder	
Dhuleta	23-01-2016 PM 01...	File folder	
Dialpur	23-01-2016 AM 10...	File folder	
Jagan Khurd	23-01-2016 AM 10...	File folder	
Kang Anjan	23-01-2016 AM 10...	File folder	
Kot Garewal	23-01-2016 AM 10...	File folder	
Kotli khakian	23-01-2016 AM 10...	File folder	
Landhra	23-01-2016 AM 10...	File folder	
Mandi	23-01-2016 AM 10...	File folder	
Mansoopar	23-01-2016 AM 10...	File folder	
Massani	23-01-2016 AM 10...	File folder	
Mini PHC Dosanj Kalan	23-01-2016 AM 10...	File folder	
Nagar	23-01-2016 AM 10...	File folder	
Paddi Jagir	23-01-2016 AM 10...	File folder	
Phalpota	23-01-2016 AM 10...	File folder	
Phillaur	23-01-2016 AM 10...	File folder	
Raipur anjan	23-01-2016 AM 10...	File folder	
Sarahan Mundi	23-01-2016 PM 01...	File folder	
Teheng	23-01-2016 AM 10...	File folder	
Turan	23-01-2016 AM 10...	File folder	
Virk	23-01-2016 AM 10...	File folder	


24 items Offline status: Online
Offline availability: Not available

Network > psc > test > Health_Center > RURAL > Nawanshahr > Makandpur > balawal

Organize ▾ New folder

IMG_20060121_135628.jpg IMG_20160121_135635.jpg IMG_20060121_135643.jpg IMG_20160121_135651.jpg

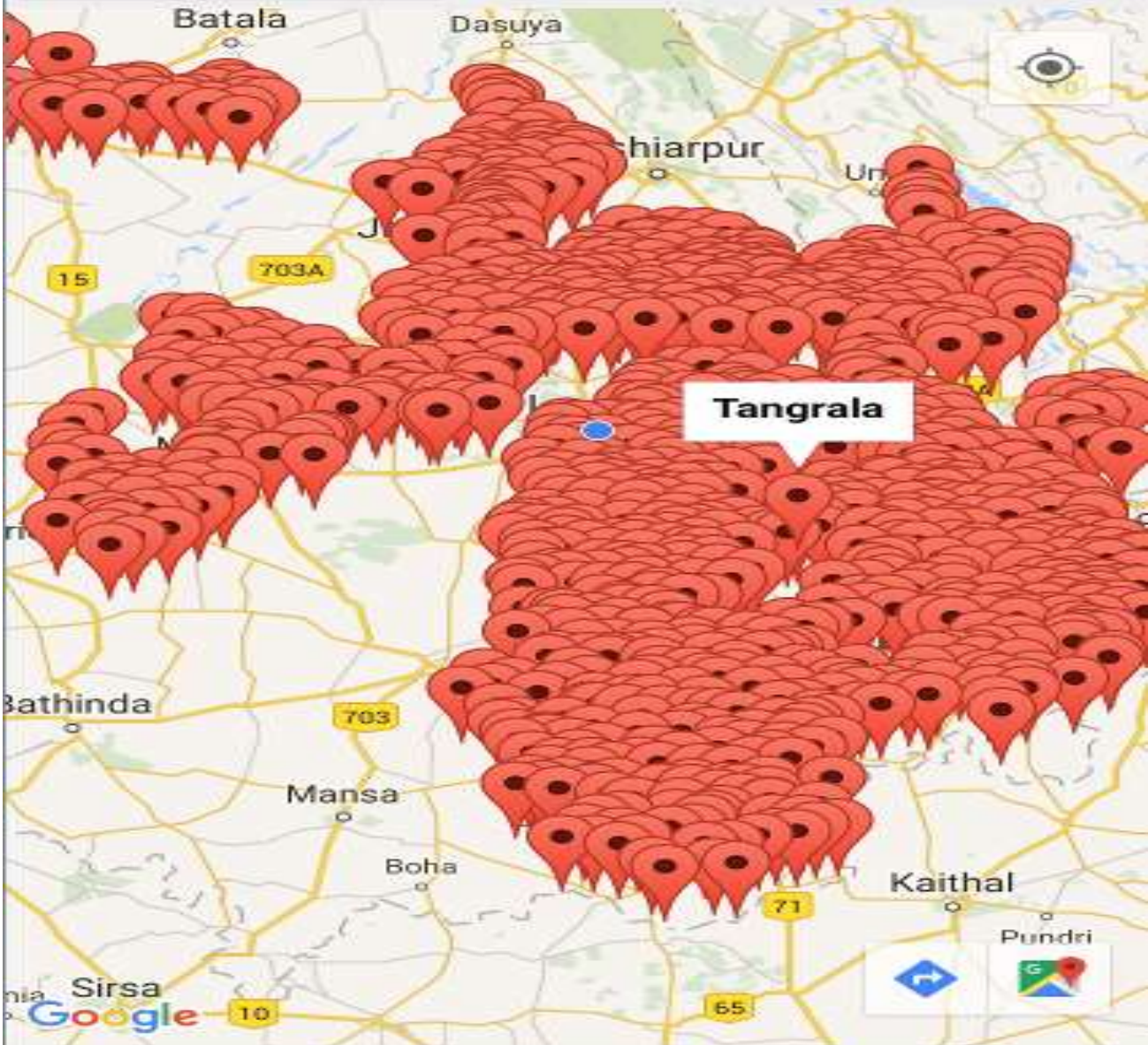


IMG_20060121_135702.jpg

5 items Offline status: Online
Offline availability: Not available

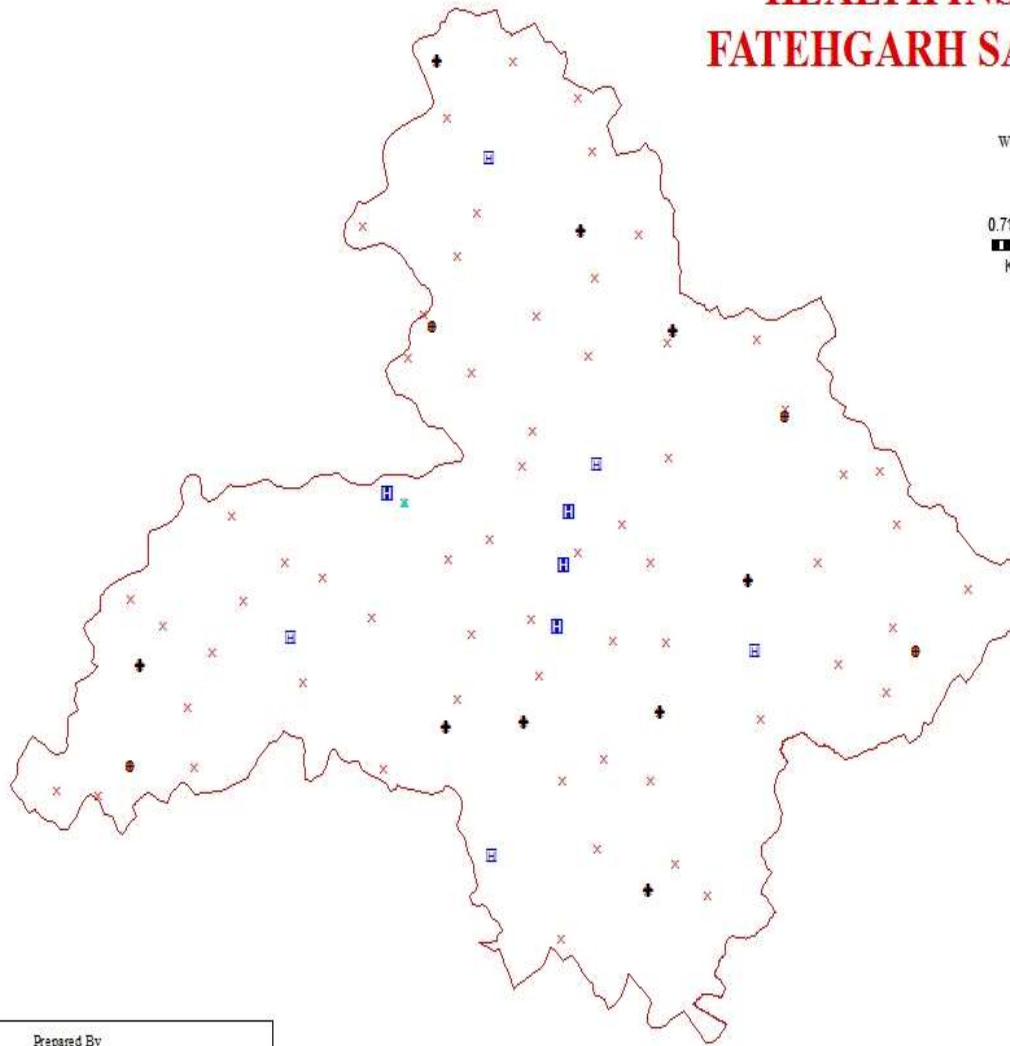
Rural

SHOW LOCATIONS



HEALTH INSTITUTIONS IN FATEHGARH SAHIB DISTRICT

HEALTH INSTITUTIONS FATEHGARH SAHIB DISTRICT

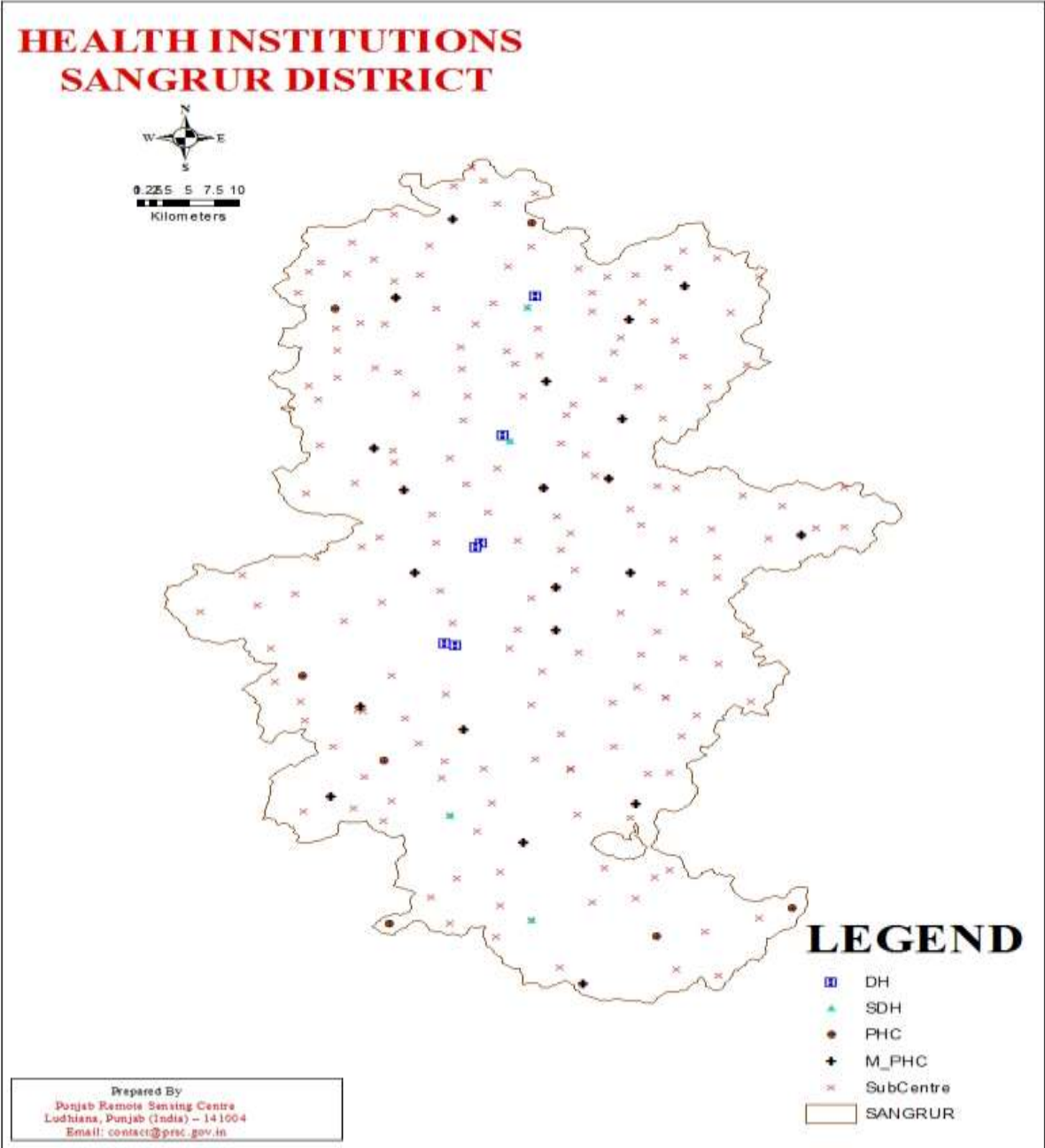


LEGEND

-  DH
-  CHC
-  SDH
-  PHC
-  M_PHC
-  SUB_CENTRE
-  FATEHGARH_SAHIB

Prepared By
Punjab Remote Sensing Centre
Ludhiana, Punjab (India) - 141004
Email: contact@prsc.gov.in

HEALTH INSTITUTIONS IN SANGRUR DISTRICT





Home



Water Quality



Crops Detail



Soil Detail

Water Quality

Date of Observation

Name

District Name

Block Name

Village Name

Contact Details

Pincode

Contact No.

Location

[Get Lat/Long](#)

Crop Rotation

Depth Type

Water Quality Tested

Crops

Source of Irrigation

File: No file chosen (Max file size is 4MB)
(Only pdf, doc, docx, jpg files are allowed)

Optinal Information You may provide additional Information.

Crop Detail

Date of Observation

Name

District Name

Block Name

Village Name

Contact Details

Pincode

Contact No.

Location

[Get Lat/Long](#)

Season

Crop

variety of Crop

Weed Type

Weed Control Method

Major Crop

Minor Crop

Variety of Crops

Yield of Crops

Size of Land Holding

Type of Land Holding

Method of Harvesting

Method of Weed Control

Method of Pest

Method of Pest Control

PM Details

File: No file chosen (Max file size is 4MB)
(Only pdf, doc, docx, jpg files are allowed)

Optinal Information You may provide additional Information.

Soil Details

Name	<input type="text" value="enter the name of farmer"/>
District Name	<input type="text" value="Select District"/>
Block Name	<input type="text" value="Select Block"/>
Village Name	<input type="text" value="Select Village"/>
Email Address	<input type="text" value="enter the email id"/>
Contact No.	<input type="text" value="enter contact number"/>
Location	<input type="text" value="X coordinate"/> <input type="text" value="Y coordinate"/> Get Lat/Long
Soil Texture	<input type="text" value="Please select"/>
Soil Colour	<input type="text" value="Please select"/>
Organic Manure	<input type="text" value="Please select"/>

Quantity(Applied Manure)

Type of Crop

Inorganic fertilizer applied with quantity (kg/ha) and timing

Urea	<input type="text" value="For eg:- 100Kg/Ac"/>
Di-ammonium phosphate	<input type="text" value="For eg:- 20 kg/Ac"/>
MOP	<input type="text" value="For eg:- 40 kg/Ac"/>
Other (micronutrients/sulphur)	<input type="text" value="For eg:- Zn-spray"/>

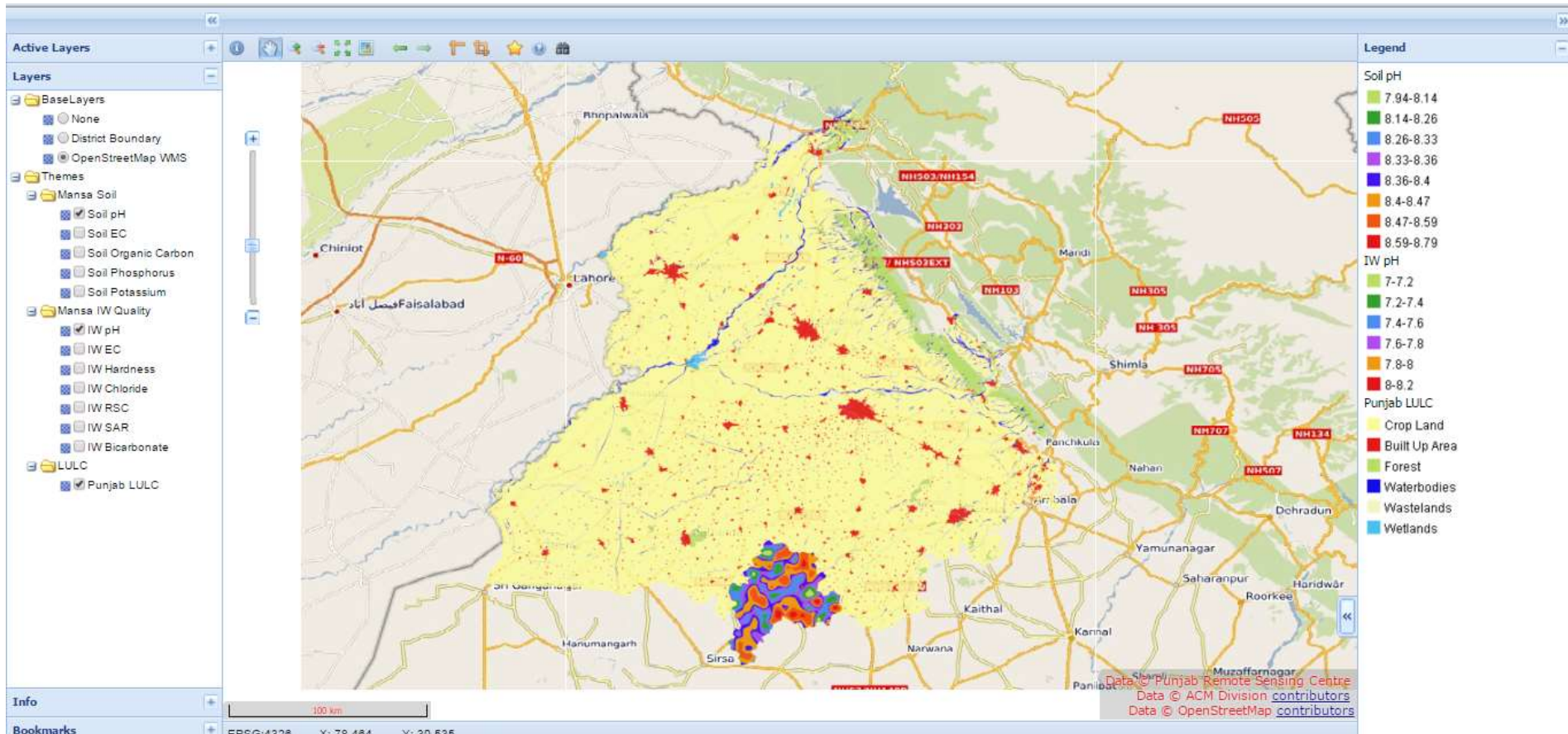
Soil Quality Tested

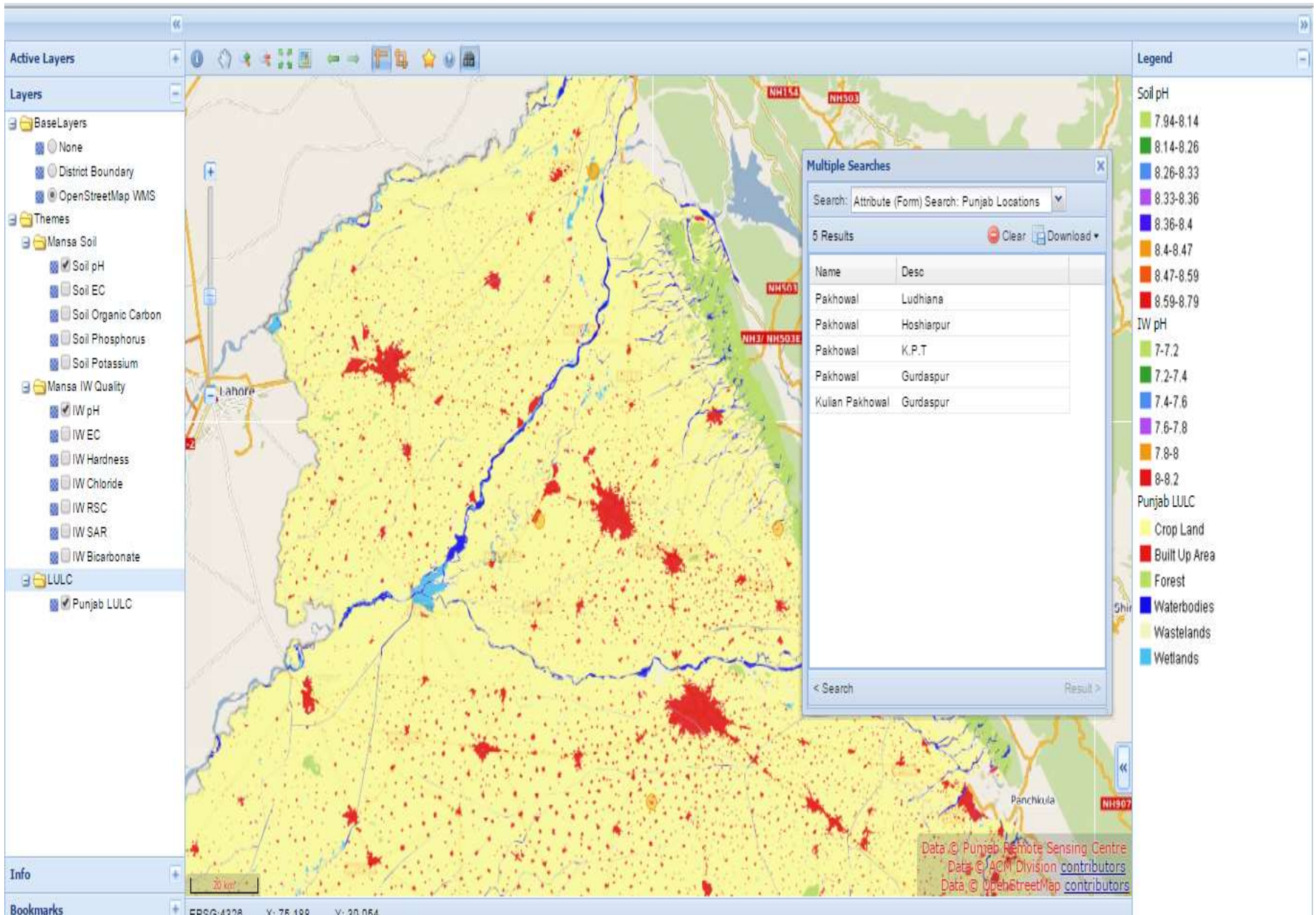
Soil Quality File: No file chosen (Max file size is 4MB)
(Soil Quality Report: Only in pdf, doc, docx, jpg files are allowed)

Save

Cancel

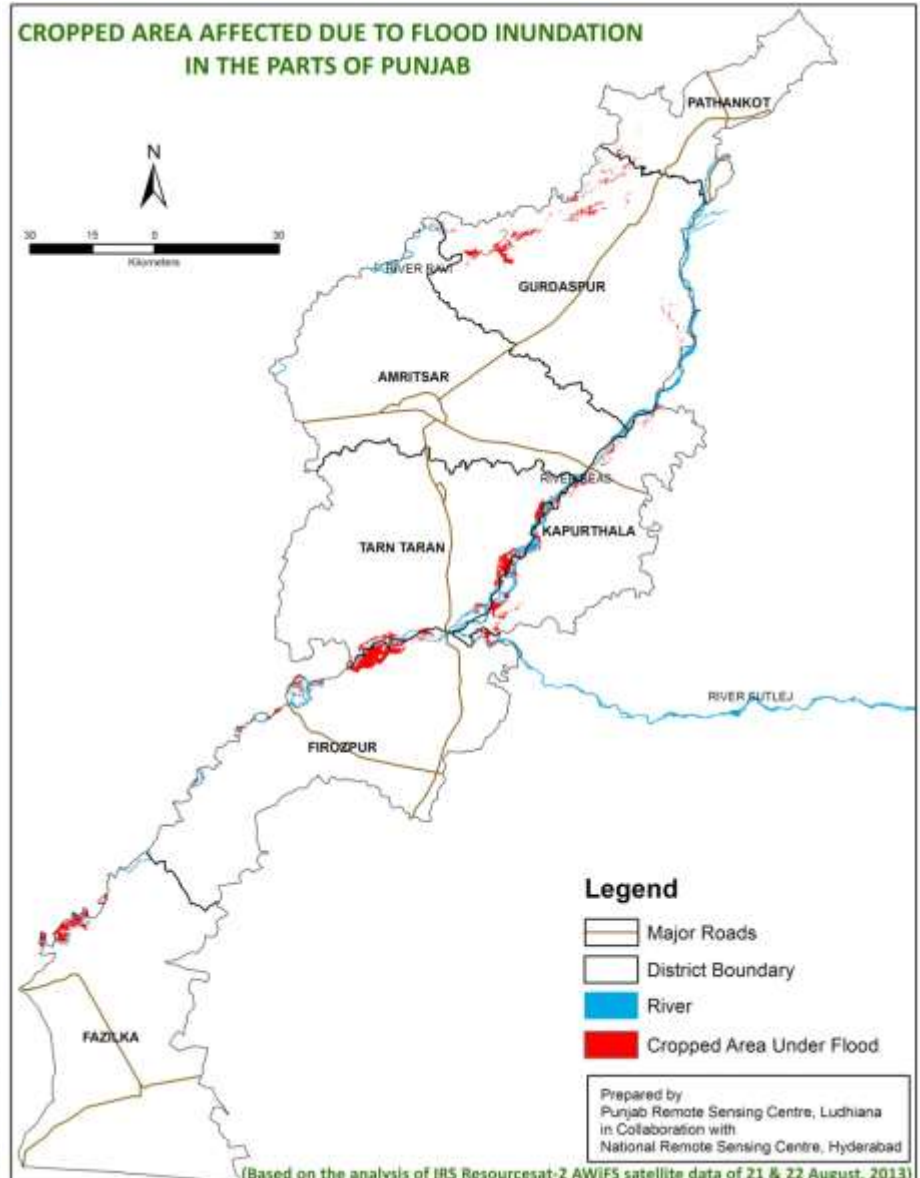
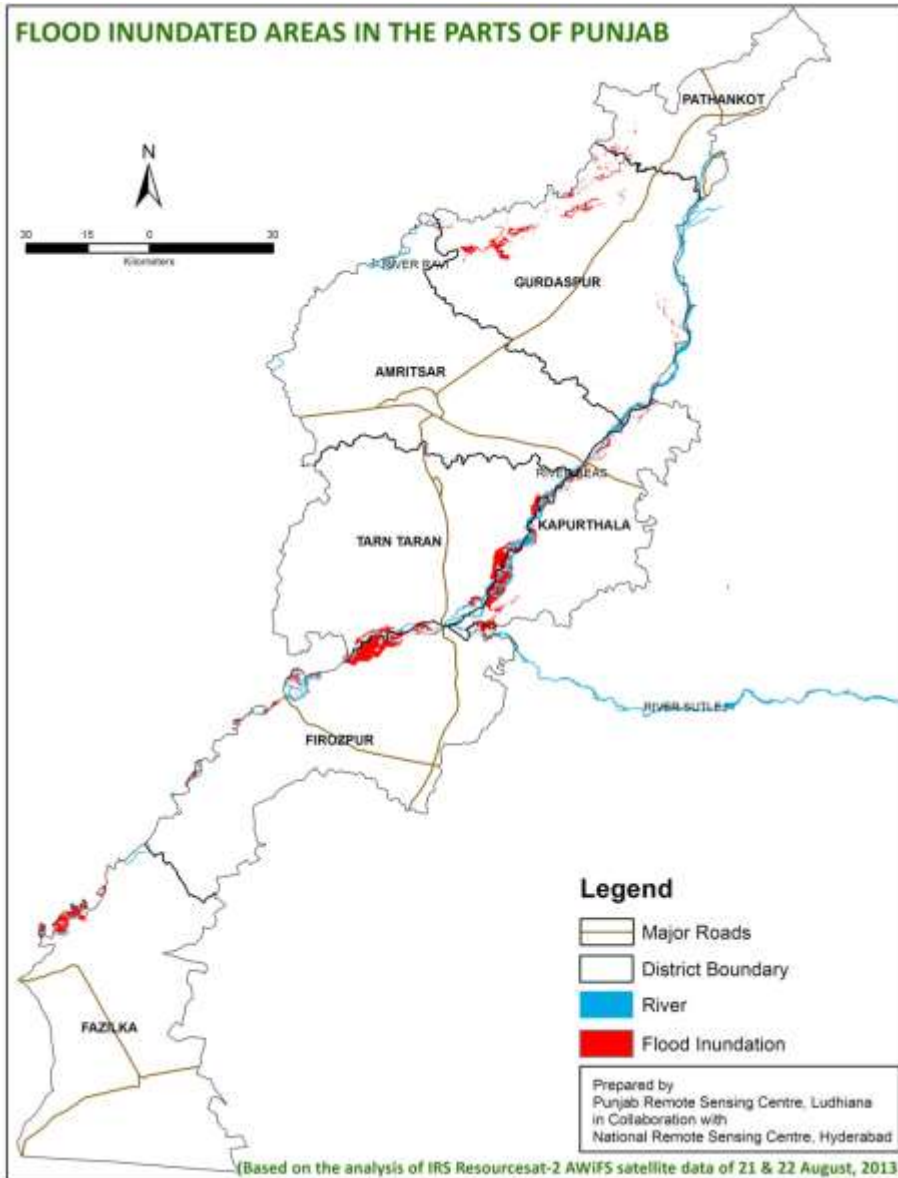
Agro-Geoinformatics



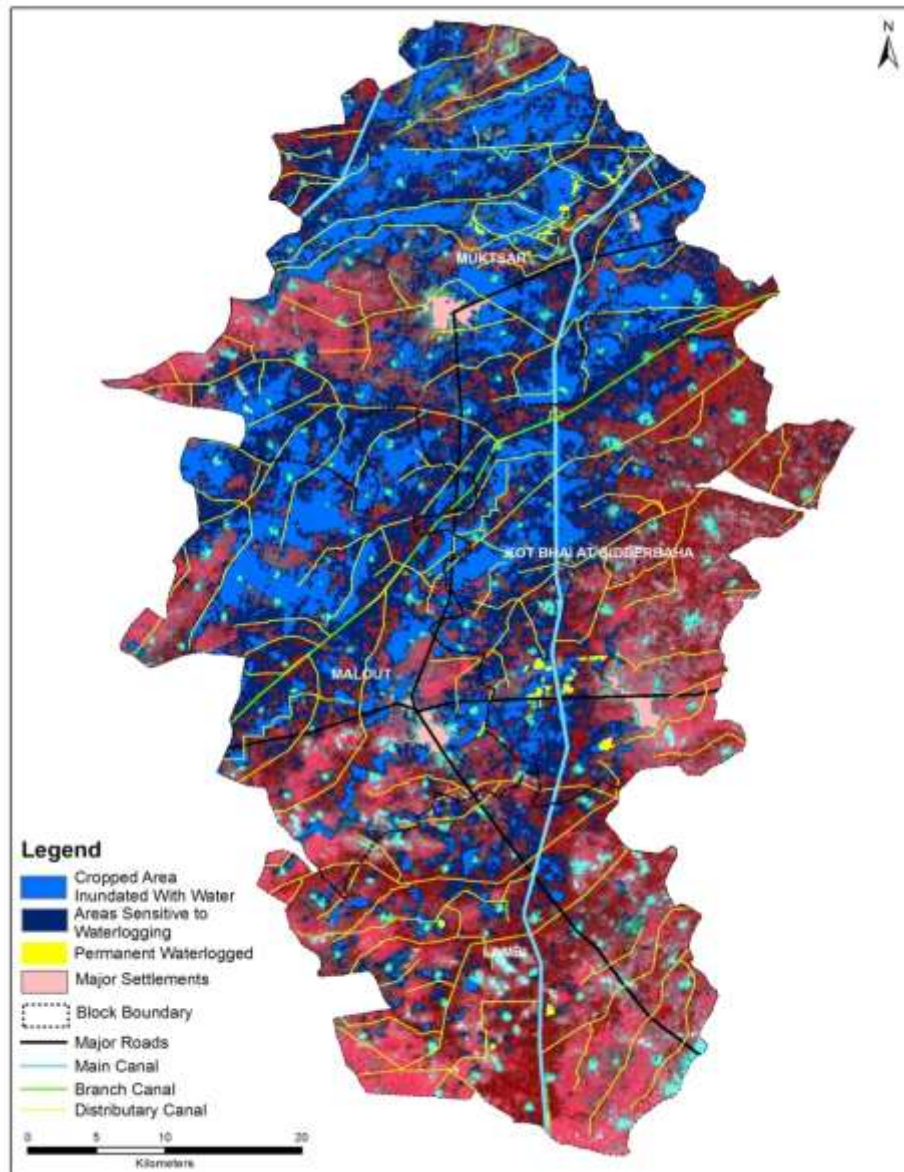


Near Real Time Monitoring of Events & Disasters

Flood Mapping in Punjab



Assessment of Waterlogging in Sri Muktsar Sahib District, Punjab



$$\text{MNDWI} = \frac{\text{Green} - \text{SWIR}}{\text{Green} + \text{SWIR}}$$

where Green is a green band
SWIR is the short wave infrared band

- Resourcesat-2 of 26th August 2013
- Four spectral bands : band-2 (VIS), band-3 (VIS), band-4 (NIR) and band-5 (SWIR)
- Maximum waterlogging occurred in the area between 15 and 21 August 2013 due to high rainfall

Use of Remote Sensing for Studying Carbon Dynamics

1. Identifying land use

C content in forest >> C content in cropland

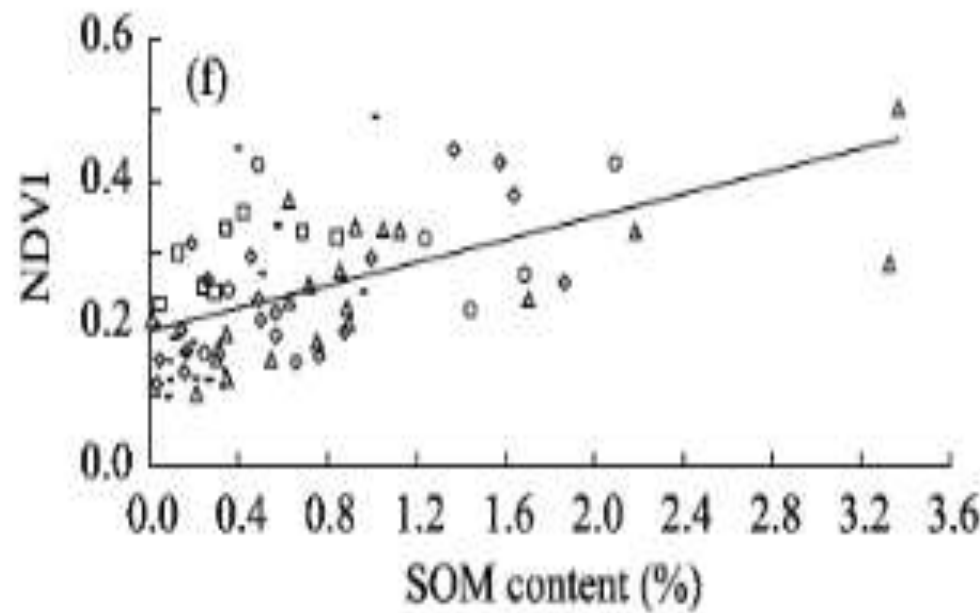
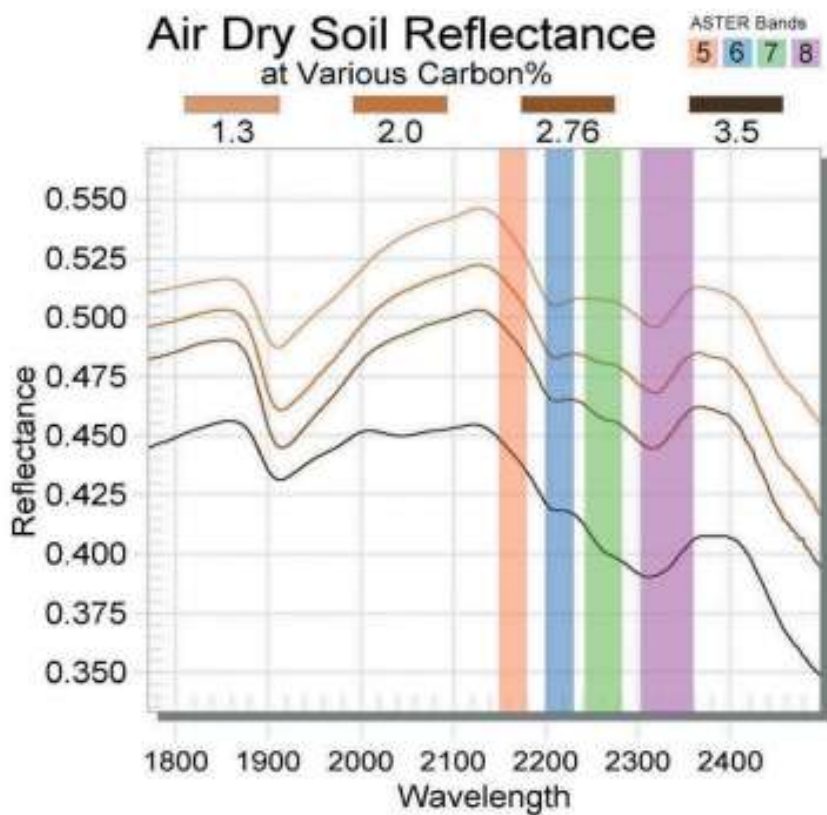
2. Prediction of carbon content from satellite imagery using

(a) fine spatial and spectral resolution data

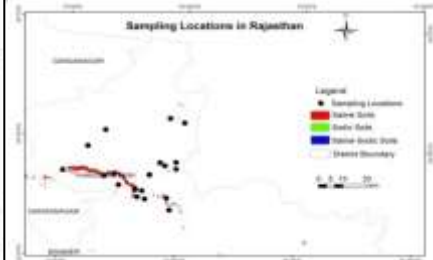
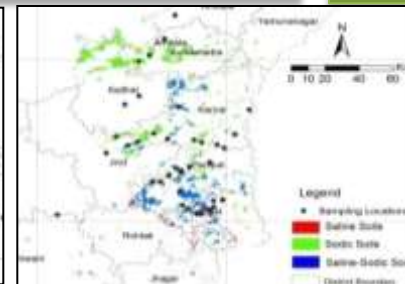
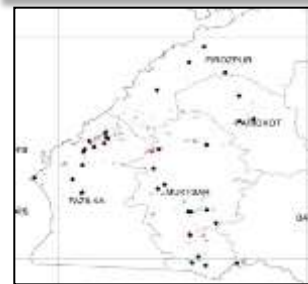
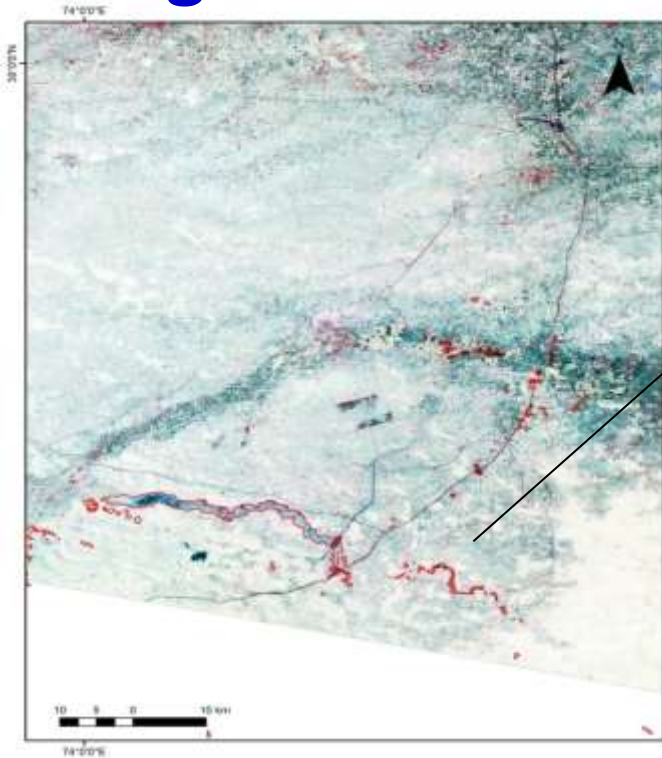
(b) Hyperspectral data

Spectral reflectance of air dry soil at various SOC concentrations.

Relationship between organic carbon and NDVI

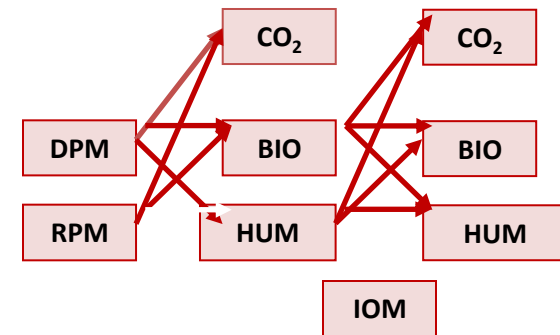


Organic Carbon Dynamics in Saline Soils - Approach



1. Satellite Imagery

4. Sampling Sites



5. Soil Analysis

5. Modification

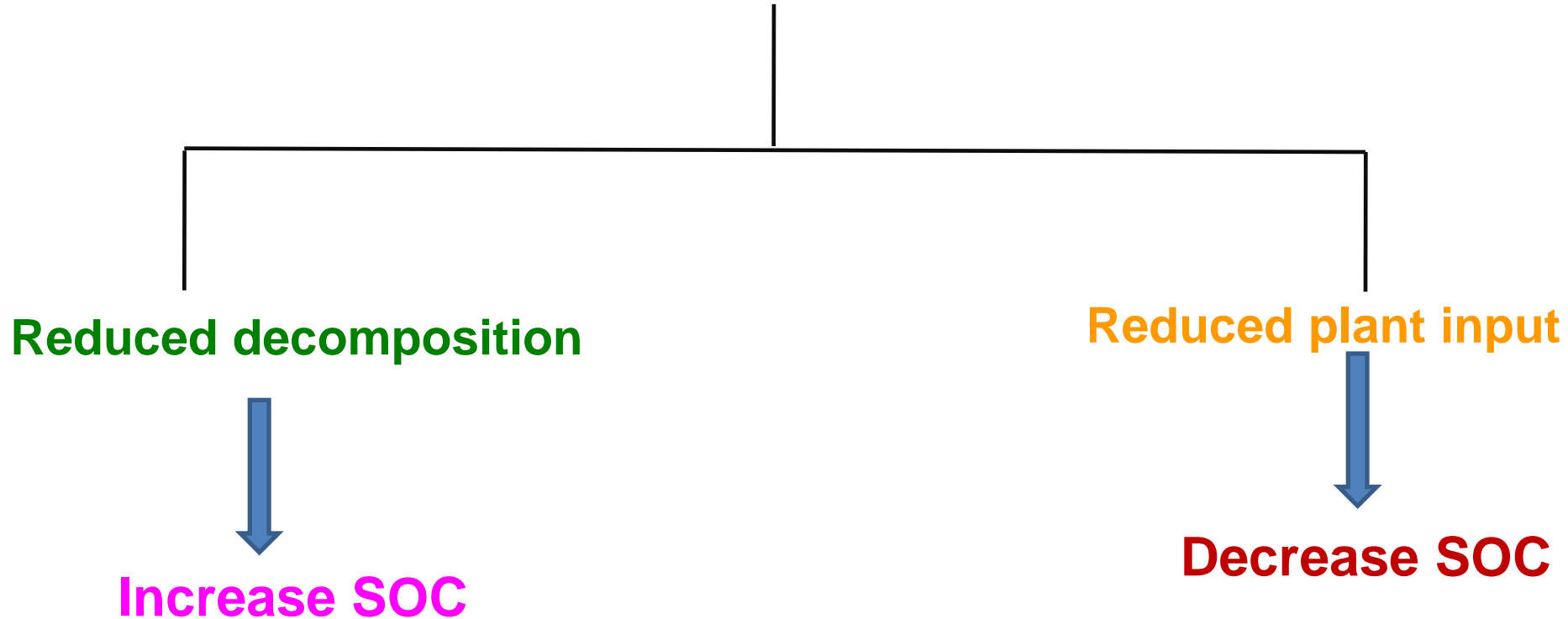
6. Modelling

Carbon Modelling

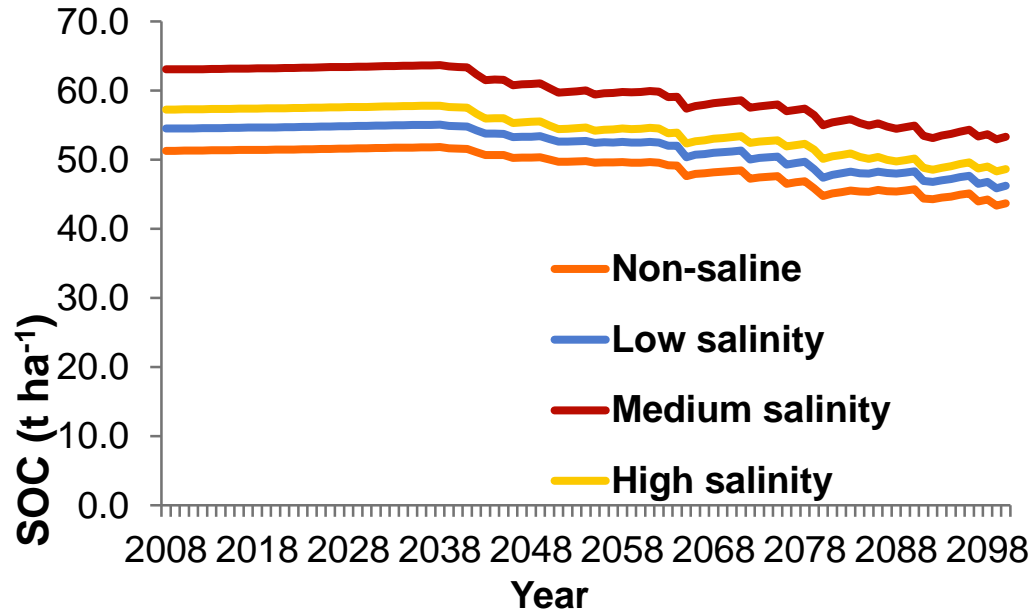
- Rothamsted Carbon Model (Roth C)
(Jenkinson et al. 1987, Coleman and Jenkinson 1996)
- Five pools
 - a. Decomposable plant material (DPM)
 - b. Resistant plant material (RPM),
 - c. Microbial biomass (BIO)
 - d. Humidified SOM (HUM)
 - e. Inert organic matter (IOM)
- Change in each pool is governed by temperature, moisture, land use type, plant retainment factor and rate constant

Modifications of RothC

Factors controlling SOC content in saline soils



Projected SOC content of non-saline and saline soils

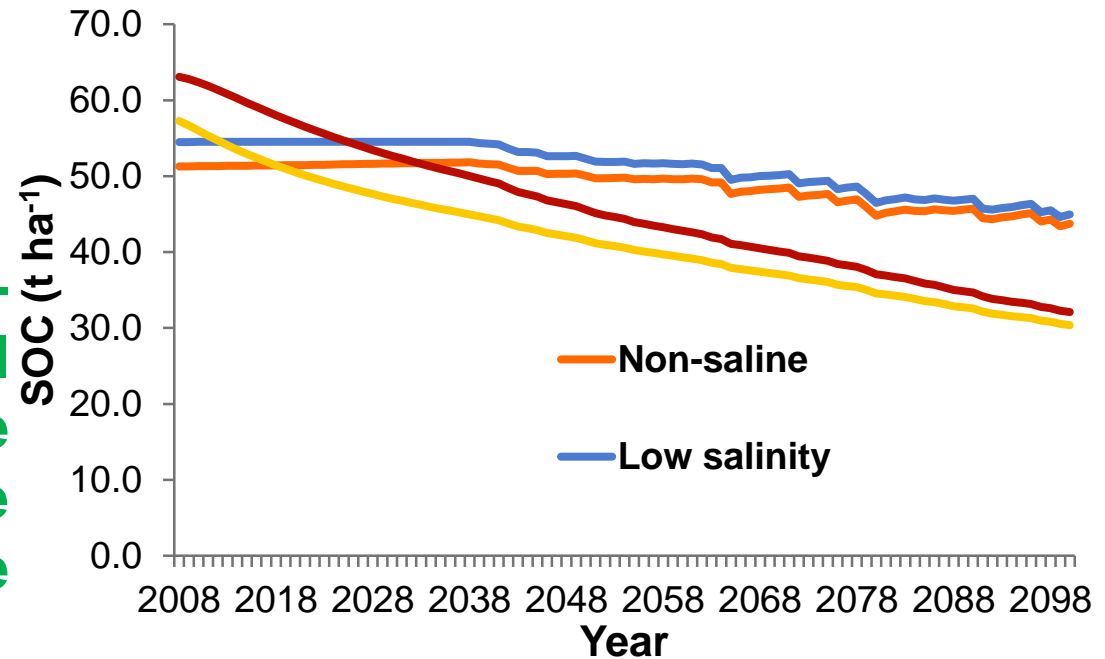


Scenario 1 (without calibration of model)

- **SOC content in non-saline and saline soils will decrease under future climate**

Scenario 2 (with calibration of model)

- **SOC content in non-saline and saline soils will decrease under future climate, but decrease would be more in saline soils**



NATIONAL CARBON PROJECT – ISRO/DOS

SUB-PROJECTS

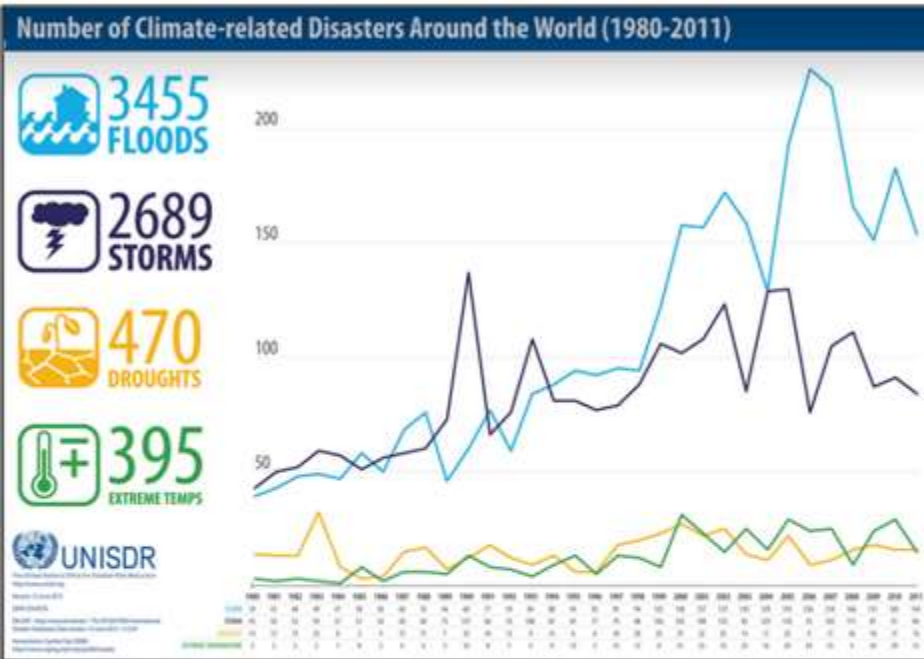
- Vegetation C Pool Assessment
- Soil C Pool Assessment Assessment
- Soil-Vegetation Atmosphere C fluxes

PRSC currently supporting work for Measurement of Vegetation and Biomass parameters under Vegetation-Carbon Pool Assessment (VCP)

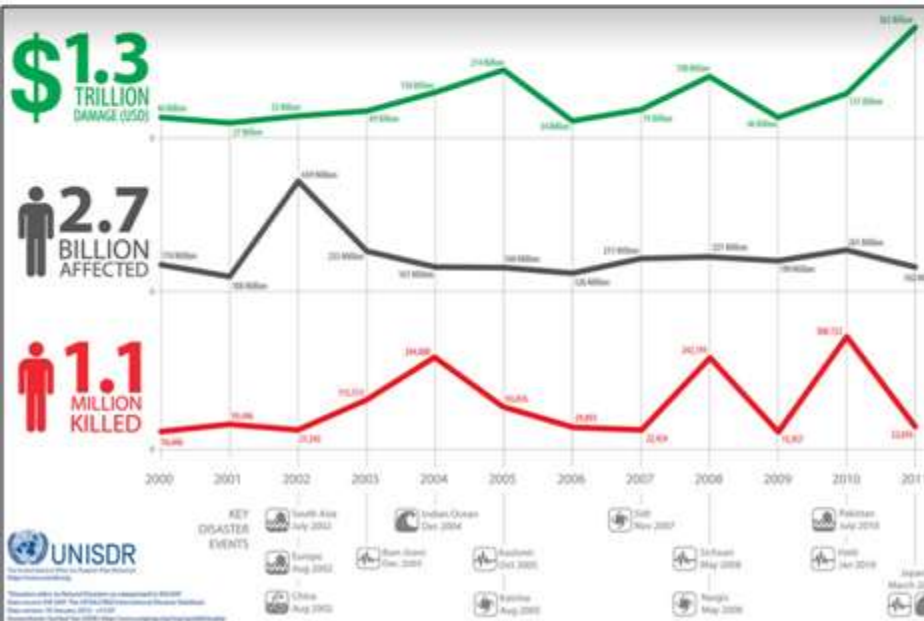
Vegetation Carbon Pool

- Assessment of terrestrial vegetation biomass in the country using ground sampling and satellite remote sensing data
- To generate geospatial data of the terrestrial phytomass Carbon of India along with estimates of uncertainty
- APPROACH
 - Estimate by a combination of field work, geospatial modeling, grid-wise C density (biomass contribution) of forests, trees outside forest (TOF), crop & other vegetation.
 - Grid-wise area under each of land cover category above for reference year is obtained by remote sensing.

Impact of Flooding



- Globally, climate change has resulted in an economic loss of \$300 billion every year.
- Disasters cost India \$10bn per year which includes more than \$7 billion loss on account of floods.
- India has more of its annual GDP exposed to river flooding each year on average, than any other country.



ANNUAL LOSS

INDIA'S AVERAGE ANNUAL LOSS BY DISASTERS

Earthquakes	19
Cyclones	447
Storm surge	727
Tsunami	1,160
Flood	7,472
Total	9,825

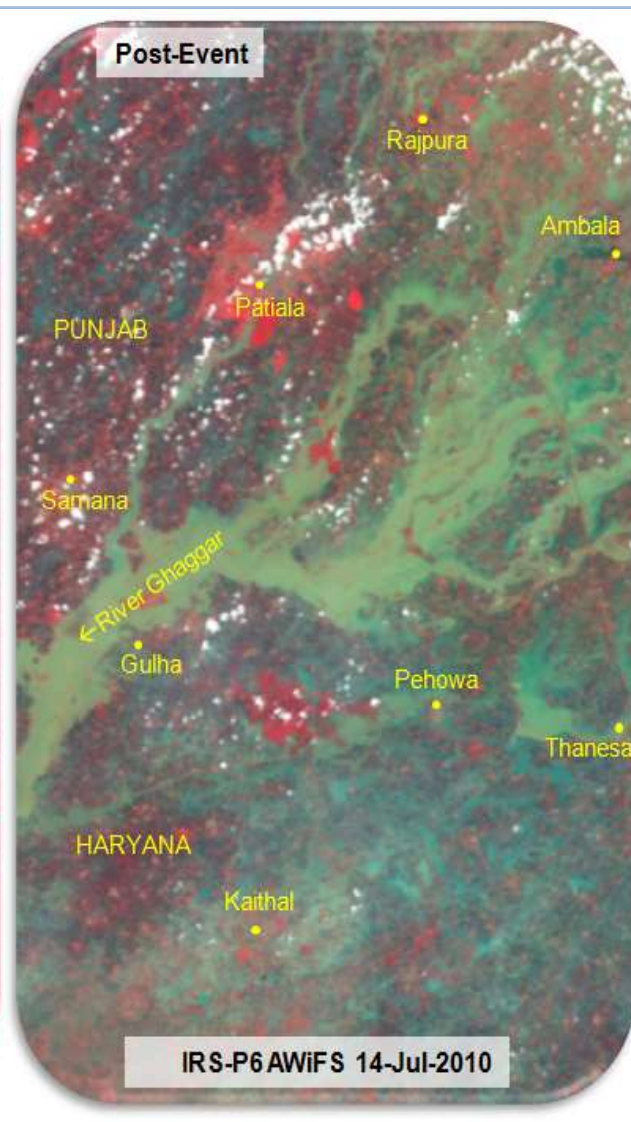
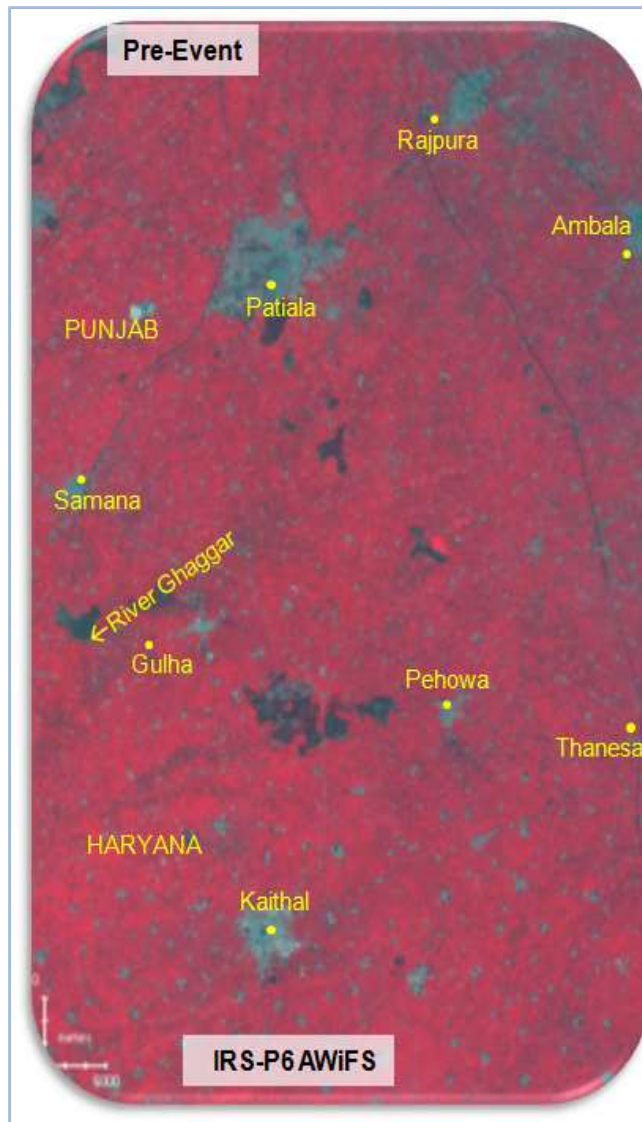
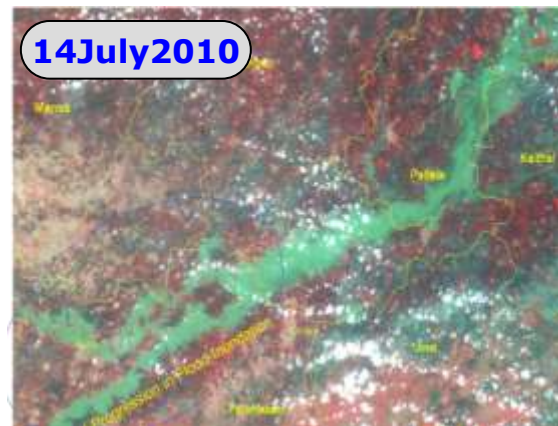
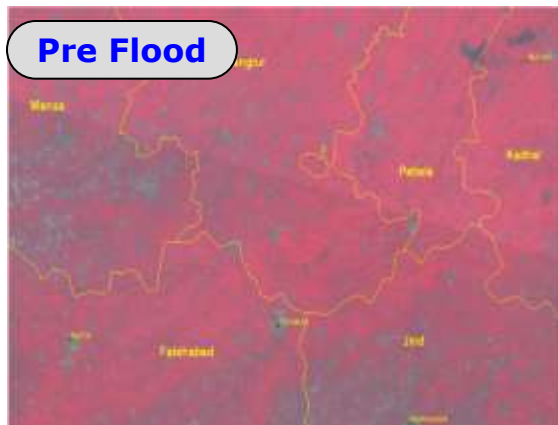


Note: Figures in million \$

Source: Global Assessment Report 2015 of UN office for Disaster Risk Reduction

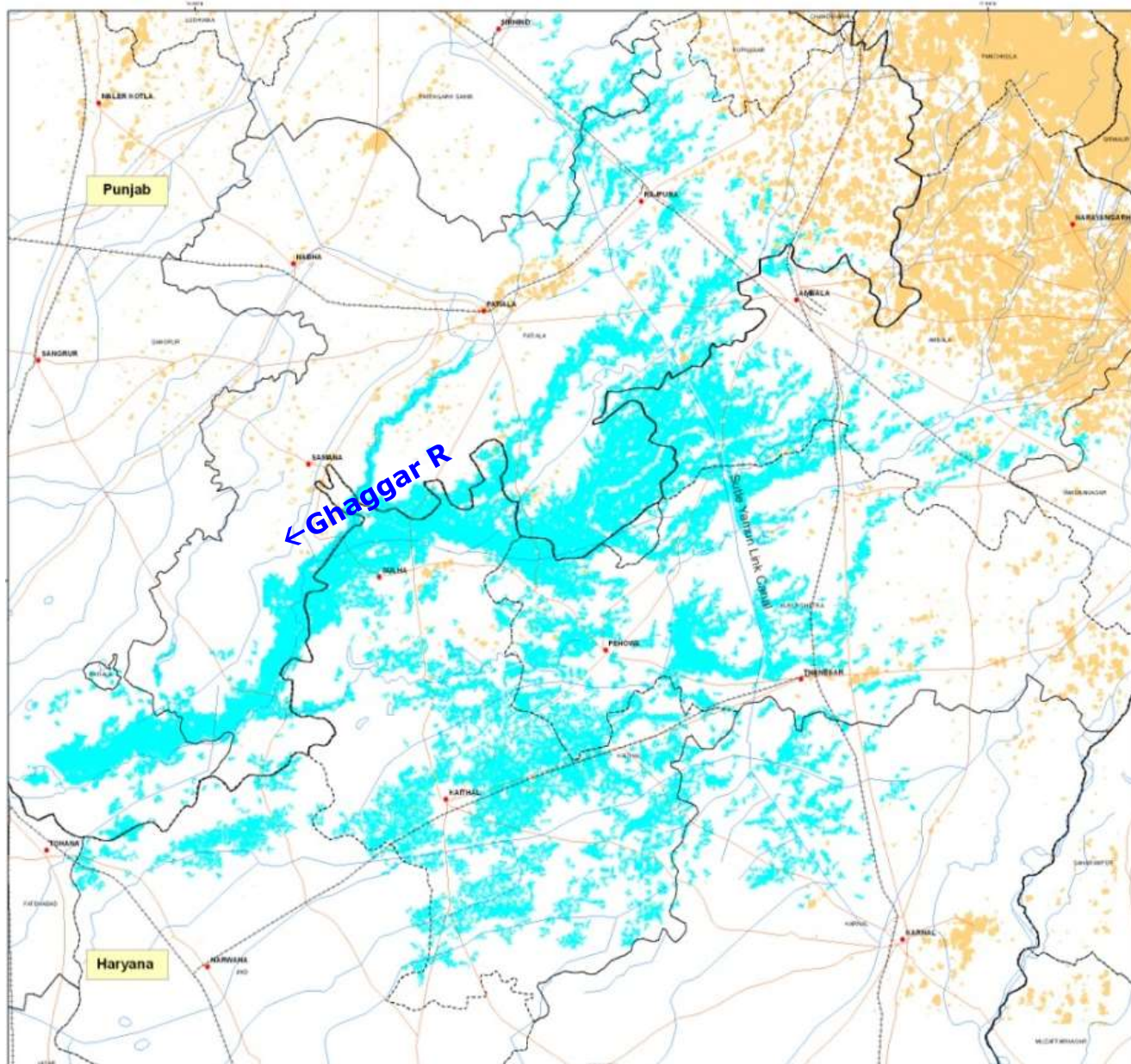
DRR: HFA 2005-15 & POST 2015 SENDAI, JAPAN
March 2015

Floods in Punjab & Haryana (July 2010)

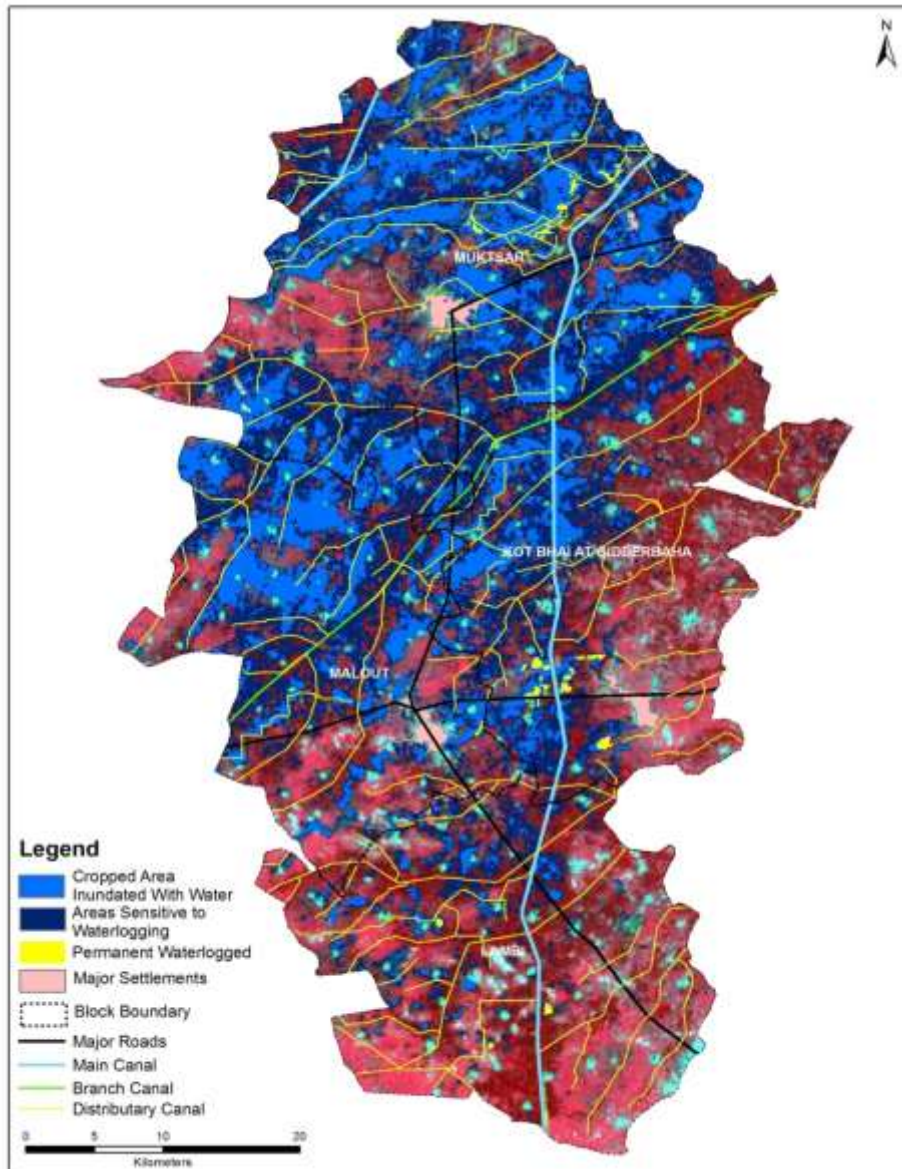


Flood Inundated Areas in part of Punjab & Haryana State

Based on the analysis of IRS P6 AWiFS data of 09-July-2010



Classification of satellite imagery of Sri Muktsar Sahib district using MNDWI

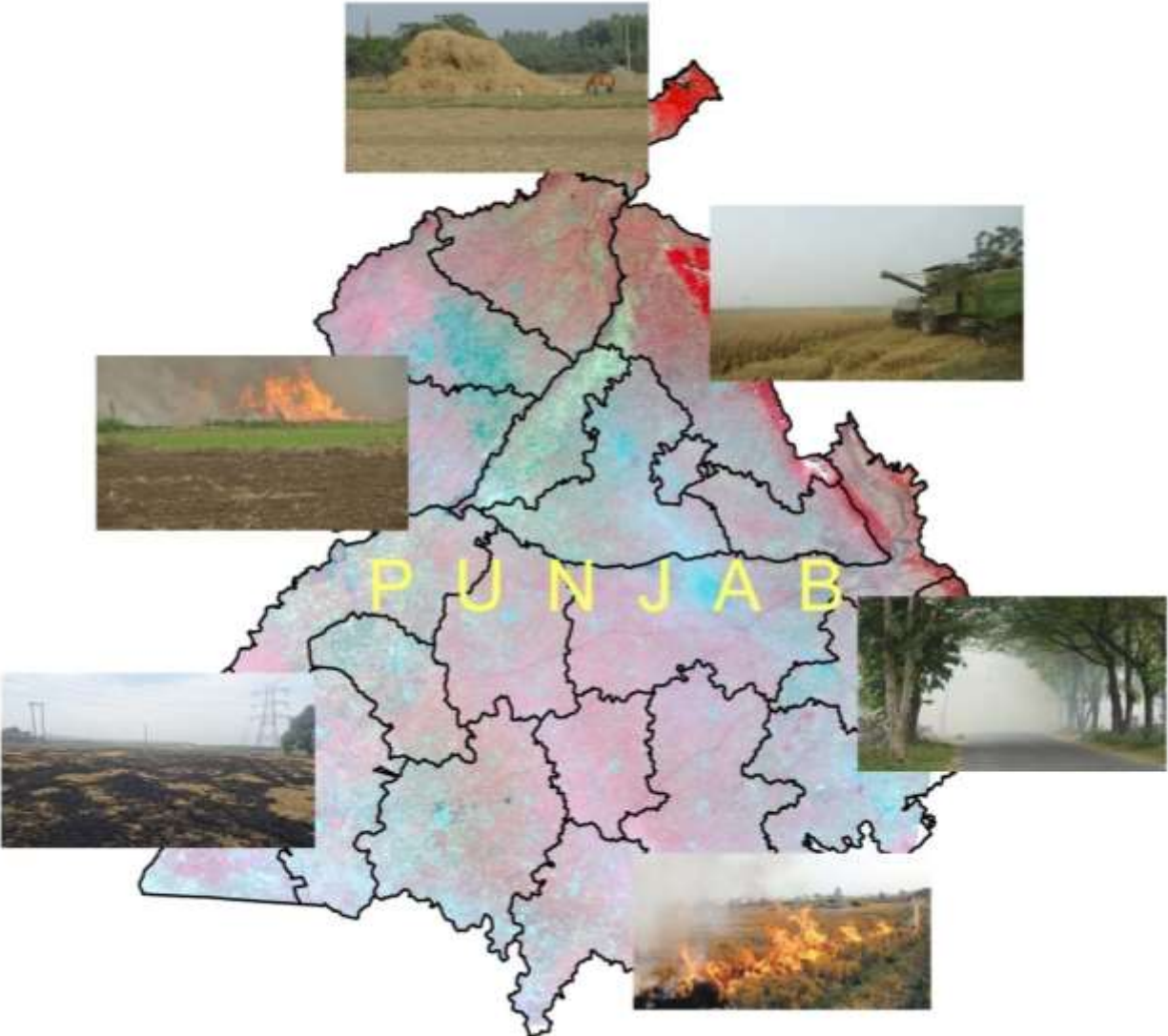


MNDWI = (Green-SWIR)/(Green+ SWIR)
where **Green** is a green band
SWIR is the short wave infrared band

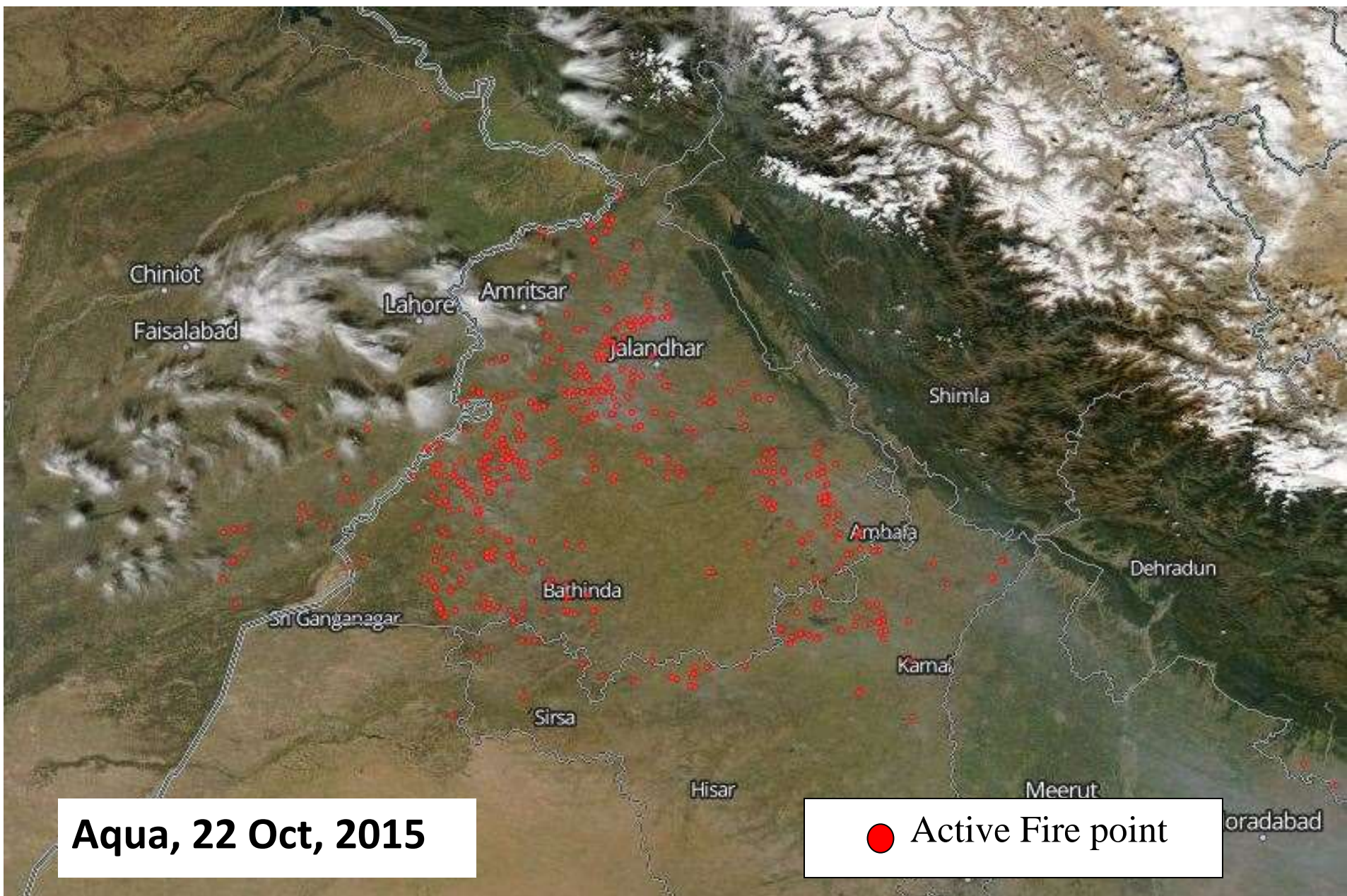
- Resourcesat-2 of 26th August 2013
- Four spectral bands : band-2 (VIS), band-3 (VIS), band-4 (NIR) and band-5 (SWIR)
- Maximum waterlogging occurred in the area between 15 and 21 August 2013 due to high rainfall

MNDWI- Modified Normalized Difference Water Index

STUDY TO MONITOR BURNING OF PADDY STRAW IN AGRICULTURAL FIELDS



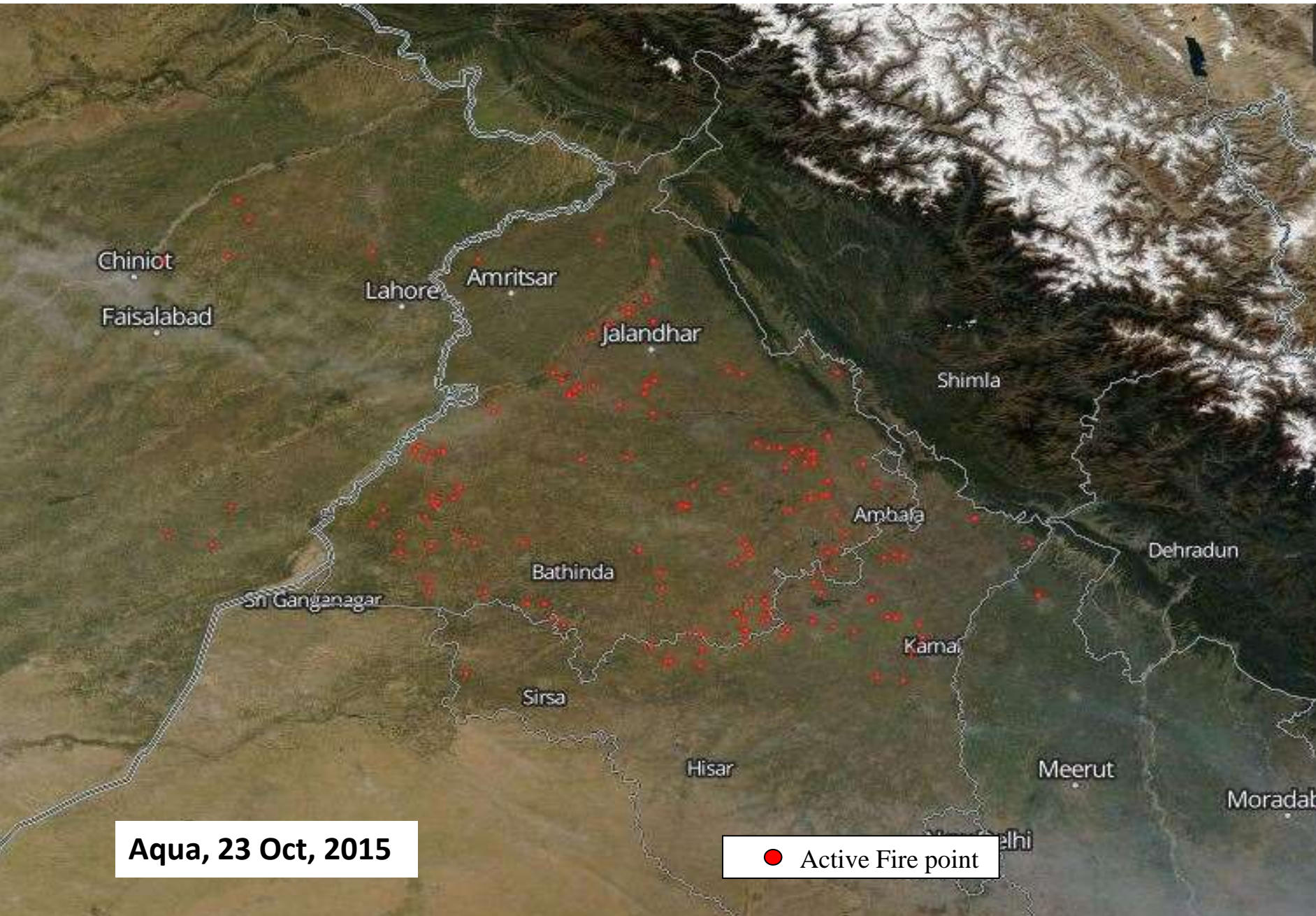
Active fire points overlaid on MODIS satellite imagery



Aqua, 22 Oct, 2015

● Active Fire point

Active fire points overlaid on MODIS satellite imagery

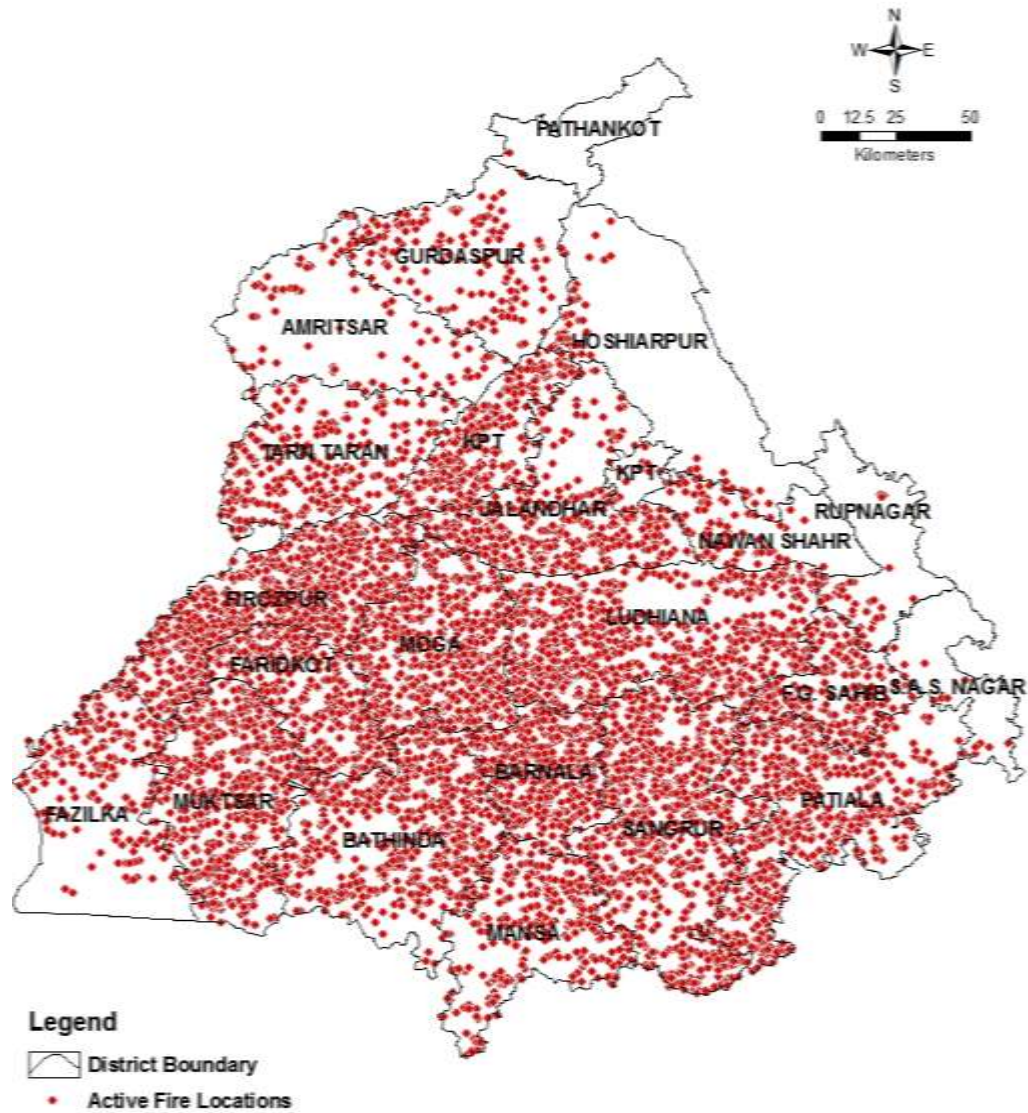


Aqua, 23 Oct, 2015

● Active Fire point

Active Fire Locations Detected by MODIS in Punjab

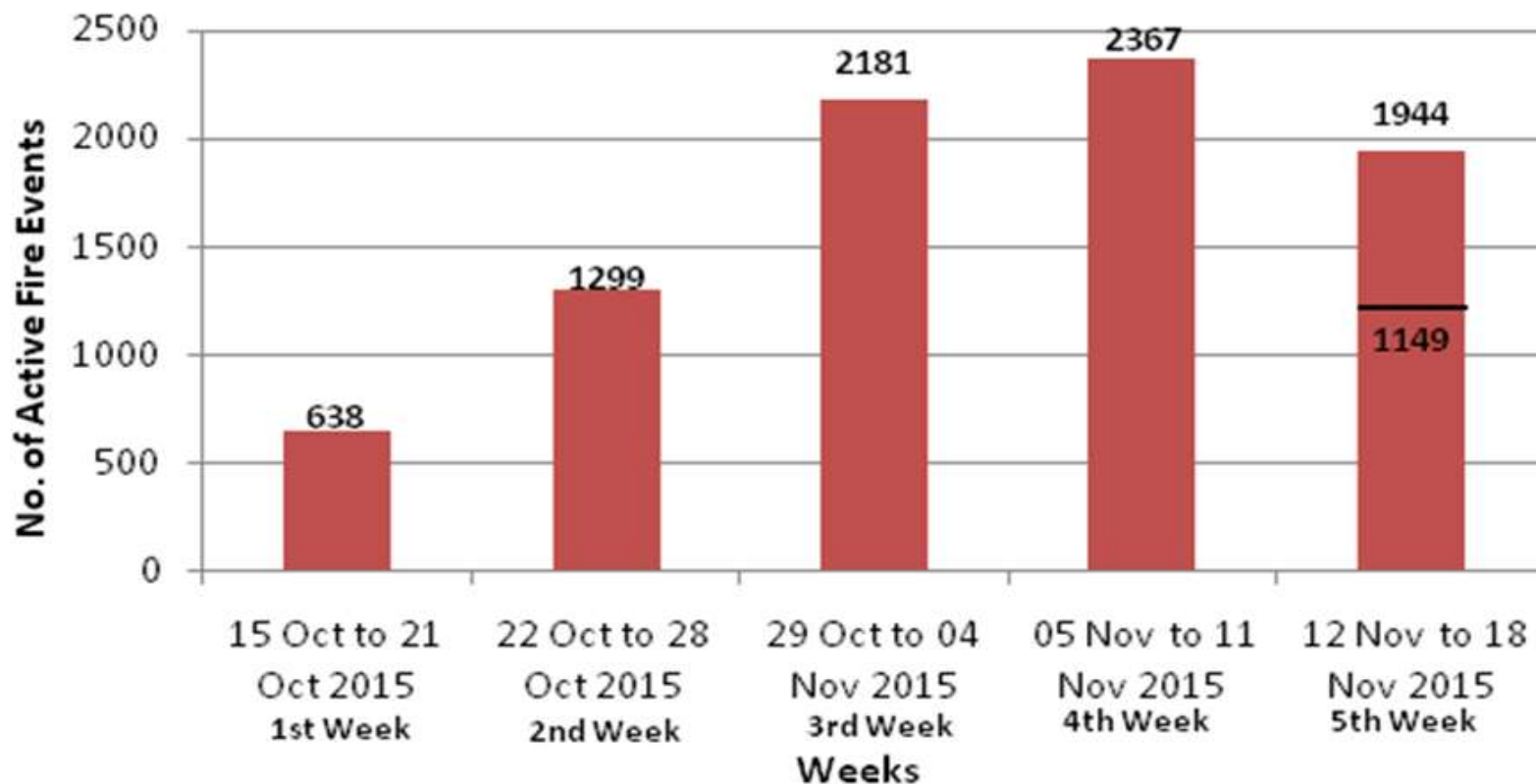
15-Oct-2015 to 15-Nov-2015



Note: As these points are captured by MODIS/Terra (10:30 am) and Aqua (1.30 pm) during their time of pass, the number of fire events may be more than those shown in the map.

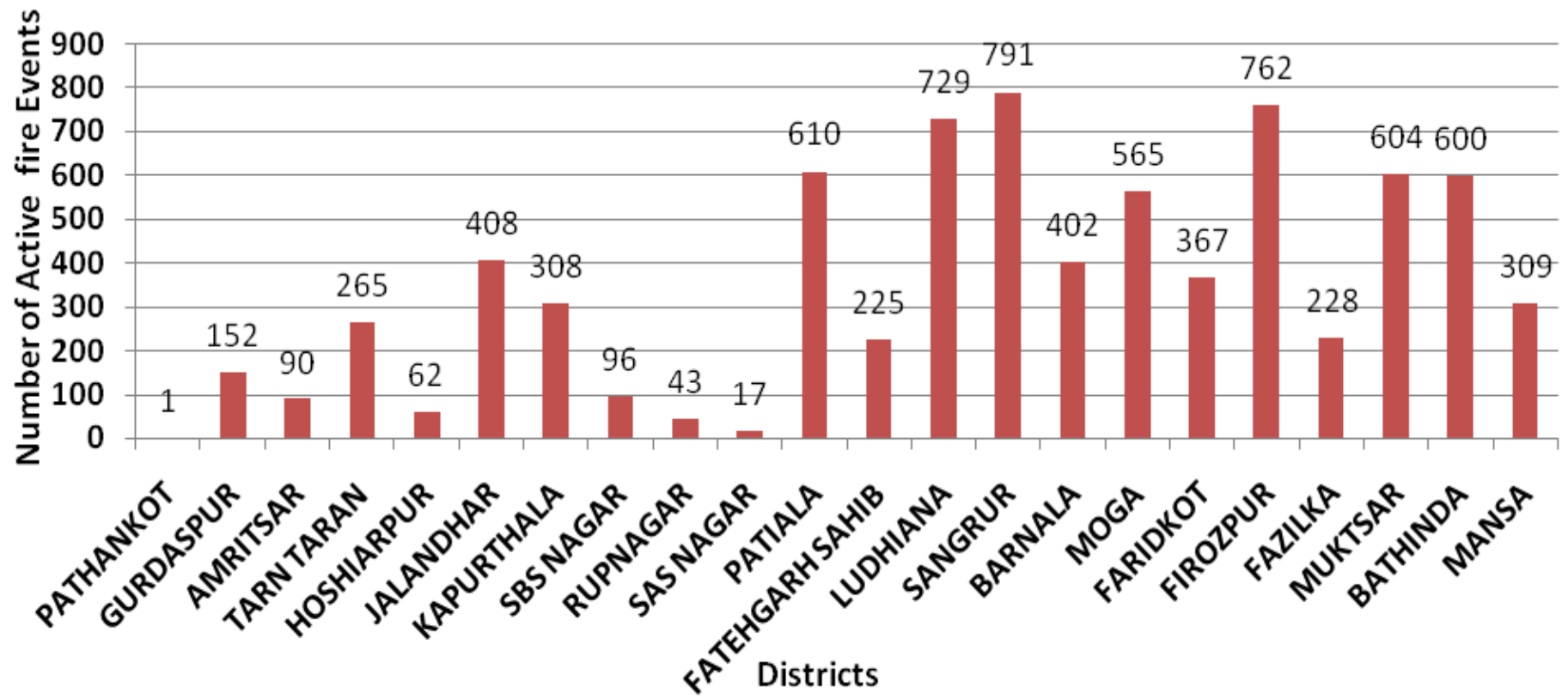
Week-wise Fire Events for the Period 15 October to 18 November 2015:

WEEKLY FIRE EVENTS (PUNJAB)

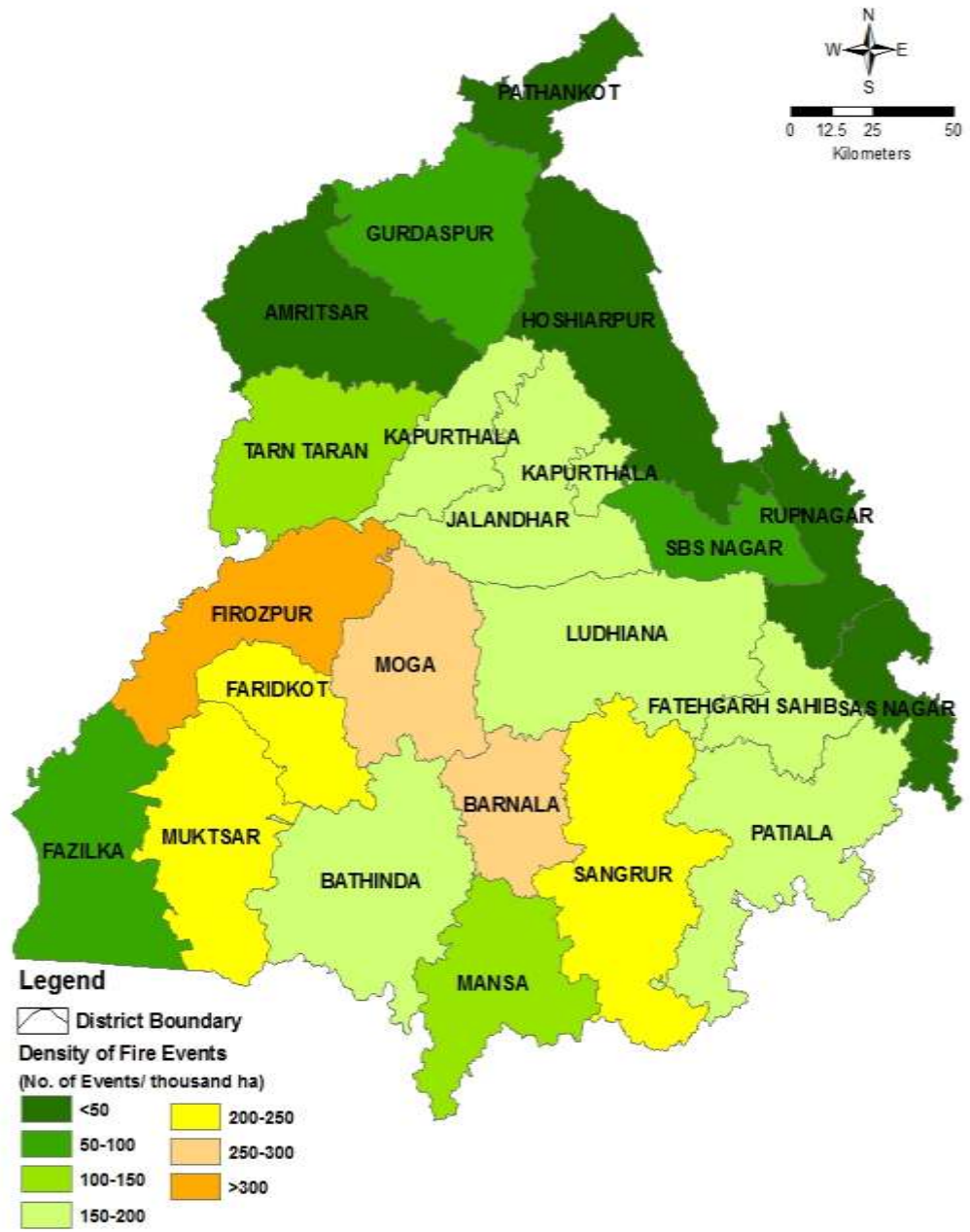


District-wise Total Fire Events for the Period 15 October to 15 November 2015:

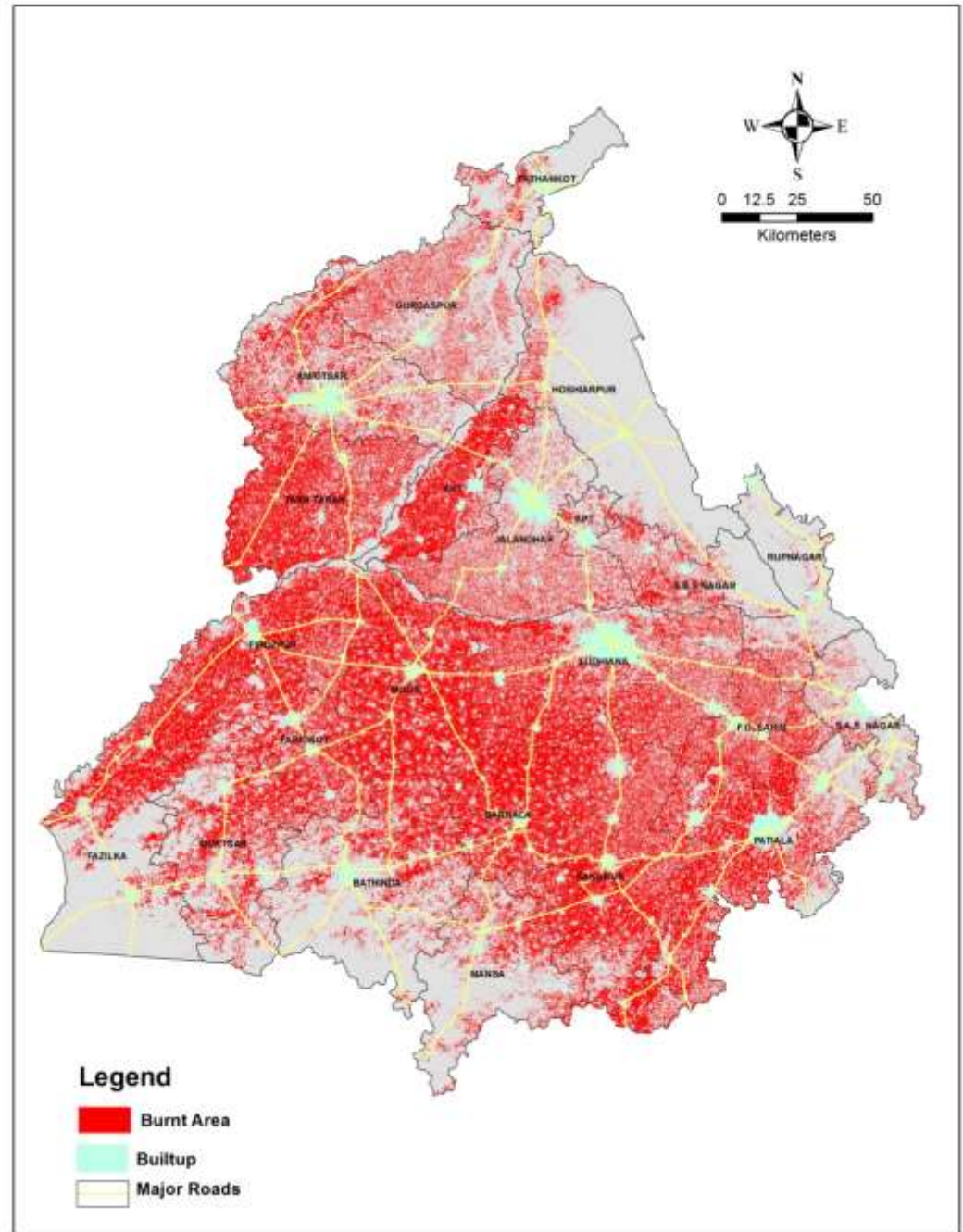
Number of fire Events in Different Districts of Punjab
15 Oct to 15 Nov 2015



District-wise Fire Event Density: Punjab 15-Oct-2015 to 15-Nov-2015

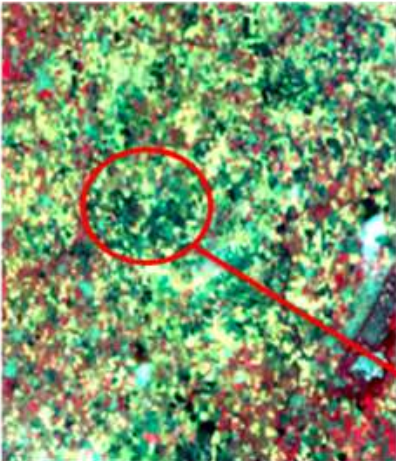


*Classified
burnt area in
Punjab from
satellite data
during the
period of
15-Oct to
15-Nov-2015*

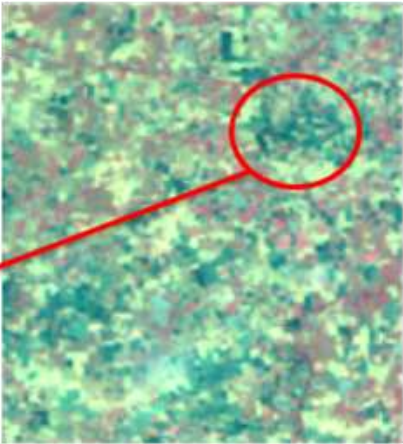


Identified burnt area in Punjab using IRS R2 AWiFS data, 18 October 2015

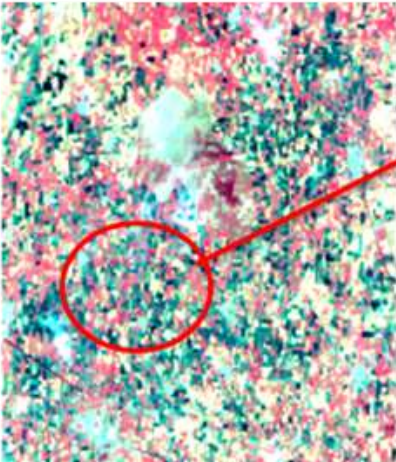
Burnt Area in Firozpur District



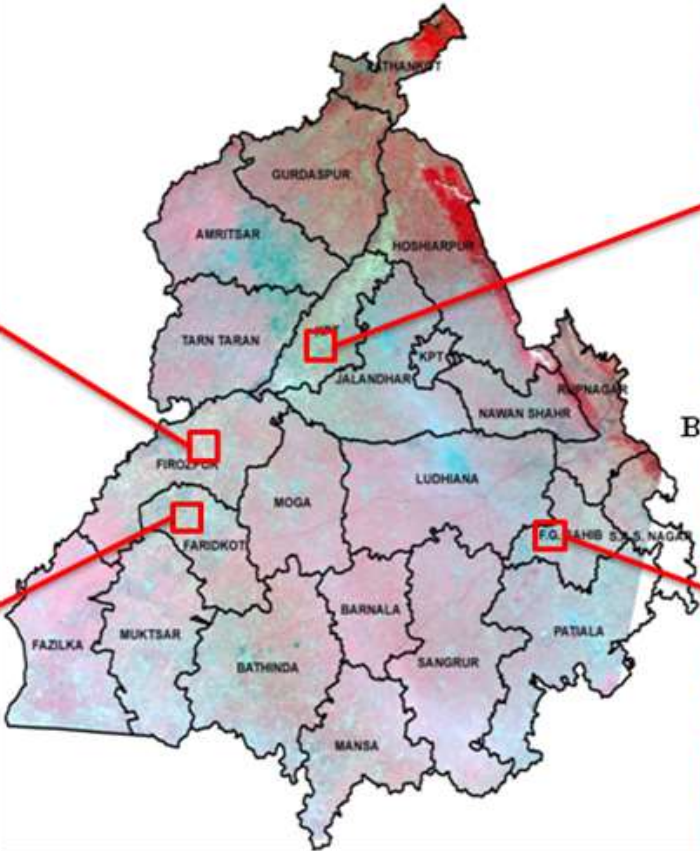
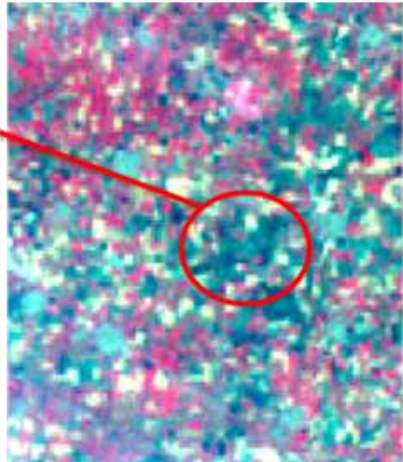
Burnt Area in Kapurthala District



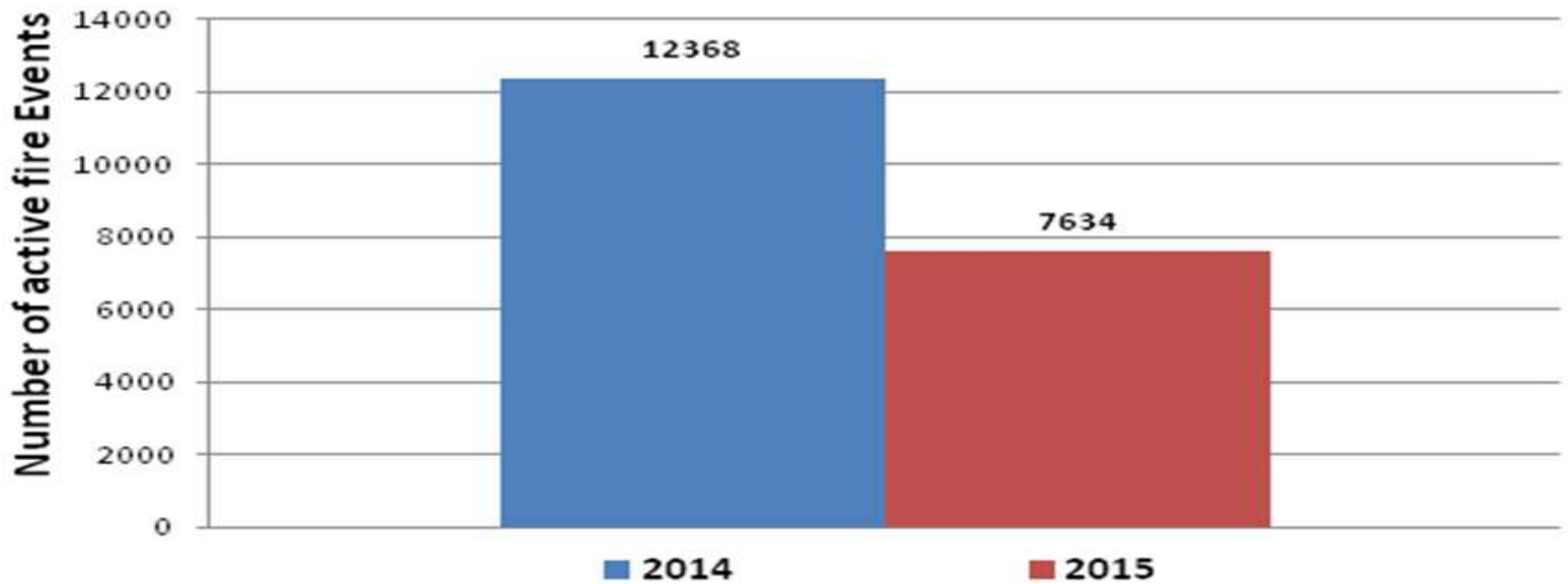
Burnt Area in Faridkot District



Burnt Area in Fatehgarh Sahib District



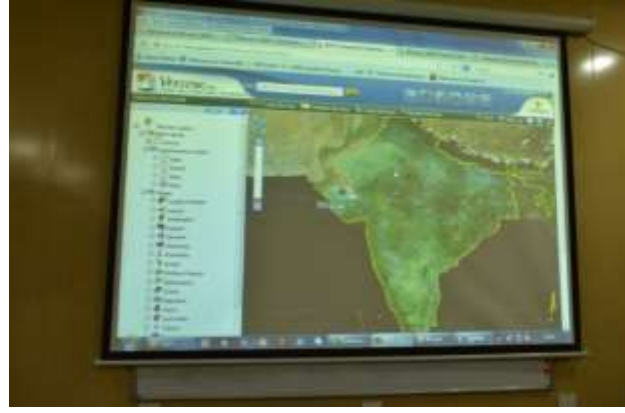
Number of active fire Events in Districts of Punjab 15 Oct to 15 Nov 2014 & 15



✓ Burning of crop residue may be a regional incident but its impact is not bound to a specific area, state or country. This issue is of national concern and all the states should act together to mitigate the menace

Capacity Building & Data Dissemination

Space Based Information Support for Decentralized Planning (SISDP)



LUDHIANA SCAN

Workshop

A two-day workshop on "Space-based Information Support for Decentralised Planning" is being organised by the Punjab Remote Sensing Centre (PRSC) under the aegis of the department of space, GS Sandhu, Financial Commissioner (Development), inaugurated the workshop and launched the new website of

the PRSC, www.prsc.gov.in. Dr B Pateriya, director, PRSC, urged the departments to participate in the generation of data for decentralised planning. Dr SK Srivastava, Raja Shekhar, Dr Harish Karnatak from the department of space and Dr VK Verma from the PRSC gave an overview of the project data requirements, current status and future plans of the project. About 50 officers are attending the workshop.

Awareness Workshop

Space Based Information Support for Decentralized Planning (SISDP)



Interaction and Discussion with Villagers at Pakhowal, 10 December 2015

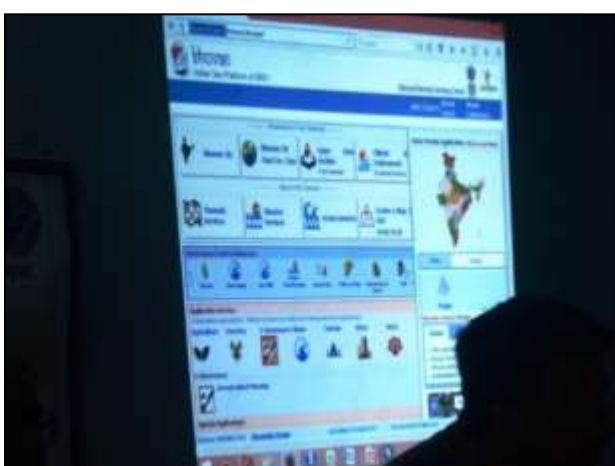


Awareness Workshop

Space Based Information Support for Decentralized Planning (SISDP)



Demonstration and Awareness to students at Pakhowal, 10 December 2015



PRSC on Bhuvan Portal

BHUVAN PUNJAB

<http://bhuvan.nrsc.gov.in/state/PB>

The screenshot displays the Bhuvan web portal interface for Punjab. At the top, the browser address bar shows the URL bhuvan.nrsc.gov.in/state/PB. The page header includes the Bhuvan logo (Indian Geo-Platform of ISRO) on the left and the NRSC logo and other institutional emblems on the right. The main title is "Bhuvan - Punjab".

Below the header, there is a search bar with the text "Enter City or Lat, Lon(ex:chennai or 13.2,80.)" and a "Find" button. To the right of the search bar are map style selection buttons: "Map", "Satellite", "Hybrid", "Terrain", and "More".

On the left side, there is a sidebar menu with the following sections:

- State: Punjab (with a "Clear" button)
- Show Punjab Only
- Administrative Layers**
 - District Boundary
 - Tehsil Boundary
 - Block Boundary
 - Panchayat Boundary
 - Village Boundary
- Infrastructure Layers**
- Active Agricultural Fire**
- Agriculture & Soils**
- Census (2011)**
- Disaster Specific Datasets**

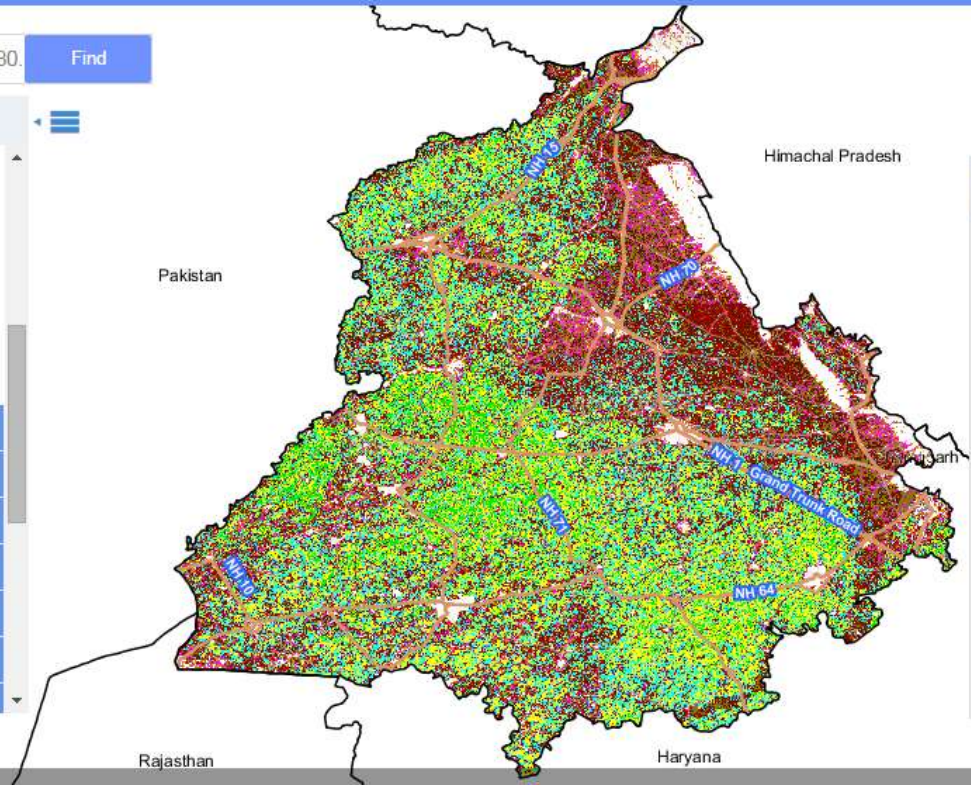
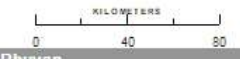
The main map area shows the state of Punjab with its district boundaries highlighted in orange. Major cities and towns are labeled, including Pathankot, Amritsar, Jalandhar, Ludhiana, and Patiala. The map also shows neighboring states: Himachal Pradesh to the north, Rajasthan to the west, and Haryana to the south. A scale bar at the bottom left indicates distances up to 80 kilometers. The bottom right corner shows the coordinates 78.94, 32.16.

Enter City or Lat,Lon(ex:chennai or 13.2,80)



State

- Cropping System (Raster Data)
 - Crop Rotation
- Area Under Crops (Raster Data)
- Agro-Ecological Zones
- Warehouse & Mandi
- Agro-Climatic Zones

- Census (2011)**
- Disaster Specific Datasets**
- Election - 2014**
- Forest**
- Geology & Mining**
- Ground Water**
- Health**



Legend

-  Rice -Wheat
-  Cotton-Wheat
-  Maize Based
-  S.Cane based
-  Rice-Other Crops
-  Other crops-Wheat
-  Cotton-Other Crops
-  Triple Cropping
-  Other Rotation
-  Non Agriculture

Enter City or Lat,Lon(ex:chennai or 13.2,80) Find

State Punjab Clear

- Census (2011)**
- Disaster Specific Datasets**
 - Flood
 - 2013
 - Punjab
 - Waterlogging(Muksar)
 - 14-07-2010
 - 1988 and 1993
 - Seismic Zone
- Election - 2014**
- Forest**
- Geology & Mining**

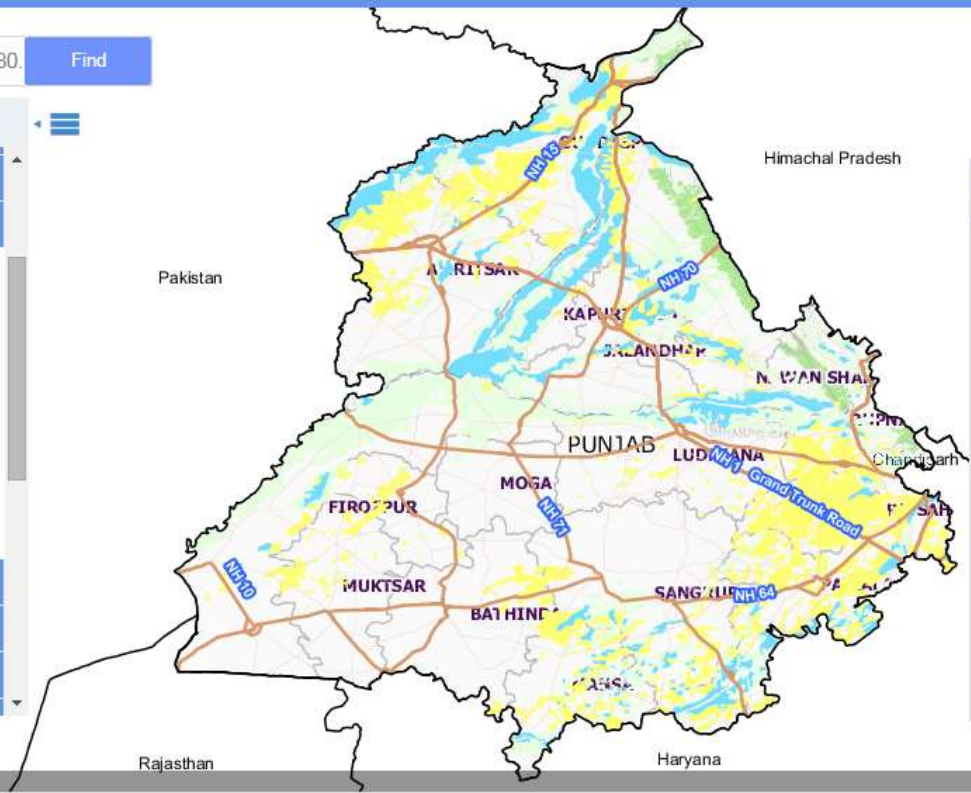
Map Satellite Hybrid Terrain More

Tools +

Legend ✕

1988 and 1993

- Flooded in 1988
- Flooded in 1993
- Flooded in 1988 and 1993



Enter City or Lat,Lon(ex:chennai or 13.2,80). Find

State Punjab Clear

- Census (2011)
- Disaster Specific Datasets
- Election - 2014
 - Parliamentary Constituencies
 - Assembly Constituencies
 - Kanungo Circle
 - Patwar Circle
 - Polling Stations 
- Forest
- Geology & Mining
- Ground Water
- Health



Map Satellite Hybrid Terrain More

Tools +

Legend ✕

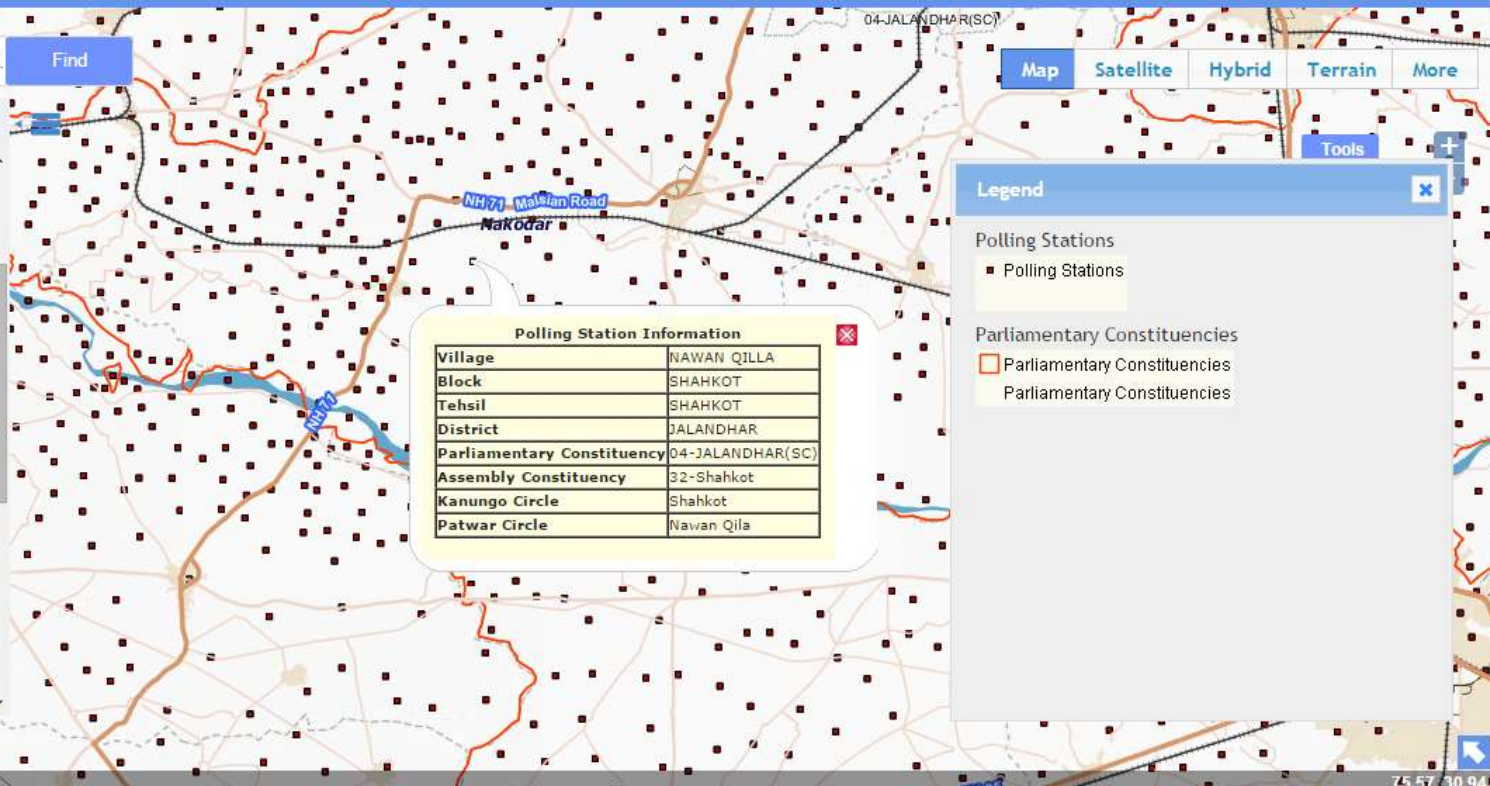
Parliamentary Constituencies

- Parliamentary Constituencies
- Parliamentary Constituencies




Enter City or Lat, Lon(ex: chennai or 13.2,80. Find

Map Satellite Hybrid Terrain More

- State **Punjab** Clear
- Census (2011)**
 - Disaster Specific Datasets**
 - Election - 2014**
 - Parliamentary Constituencies
 - Assembly Constituencies
 - Kanungo Circle
 - Patwar Circle
 - Polling Stations 
 - Forest**
 - Geology & Mining**
 - Ground Water**
 - Health**



Legend

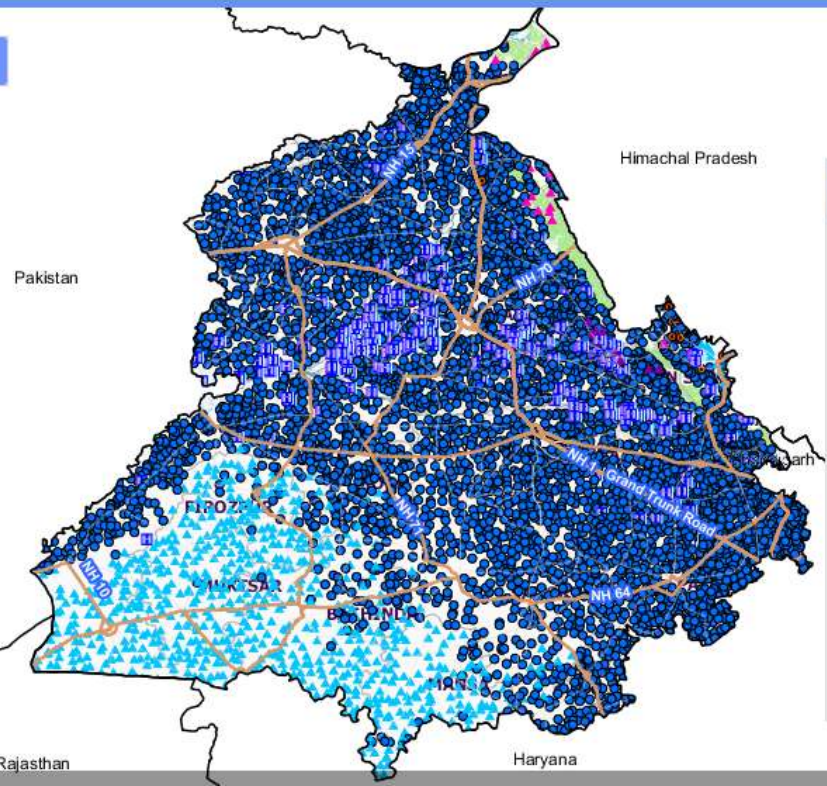
-  Polling Stations
-  Parliamentary Constituencies
-  Parliamentary Constituencies

KILOMETERS 0 4 8

Enter City or Lat,Lon(ex:chennai or 13.2,80)








State **Punjab**

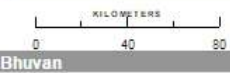
- Census (2011)**
- Disaster Specific Datasets**
- Election - 2014**
- Forest**
- Geology & Mining**
- Ground Water**
 - Ground Water Prospects
 - Rural Drinking Water Sources & Quality 
 - GreyBlocks 2004 
 - Water Level 
- Health**



Legend

Rural Drinking Water Sources & Quality

-  Canal
-  Handpump
-  Mini Tubewell
-  Percolation Well
-  Spring Water
-  Tubewell
-  Well Based

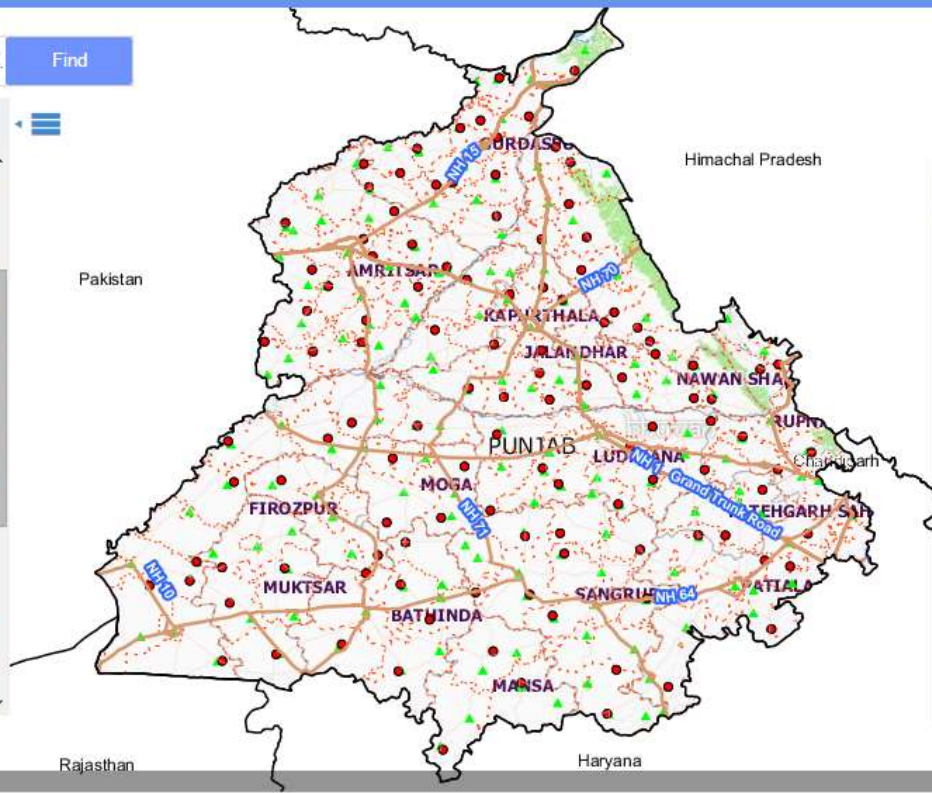


Enter City or Lat,Lon(ex:chennai or 13.2,80.)

Find

State **Punjab** [Clear](#)

- Census (2011)**
- Disaster Specific Datasets**
- Election - 2014**
- Forest**
- Geology & Mining**
- Ground Water**
- Health**
 - Health Sectors
 - Health Institutions
 - Primary Health Centers
- Irrigation**
- Land Use / Land Cover**

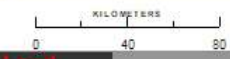


Map Satellite Hybrid Terrain More

Tools + -


Legend

- Primary Health Centers
 - pb_bik_phc_area_Project
 - PATWAR Boundary
 - Health_Labels
- PB_health_HQ_points_Project
 - Mini Primary Health Center (MPHC)
 - PB_health_PHC_HQ
 - PHC Block H.Q.







PUBLIC HEALTH & GROUND WATER GIS

[←](#) [→](#) [C](#) [H](#) [bhuvan-staging.nrsc.gov.in/projects/lgw/gw.php#](#)



bhuvan
Gateway to Indian Earth Observation

Public Health and Ground Water GIS: Punjab

Welcome User    

National Remote Sensing Centre

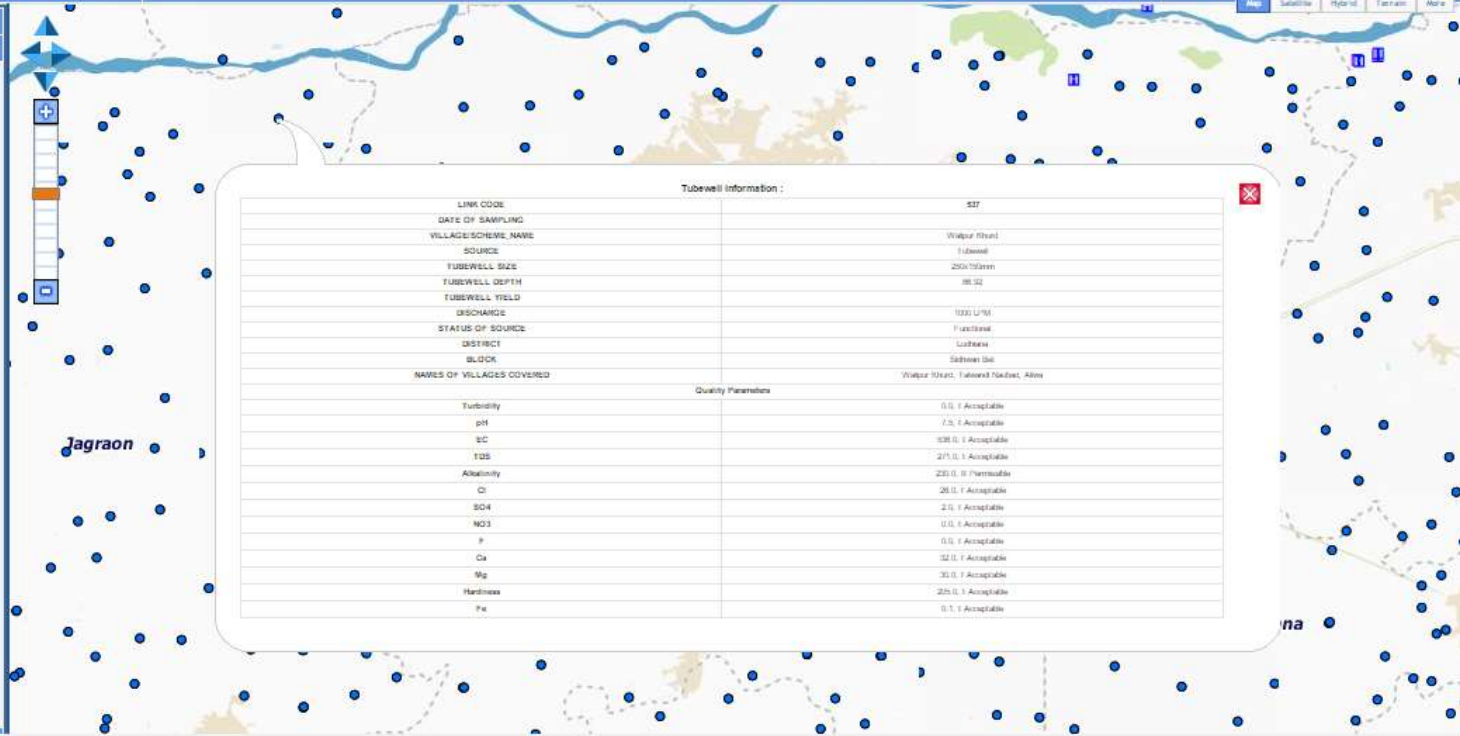
Enter City or Lat,Lon(ex:chennai or 1)

Ground Water GIS

Water Information

- District
- Block
- Road
- Rail
- Drainage (Polygon)
- Drainage (Line)
- Canal
- Settlement (Polygon)
- Rural Water Supply Sources (RWSS)
 - Wells from all Sources
 - Canal
 - Handpump
 - Mini Tubewell
 - Percolation Well
 - Spring Water
 - Tubewell
 - Well Based
 - RWSS - Water Quality Parameters
 - Heavy Metals
 - Water Level
- Lithology-Landform Controlled Aquifers (Ground Water Prospects)

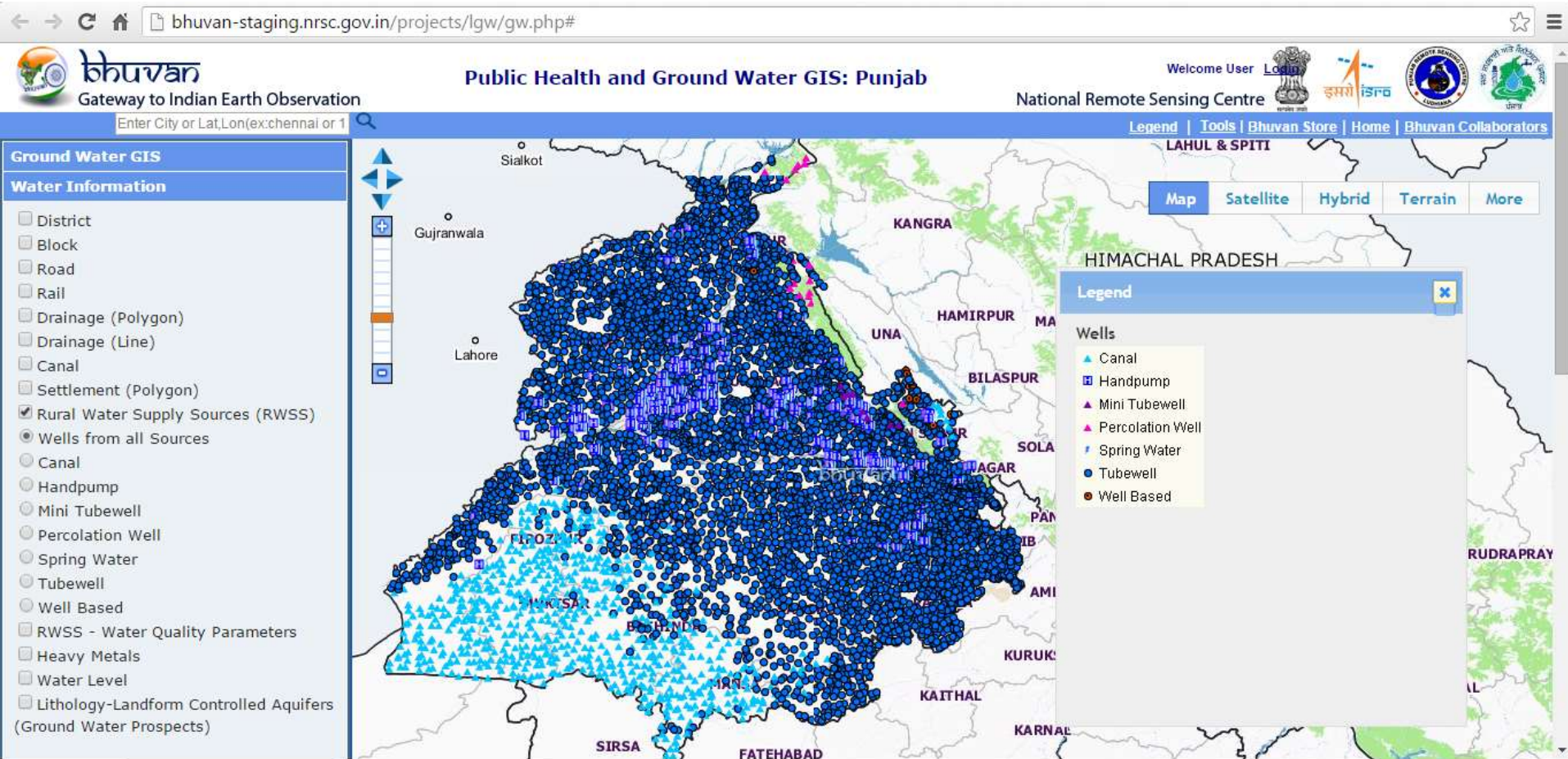
Zoom to District:



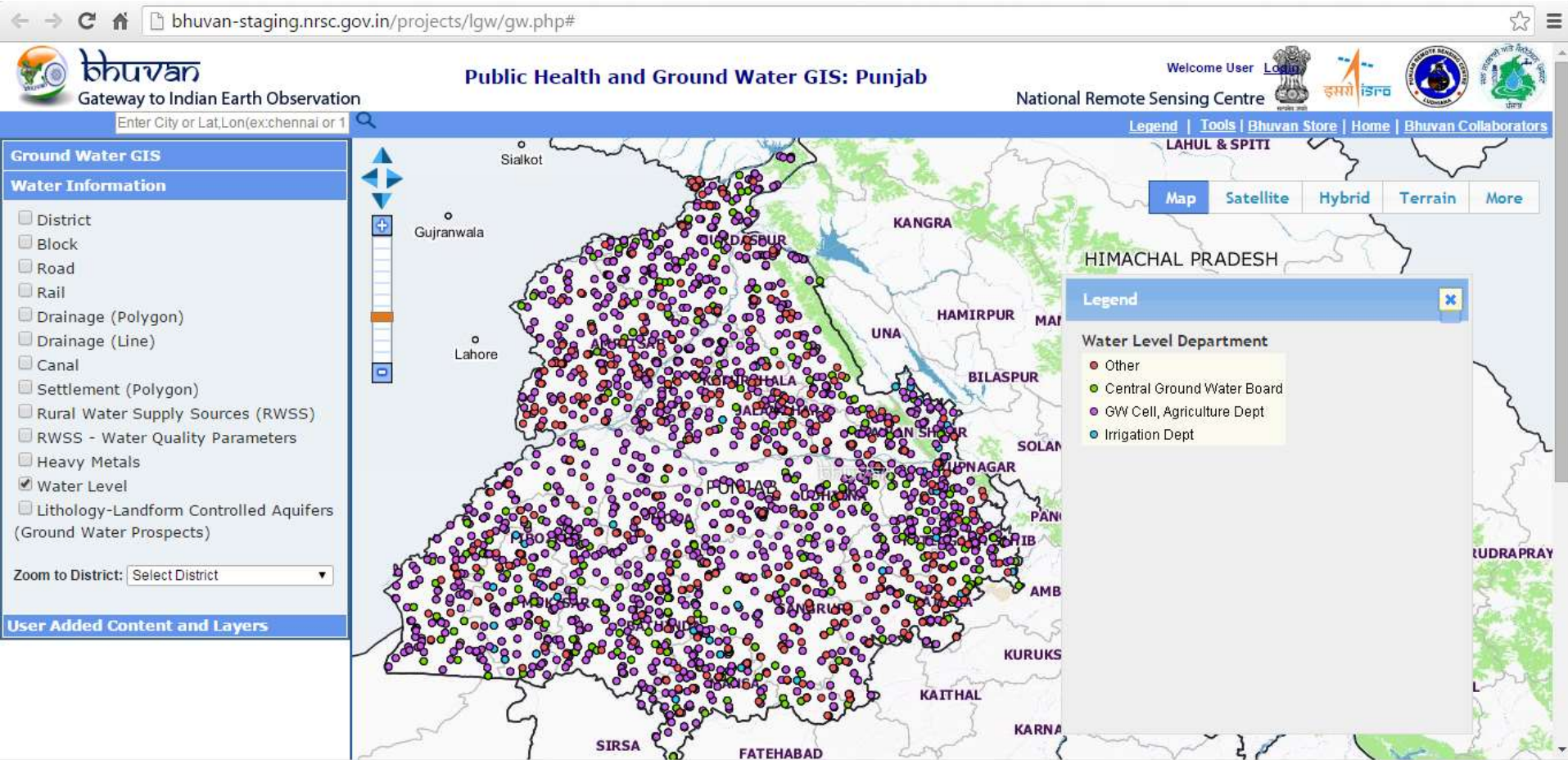
Tubewell Information :

LINK CODE	537
DATE OF SAMPLING	
VILLAGE/SCHEME NAME	Walpur Khurd
SOURCE	Tubewell
TUBEWELL SIZE	250/100mm
TUBEWELL DEPTH	88.92
TUBEWELL YIELD	
DISCHARGE	1000 L/HR
STATUS OF SOURCE	Functional
DDISTRICT	Ludhiana
BLOCK	Sidhwan Dist
NAMES OF VILLAGES COVERED	Walpur Khurd, Talsand Nandwal, Akim
Quality Parameters	
Turbidity	0.0, 1 Acceptable
pH	7.0, 1 Acceptable
EC	1000.0, 1 Acceptable
TDS	215.0, 1 Acceptable
Alkalinity	220.0, 0.9 Ferrous
Cl	26.0, 1 Acceptable
SO4	2.0, 1 Acceptable
NO3	0.0, 1 Acceptable
F	0.0, 1 Acceptable
Ca	32.0, 1 Acceptable
Mg	30.0, 1 Acceptable
Hardness	220.0, 1 Acceptable
Fe	0.1, 1 Acceptable

Public Health & Ground Water GIS



Public Health & Ground Water GIS



Tourism WebGIS : Amritsar

← → ↻ 🏠 bhuvan.nrsc.gov.in/tourism/tourism.php# ☆ ☰

 **Indian Geo-Platform of ISRO**

Tourism : Amritsar

Welcome Bhuvanite Visit Stay Food Hubs Services Travel Economic Religious Shopping Others Heritage Walk Download

Map Satellite Hybrid

See the City Search

[Top Destination](#) [Travel](#) [Hotel](#)

- Bagh Ramanand
- Toba Bhai Salo Ji
- Gurudwara Santokhsar Sahib
- Town Hall
- Jama Masjid
- Gurudwara Lohgarh Sahib
- Guru Ka Mahal
- Saraghari Gurudwara
- Gurudwara Baba Deep Singh Ji
- Gurudwara Ramsar
- Jalianwala Bagh

Legend

Airport	Main roads
Bridges flyovers	Parking area
Bus terminal	Parks
Canal	Plantation
Drain	Public utilities
Fort	Railway line
Govt. land	Railway station
Govt. Office	Recreational
Hansali	Religious place
Harmandir Sahib	Road
Historical Site	Round about
Industrial	School
Institution	Truck terminus
Kacha Road	University
Lake pond	Water works

Golden Temple



[Know more](#)

Close

[Legend](#) [Contact Us](#) [Disclaimer](#) [Feedback](#)

Municipal GIS : Ludhiana

← → ↻ 🏠 bhuvan.nrsc.gov.in/urban/municipalgis/municipal.php

bhuvan
Indian Geo-Platform of ISRO

Ludhiana Municipal GIS
Updated Data for Block-27 of Zone – D Added

Welcome Bhuvanite Amenity Downloads Tools

Municipal GIS for Ludhiana, Punjab

[Services](#) [Information](#) [Downloads](#)
(By Municipal Corporation Ludhiana)

Know Your UID

Search by Ward
Zone: D
Block: 27
Ward: 45

Legend
Use ⓘ to get UID on click

Search by Locality
Enter Locality name

Search by House No.
Enter House No. (Eg.146-A)

[Contact Us](#) [Disclaimer](#) [Feedback](#)

Map Satellite Hybrid

NO-299

PUNJAB BHUVAN

H.NO-7

MODEL TOWN EXT. D

H.NO-67

H.NO-41

Zone No:	ZONE-D
Block No:	027
Ward No:	45
UID No:	04-027-XXXXX-00468-XXX
House No:	250/7D

TANGIBLE BENEFITS

- ❑ Accurate and Scientific assessment of spatio-temporal conditions
- ❑ Economics of Govt. and stake holders—analyzing key concerns
- ❑ Highlighting key areas of Technological innovations
- ❑ Timely flow of information to stake holders
- ❑ Periodic assessment of outcomes
- ❑ Scaling-up of right approaches
- ❑ Bring consistency and improvement in the system

DISCUSSION





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