

MULTI HAZARD VULNERABILITY RISK ASSESSMENT (MHVRA)

and **DISASTER MANAGEMENT INFORMATION SYSTEM (DMIS)**



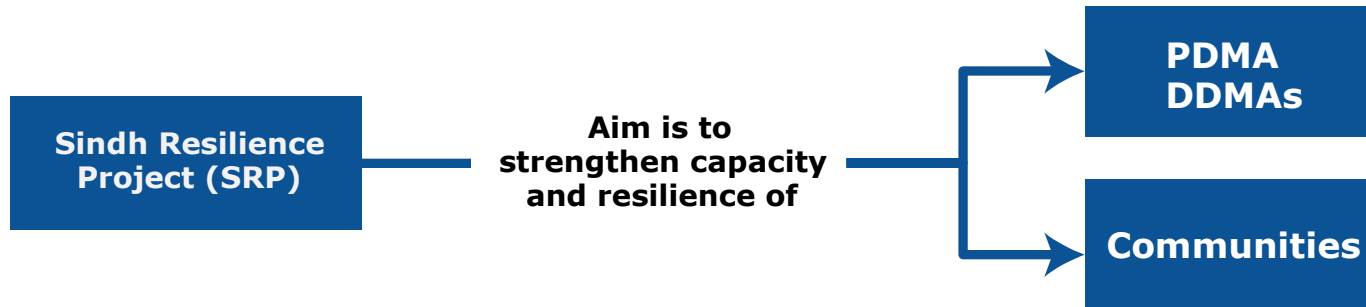
SUPARCO

Mr. AAMIR ALI

General Manager, DH (GIS)
Space Technology Applications Dte

BACKGROUND

Government of Sindh with the financial support of the World Bank is implementing a five years project, titled "Sindh Resilience Project (SRP)"



- **As a vital component in efficient disaster management, SRP (PDMA Component) planned to conduct a Multi Hazard Vulnerability Risk Assessment Study in the Province of Sindh**
- **A contract was signed with SUPARCO on 27th June, 2019**

Conduct of Multi Hazard Vulnerability Risk Assessment (MHVRA) study

Preparation of MHVRA Informed Disaster Management Plans for all districts under study and provincial level plan

Development and operationalization of Disaster Management Information System (DMIS)

OBJECTIVE

Sindh Province up to UC level Covering following hazards:



Flood



Drought



Heat wave



Cyclone and Storm



Earthquake



Tsunami



Cataloguing of historical / past hazardous events



Hazard Assessment



Exposure and Vulnerability Assessment with respect to socio-economic dimensions including:

Livelihood

Agriculture

Population

Buildings

Communication

Transportation

Infrastructure

Strategic assets



Adaptive and Coping Capacity Assessment



Risk Assessment



Atlas Designing

Development of web based integrated Disaster Management Information System (DMIS) containing various modules

MHVRA Maps and Databases

Inventory Store and Relief Distribution

Rapid Response and Rescue Coordination

Rapid Damage Assessment

Vehicle and Pumping Machine Tracking

Video Conferencing

National and International Disaster Warning and Information Integration

Live Streaming and Imagery by Mapping Drones

Mobile Applications for Crowd Sourcing and Warning Dissemination

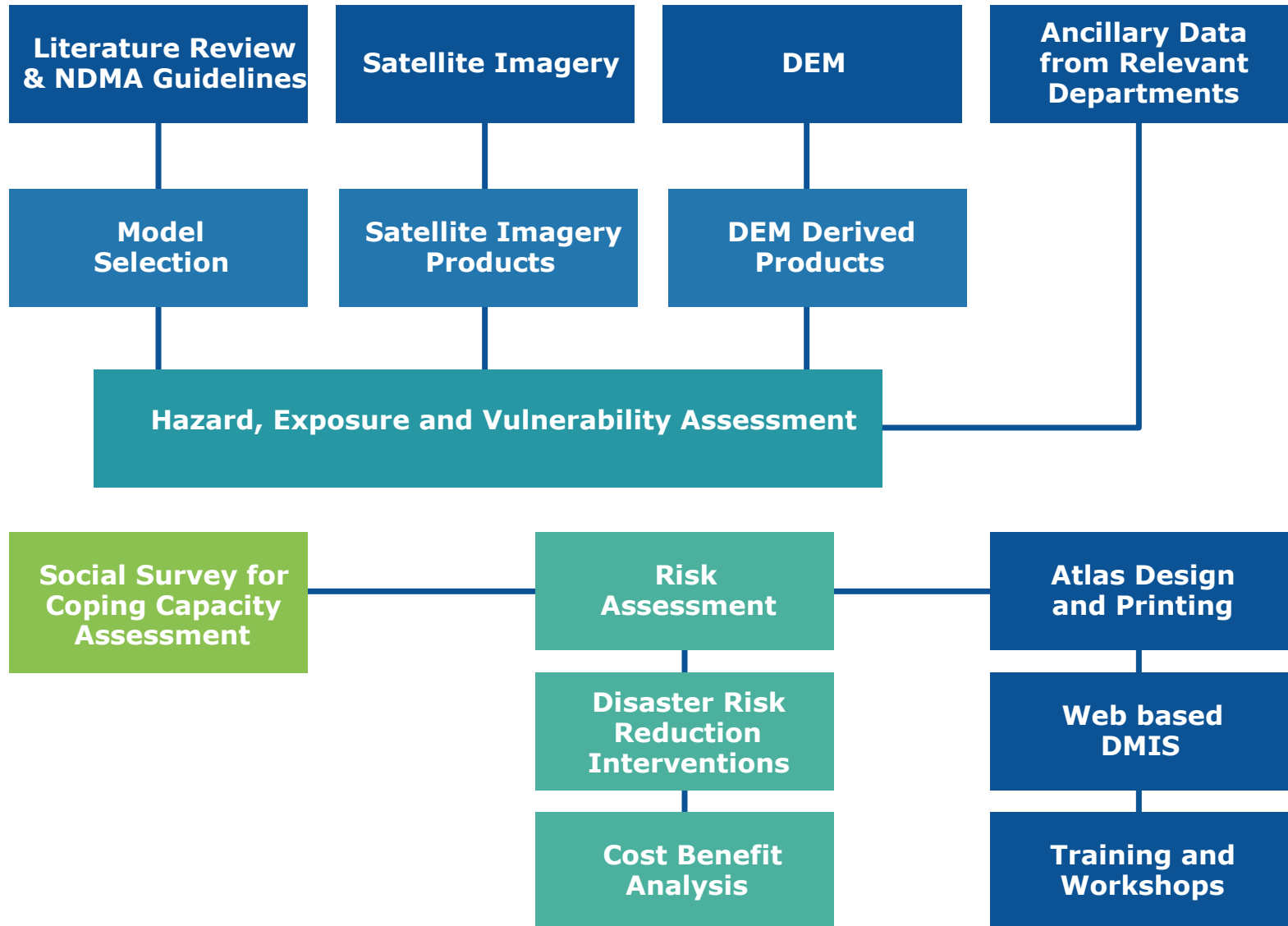
GIS Data Collection and Visualization

**Provincial and District wise
MHVRA Atlases**

**Provincial and District wise MHVRA
Informed Disaster Management Plans**

**Online Disaster Management
Information System**

GENERAL METHODOLOGY



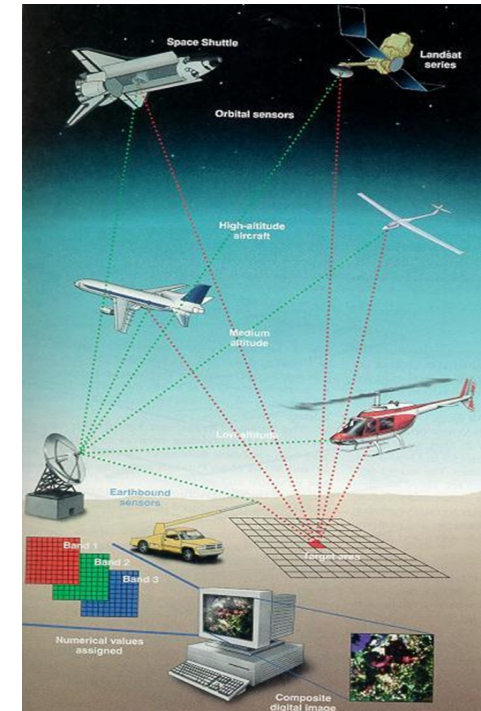
MULTI HAZARD VULNERABILITY RISK ASSESSMENT (MHVRA)

MHVRA METHODOLOGY FLOW CHART



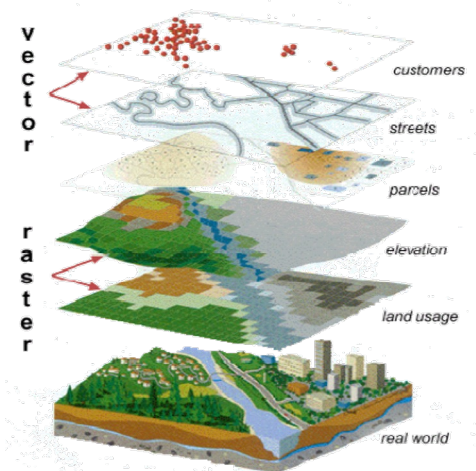
REMOTE SENSING

Remote Sensing is the measurement or acquisition of information of some property of an object by a sensor that is not in physical contact with the object under consideration.



GIS

A Geographic Information System (GIS) is a system designed to capture, store, manipulate, analyze, manage, and present spatial or geographic data



Mapping of hazard occurrences

Preparation and mapping of ancillary parameters for each hazard

Execution of model for generating hazard maps for each hazard

Calculation of return periods (10, 20, 50, 100, 250)

EXPOSURE, VULNERABILITY & RISK ASSESSMENT



EXPOSURE

The interaction of elements at risk and hazard defines the exposure. The Elements at Risk are linked to physical, economic, social and environmental vulnerability of the area.

VULNERABILITY

Vulnerability is the condition determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards

CAPACITY

Capacity of a community is categorized as “Coping & Adaptive Capacity”. The coping capacity refers to the ability of people, organizations, and systems, using available skills and resources, to face and manage adverse conditions, emergencies, or disasters. The adaptive capacity refers to the ability of a system or individual to adapt to climate change and is characterized as capacity to reduce the disaster risks.

RISK ASSESSMENT

Risk can be defined as the probability of harmful consequences, or expected losses resulting from interactions between natural hazards and vulnerable conditions in a given area and defined time period.












DATA COLLECTION & SPATIAL DATA PREPARATION



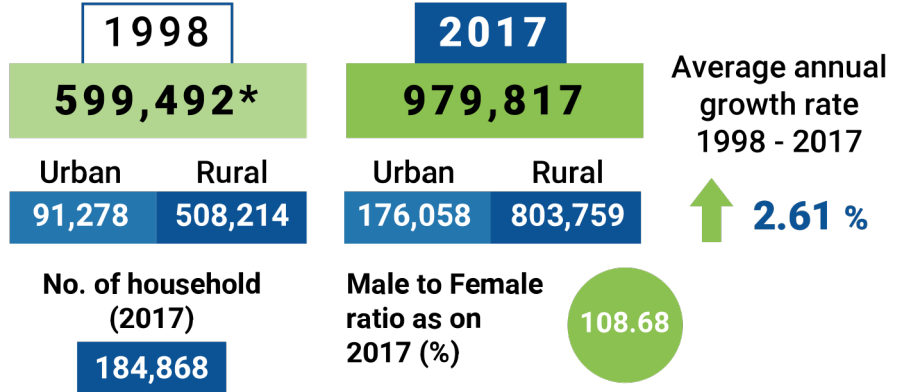
DATA TYPE	SOURCE
Satellite imagery	SPOT 6/7 1.5 meter resolution – 2019/2020
Digital Elevation Model (DEM)	SPOT stereo 5 meters
Land use / Land cover	Satellite imagery
Elements at risk (road, irrigation, railways, petrol pumps, power plants, education, health, industries, and other features)	Satellite imagery and concerned departments
Boundaries	Survey of Pakistan (SoP) and Election Commission of Pakistan (ECP)
Geological map	Geological Survey of Pakistan (GSP)
Historical cyclone tracks	World Meteorological Organization and National Oceanic and Atmospheric Administration (NOAA)
Bathymetry	Pakistan Navy Hydrographic Department and The General Bathymetric Chart of the Oceans (GEBCO)
River discharge data	Indus River System Authority (IRSA)
Temperature and Rainfall Data	Tropical Rainfall Measuring Mission (TRMM)
Demographic Data	Pakistan Bureau of Statistics (PBS) and Bureau of Statistics, Government of Sindh
Historical Earthquake and Flood Data	National Disaster Management Authority (NDMA)
Irrigation Network	Sindh Irrigation Department

DISTRICT PROFILE - THATTA

GEOGRAPHY

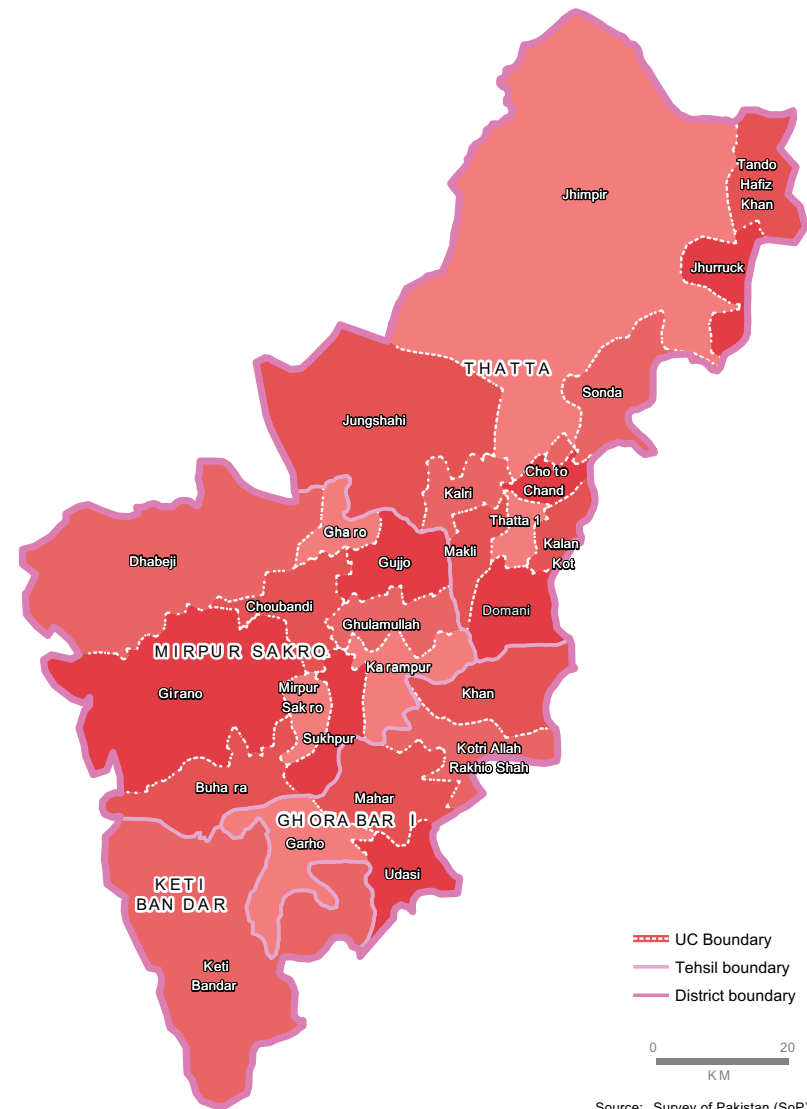
	District area in Sq Km	8,200	
	Coordinates	23° 43' N to 25° 26' N 67° 05' E to 68° 45' E	
	Surrounding districts	Jamshoro in North Hyderabad in North East Sujawal in East Malir in West	
	Climate conditions	 Moderate	
	Coldest and hottest months	 January  May	
	Seasonal temperature	Max. Mean Temp. (°C)	Min. Mean Temp. (°C)
	Spring (March and April)	33.54	21.16
	Dry Summer (May and June)	38.32	27.21
	Wet Summer (July to September)	35.17	26.54
	Autumn (October and November)	34.24	20.79
	Winter (December to February)	27.54	13.90
	Average annual rainfall	151.85 mm/yr	
	Physiographic features	Indus River in East Indus Delta in South West Arabian Sea in South Rann of Kutch in South East	

DEMOGRAPHY



*Including newly formed Sujawal District

LOCATION OF DISTRICT THATTA



Source: Survey of Pakistan (SoP) and Election Commission of Pakistan (ECP)

DISTRICT PROFILE - THATTA



ECONOMY:

Main employment sources:



Fisheries



Agriculture

Major Crops Production in M.tons (2016-17)

233,979



Wheat

54,185



Cotton

2,002,364



Rice

23,608



Sugercane

Minor Crops Production in M.tons (2016-17)

1,279



Barley

56



Bajra

123



Jowar

1,108

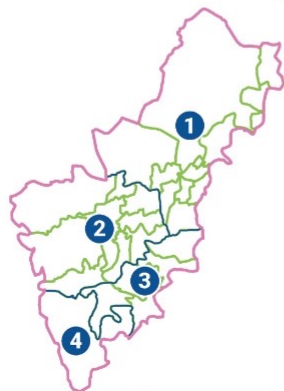


Maize

ADMINISTRATIVE SYSTEM

DISTRICT

THATTA



979,817*

TALUKA

1 THATTA



406,063*

2 MIRPUR SAKRO



340,834*

3 GHORA BARI



174,088*

4 KETI BANDAR



58,832*

UNION COUNCILS

1. Domani
2. Choto Chand
3. Kalan Kot
4. Kalri

5. Makli
6. Jungshahi
7. Jhurruck
8. Jhimpir

9. Tando Hafiz Khan
10. Thatta 1
11. Sonda
- 12.

13. Buhara
14. Choubandi
15. Dhabeji
16. Girano

17. Ghullamullah
18. Gharo
19. Gujjo
20. Mirpur Sakro

21. Karampur
22. Sukhpur

23. Garho
24. Mahar
25. Khan
26. Kotri Allah Rakhio Shah

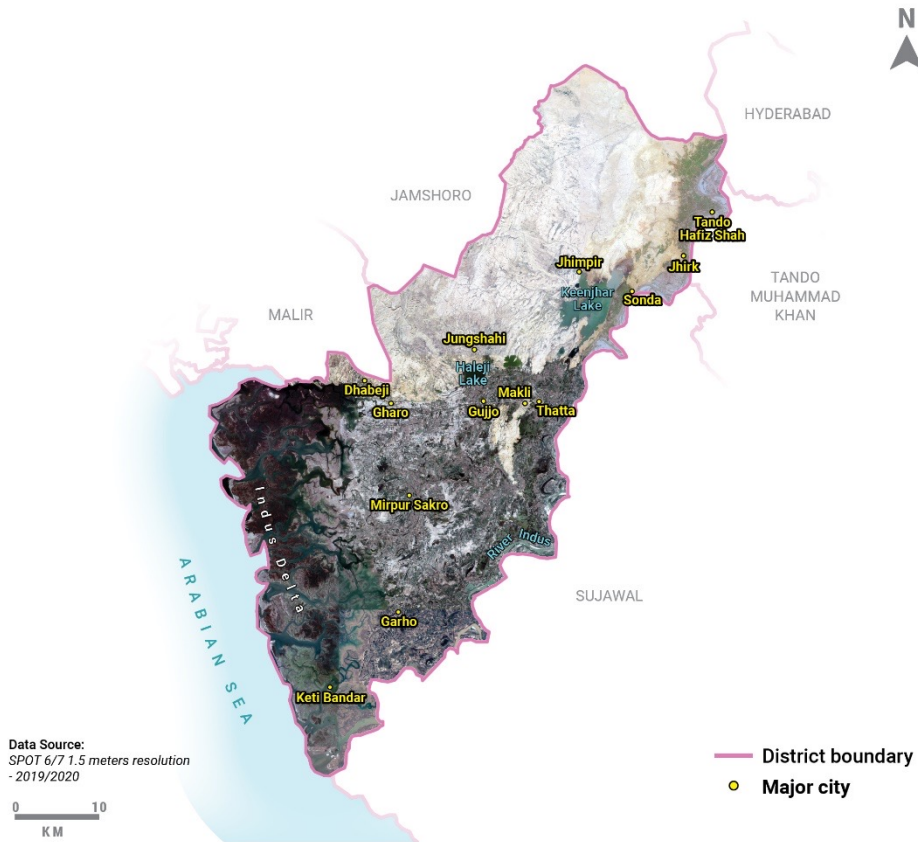
27. Udasi

28. Keti Bandar

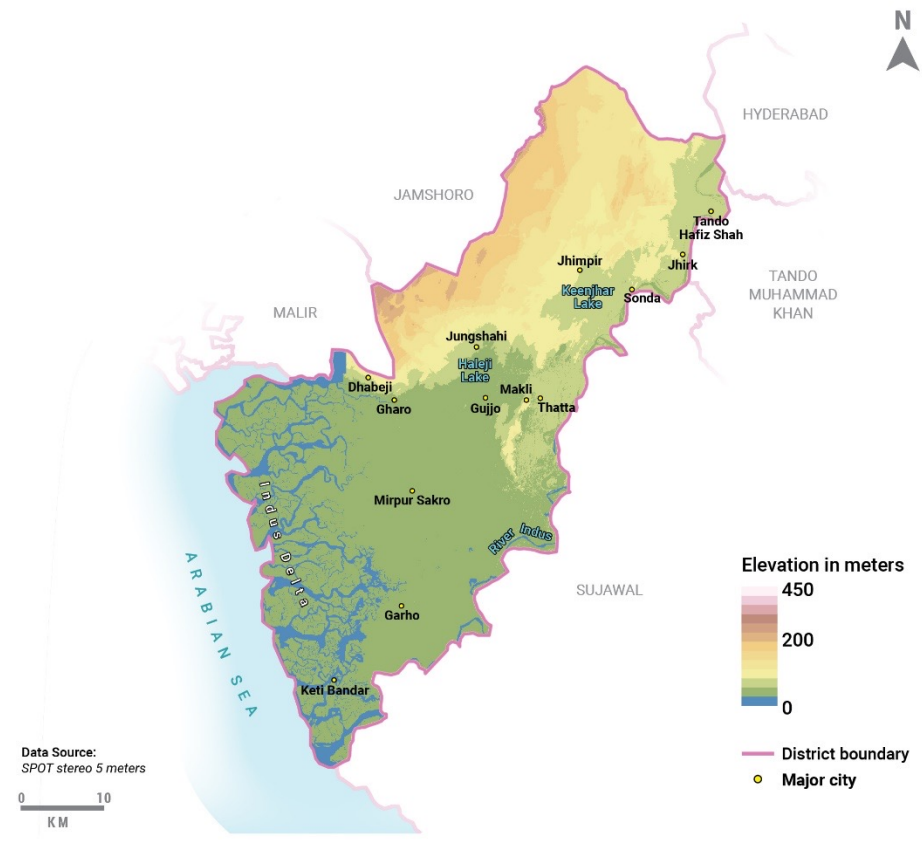
* POPULATION (2017)

GIS LAYERS - THATTA

SATELLITE IMAGERY

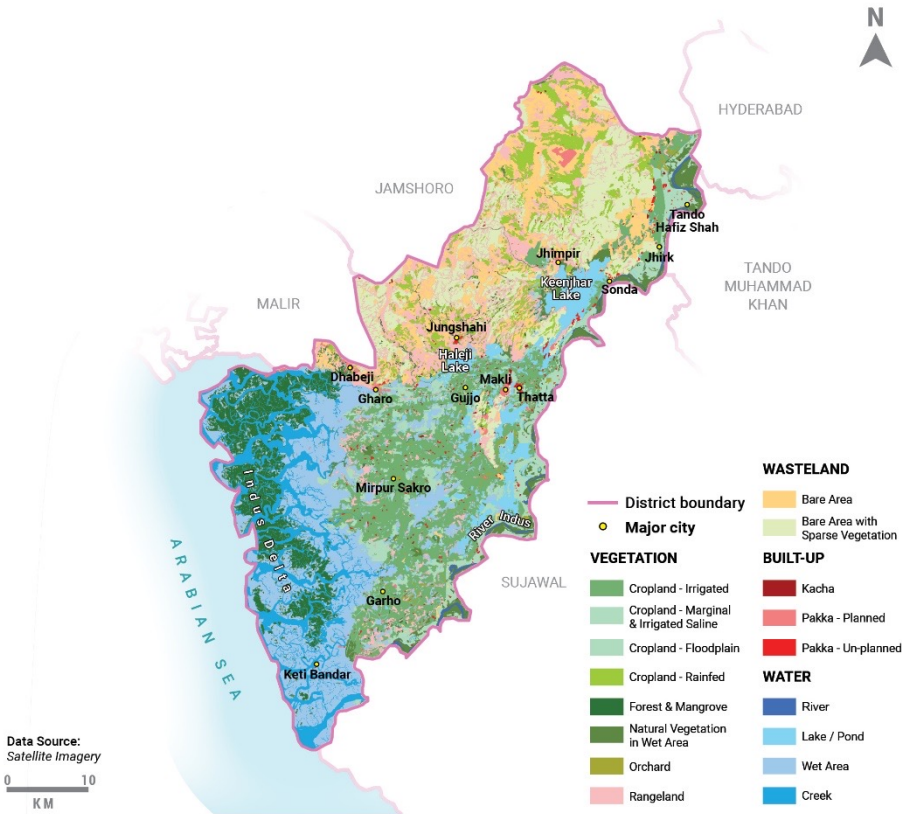


DIGITAL ELEVATION MODEL

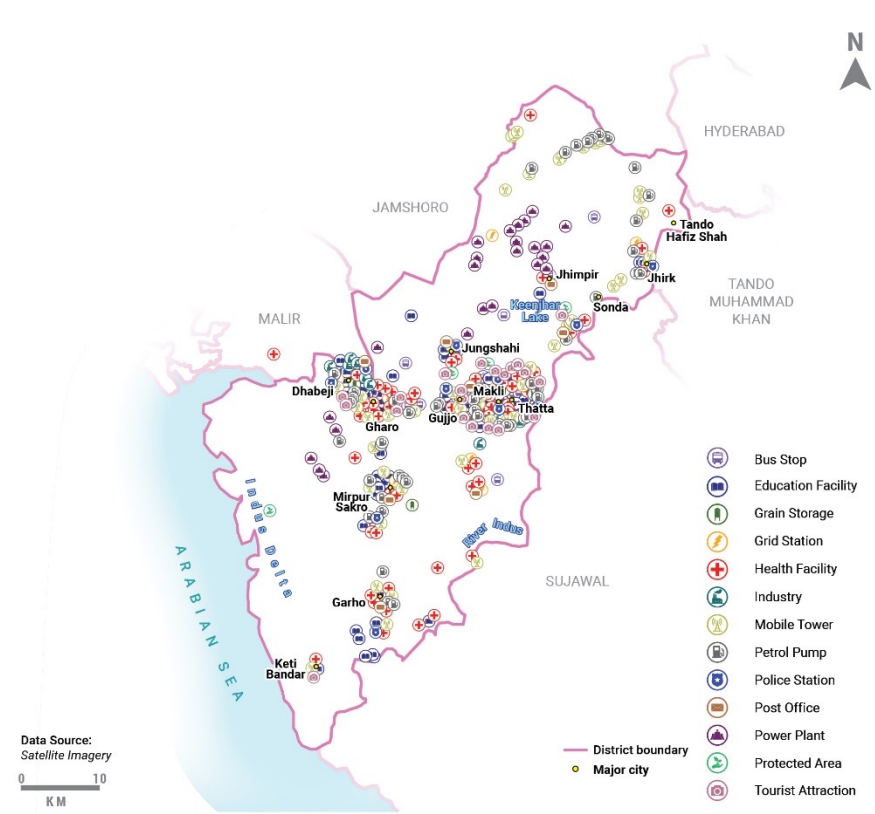


GIS LAYERS - THATTA

LAND USE / LAND COVER



CIRITICAL INFRASTRUCTURE



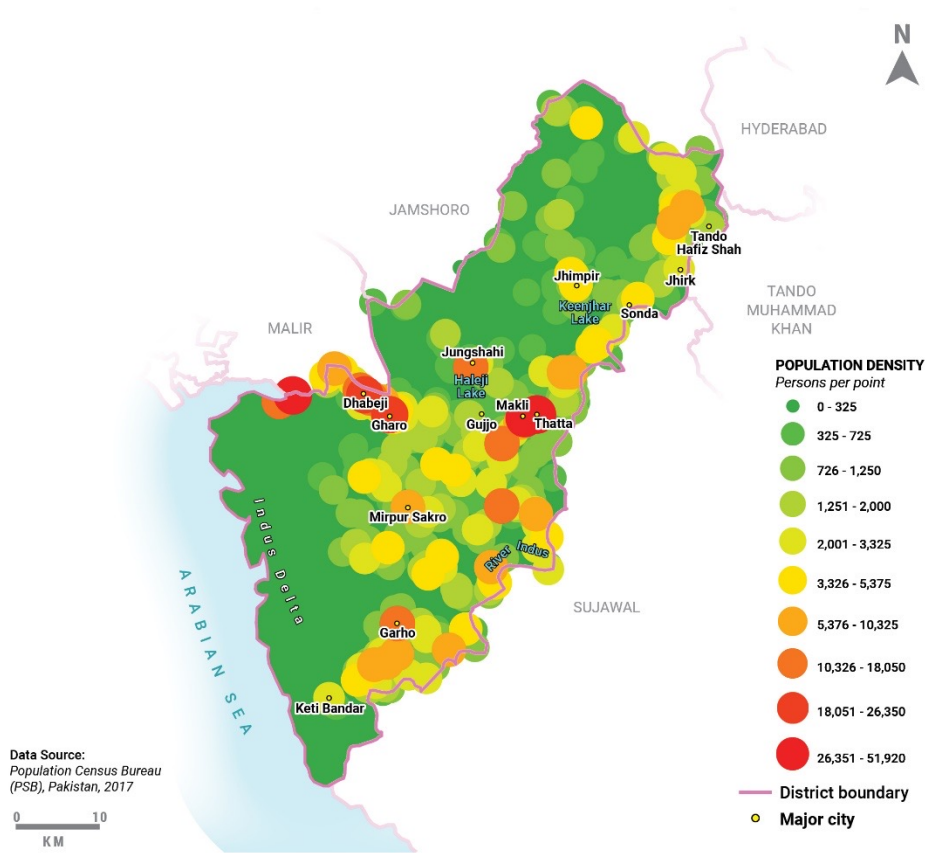
TRANSPORTATION NETWORK



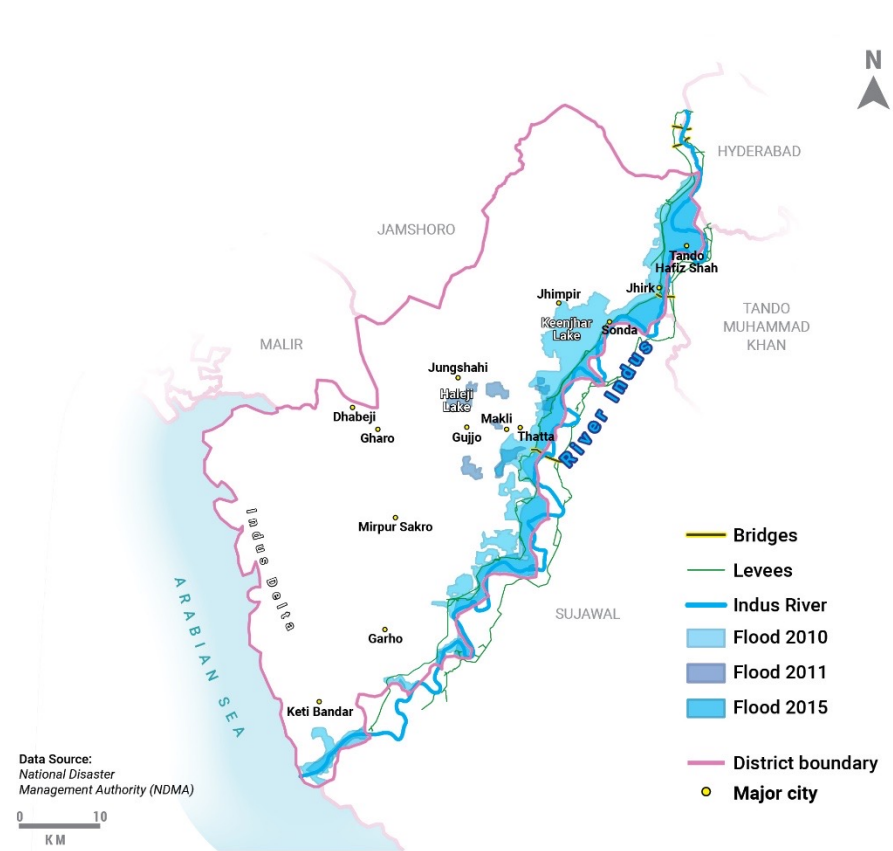
IRRIGATION AND DRAINAGE



POPULATION DENSITY





PAST FLOOD EXTENTS



UC - KETI BANDAR

UC PROFILE

 Union Council area in sq. km **914**

 Surrounding UCs / Features

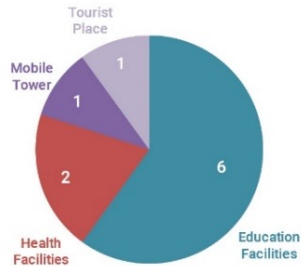
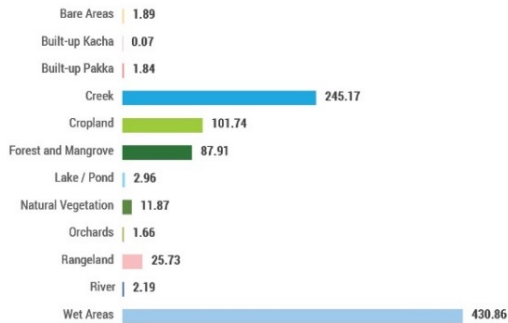
Buhara in North
Garho in North East
Udasi in East
Sujawal District in South East
Arabian Sea in West

 Population **2017 approx. 58,833**

 No. of household **2017 approx. 11,630**

Land Use Land Cover Critical Infrastructure

coverage area in sq. km

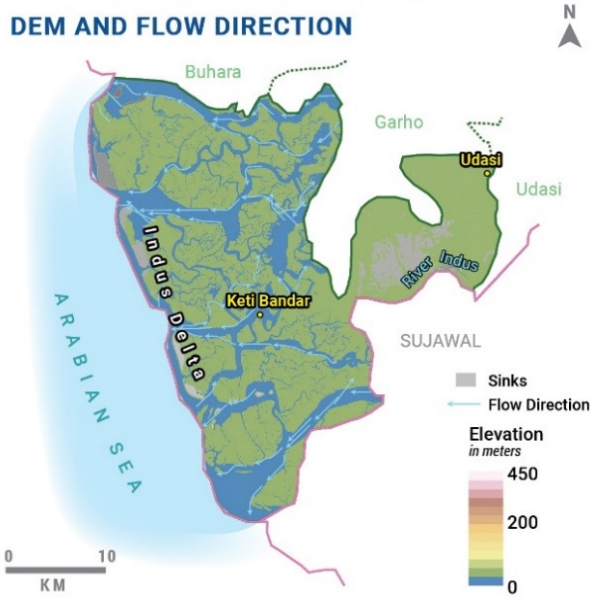


SATELLITE IMAGERY



MHVRA AT UC LEVEL

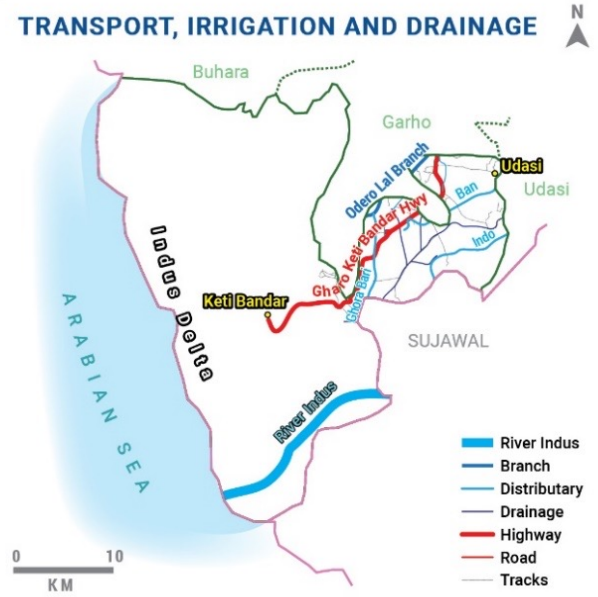
DEM AND FLOW DIRECTION



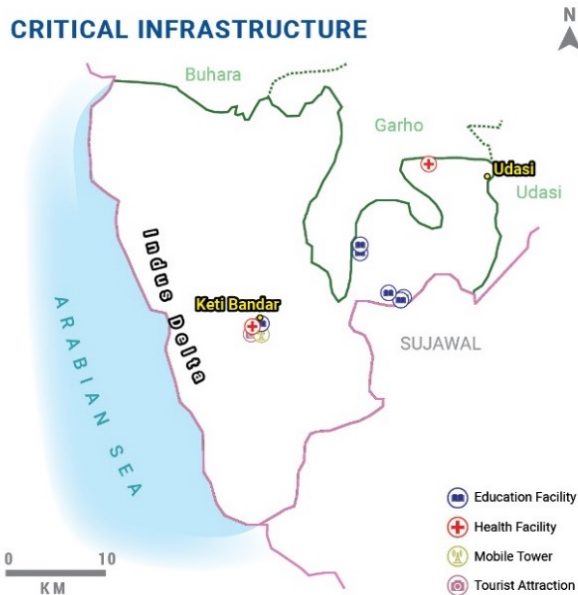
LAND USE / LAND COVER



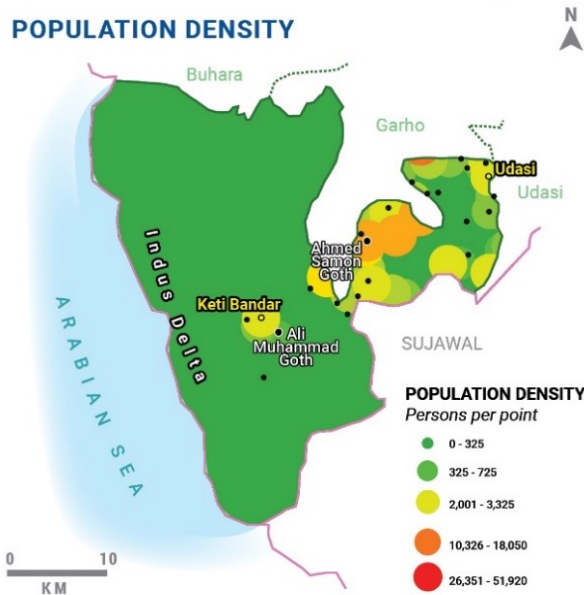
TRANSPORT, IRRIGATION AND DRAINAGE



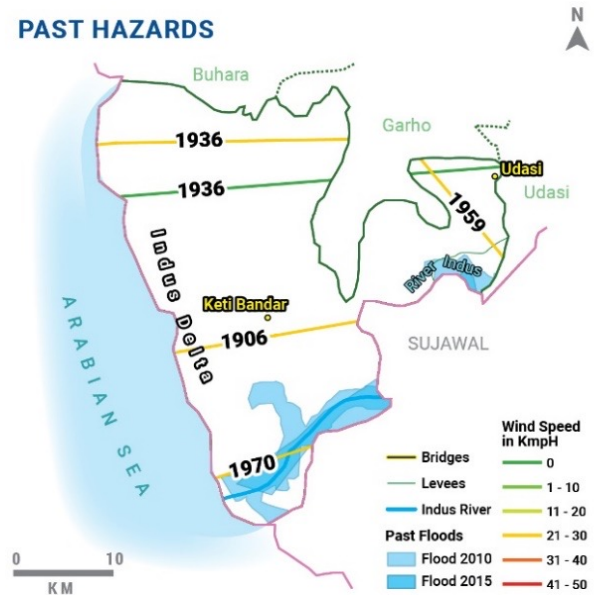
CRITICAL INFRASTRUCTURE



POPULATION DENSITY



PAST HAZARDS



FLOODS

HAZARD AT DIFFERENT RETURN PERIODS



VULNERABILITY

RISK AT DIFFERENT RETURN PERIODS



ELEMENTS AT RISK



1	1.336	0.001	9626	1934	0.001	0.149	8.368
SETTLEMENTS	ROADS (KM)	IRRIGATION AND DRAINAGE (KM)	POPULATION	HOUSEHOLD	PAKKA PLANNED AREA (SQ. KM)	PAKKA UNPLANNED AREA (SQ. KM)	AGRICULTURAL AREA (SQ. KM)



METEOROLOGICAL DROUGHT

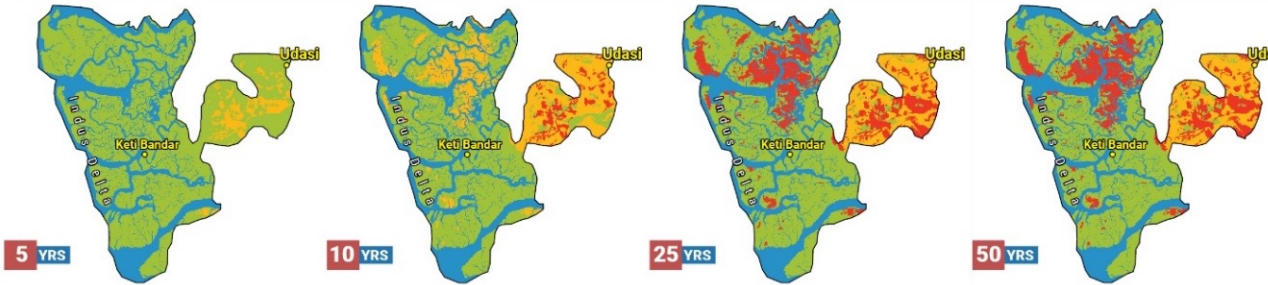
HAZARD AT DIFFERENT RETURN PERIODS

VULNERABILITY



RISK AT DIFFERENT RETURN PERIODS

ELEMENTS AT RISK



15	50696	71.344
SETTLEMENTS	POPULATION	HOUSEHOLD
58833	11630	0.669
BUILT-UP AREA (SQ. KM)	NATURAL VEGETATION (SQ. KM)	WATER (SQ. KM)
1.141	0.0718	
AGRICULTURE (SQ. KM)	BARE AREAS (SQ. KM)	

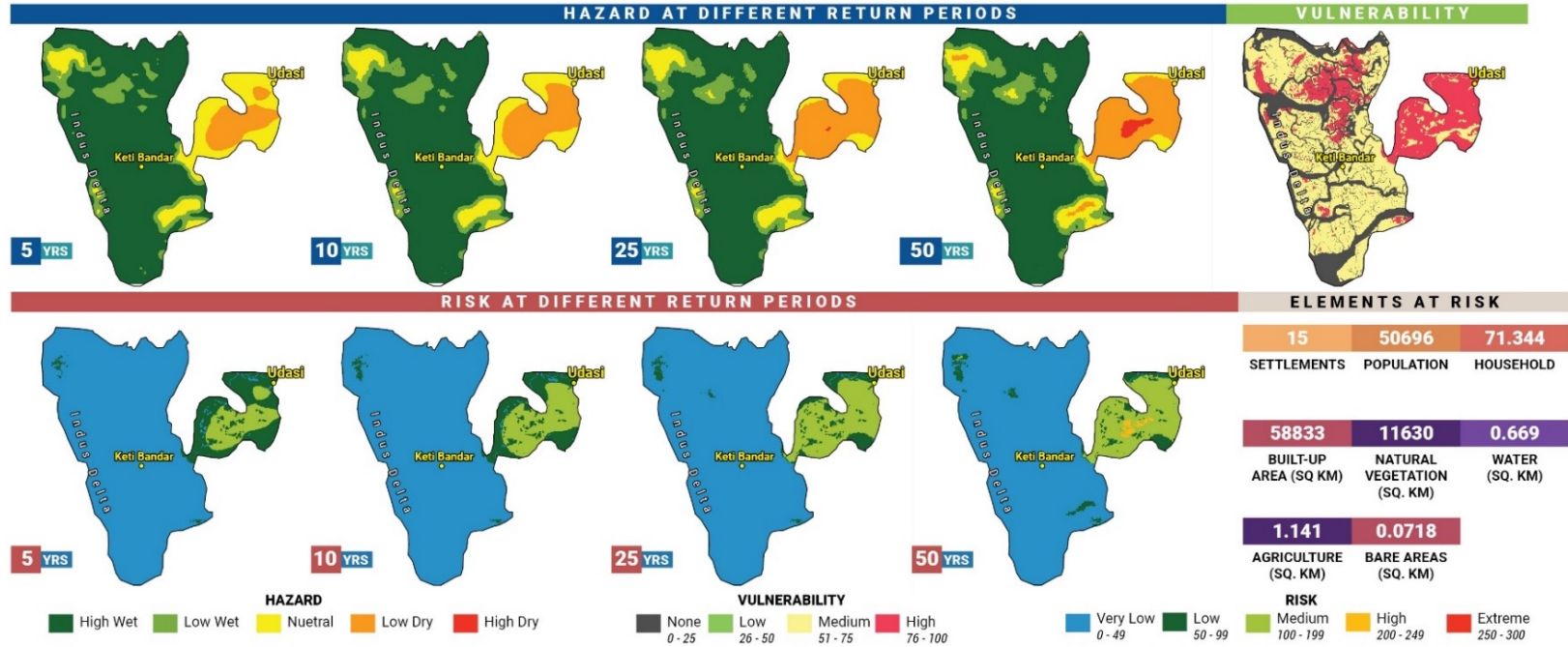
HAZARD

VULNERABILITY

RISK

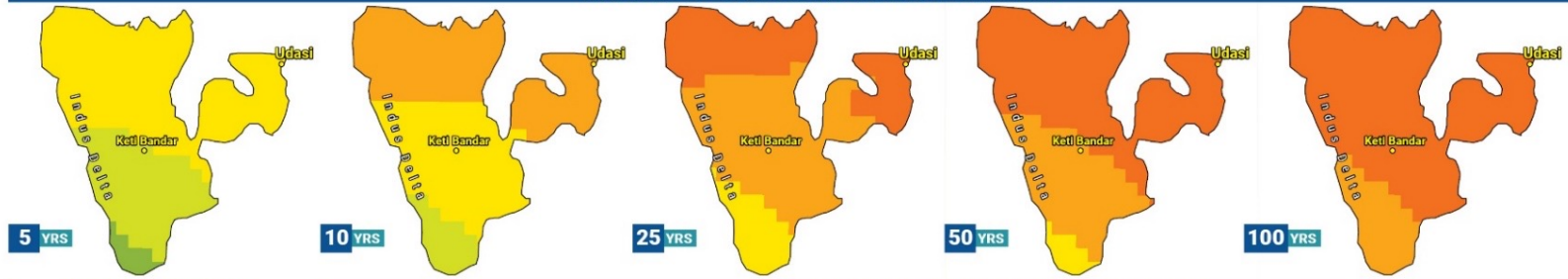


AGRICULTURAL DROUGHT



HEATWAVE

HAZARD AT DIFFERENT RETURN PERIODS



VULNERABILITY

RISK AT DIFFERENT RETURN PERIODS



ELEMENTS AT RISK

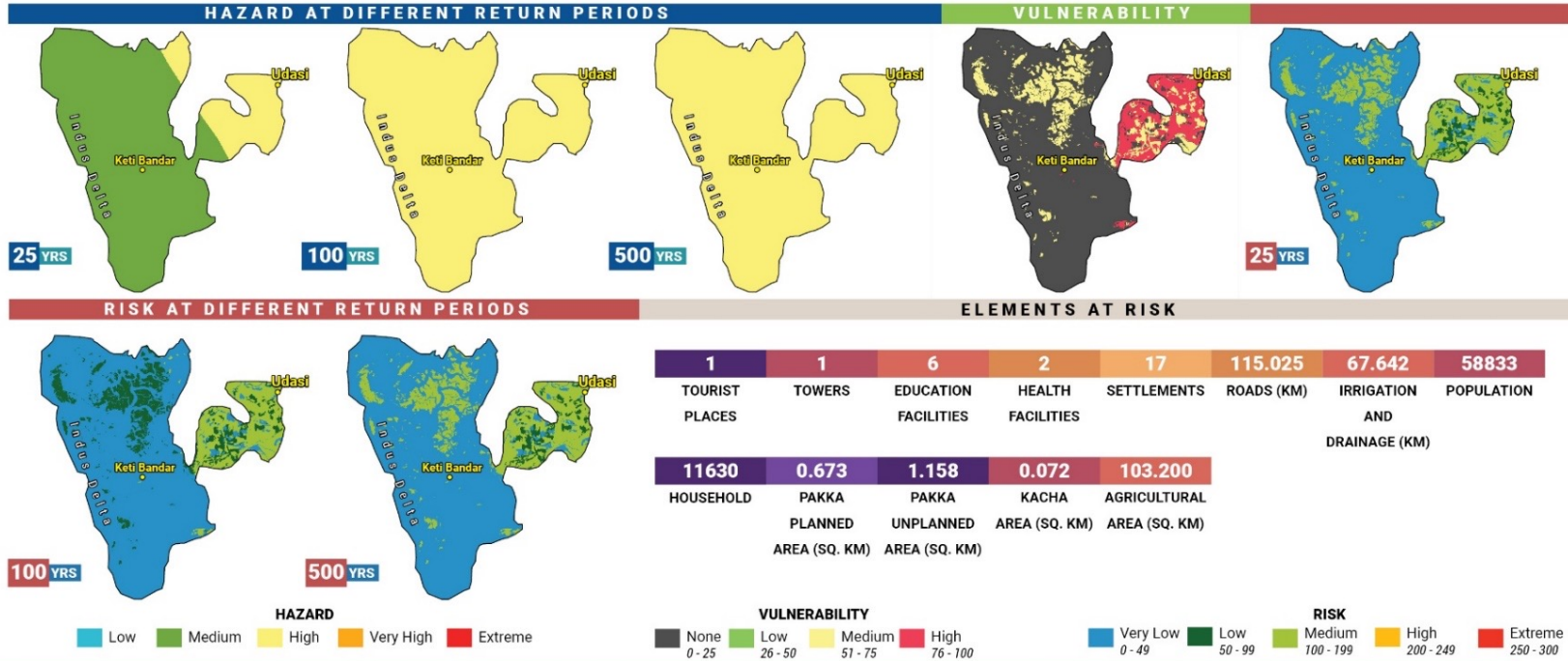


16	58833	11630	0.6124	1.060	0.027	96.935
SETTLEMENTS	POPULATION	HOUSEHOLD	PAKKA PLANNED AREA (SQ. KM)	PAKKA UNPLANNED AREA (SQ. KM)	KACHA AREA (SQ. KM)	AGRICULTURAL AREA (SQ. KM)

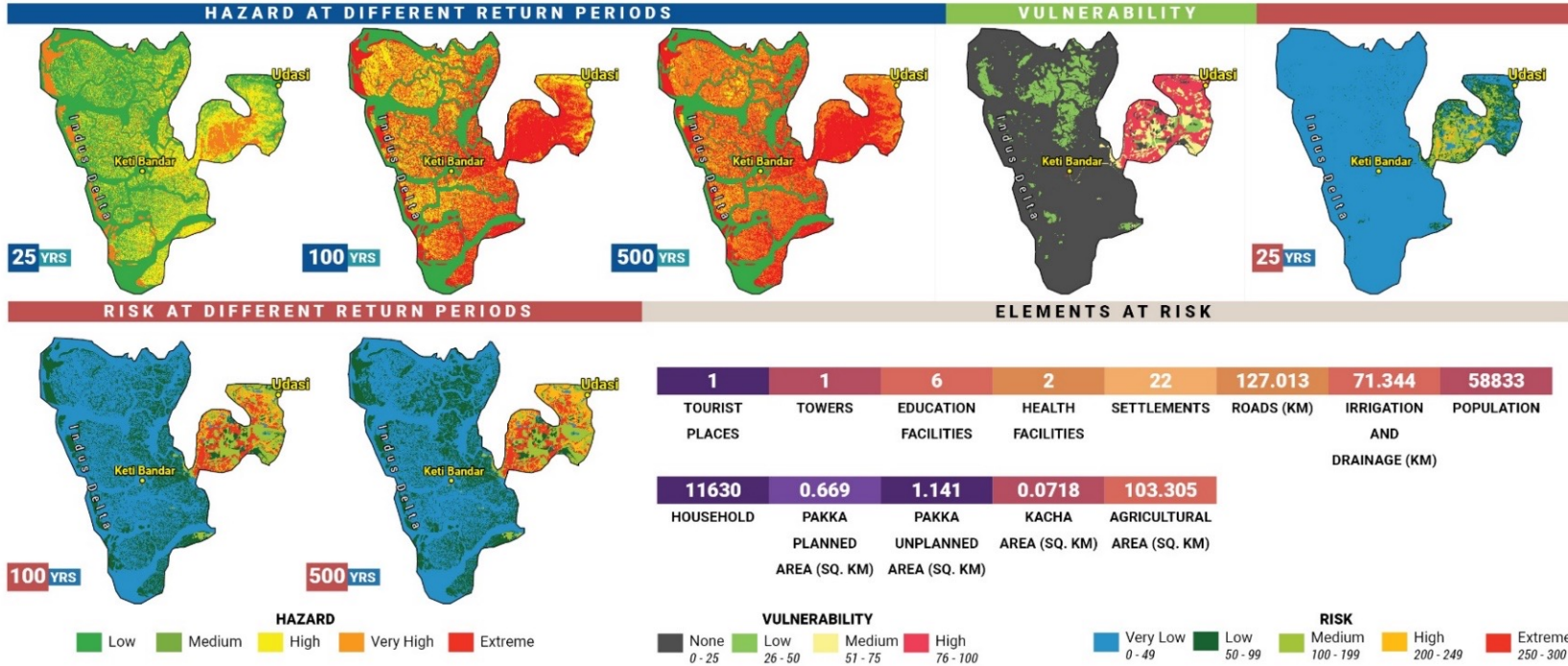


MHVRA AT UC LEVEL

CYCLONE



STORM SURGE



EARTHQUAKE

HAZARD AT DIFFERENT RETURN PERIODS



VULNERABILITY

RISK AT DIFFERENT RETURN PERIODS

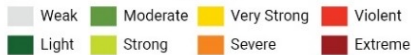


ELEMENTS AT RISK



1	1	6	2	17	121.41	53.9389	58833	11630	0.680	1.162
TOURIST PLACES	TOWERS	EDUCATION FACILITIES	HEALTH FACILITIES	SETTLEMENTS	ROADS (KM)	IRRIGATION AND DRAINAGE (KM)	POPULATION	HOUSEHOLD	PAKKA PLANNED AREA (SQ. KM)	PAKKA UNPLANNED AREA (SQ. KM)
0.074	123.575									
KACHA AREA (SQ. KM)	AGRICULTURAL AREA (SQ. KM)									

HAZARD



VULNERABILITY

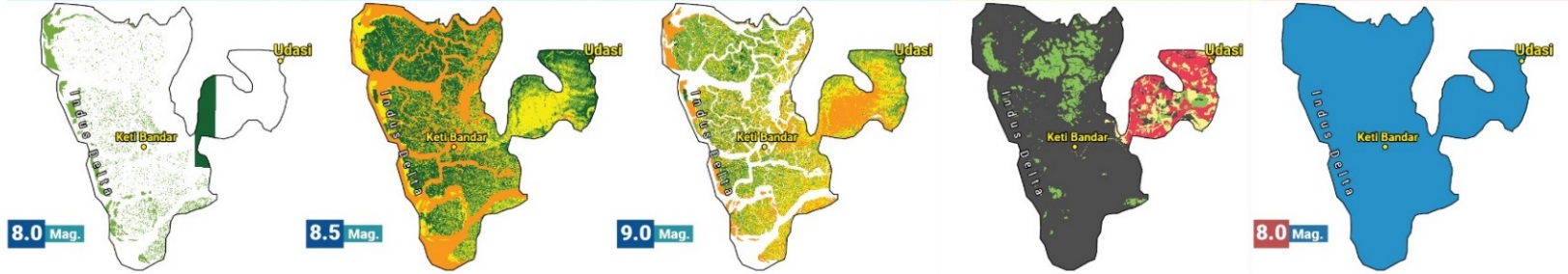


RISK



TSUNAMI

HAZARD AT DIFFERENT EARTHQUAKE MAGNITUDES



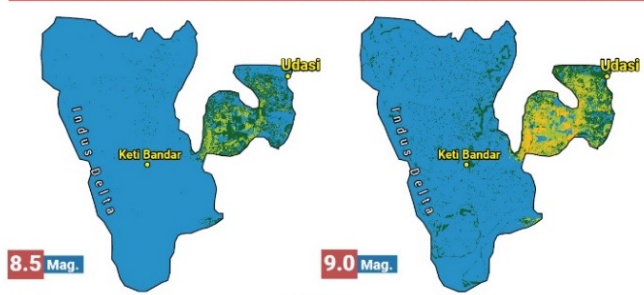
VULNERABILITY



RISK

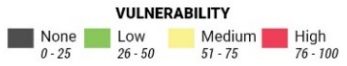


RISK AT DIFFERENT EARTHQUAKE MAGNITUDES



ELEMENTS AT RISK

1	1	5	2	10	112.215	61.055	58136
TOURIST PLACES	TOWERS	EDUCATION FACILITIES	HEALTH FACILITIES	SETTLEMENTS	ROADS (KM)	IRRIGATION AND DRAINAGE (KM)	POPULATION
11482	0.3163	1.036	0.070	99.959			
HOUSEHOLD	PAKKA PLANNED AREA (SQ. KM)	PAKKA UNPLANNED AREA (SQ. KM)	KACHA AREA (SQ. KM)	AGRICULTURAL AREA (SQ. KM)			



MHVRA AT UC LEVEL



RISK MATRIX

■ Very Low 0 - 49
 ■ Low 50 - 99
 ■ Medium 100 - 199
 ■ High 200 - 249
 ■ Extreme 250 - 300

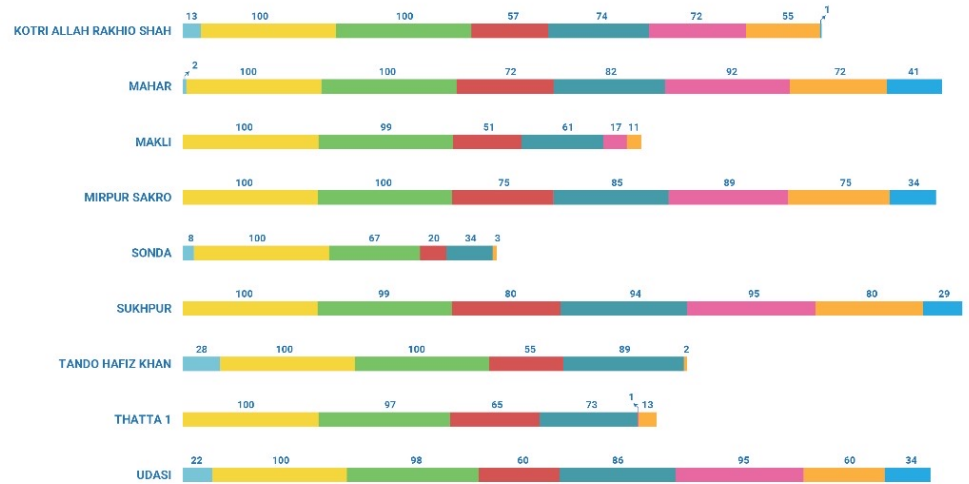
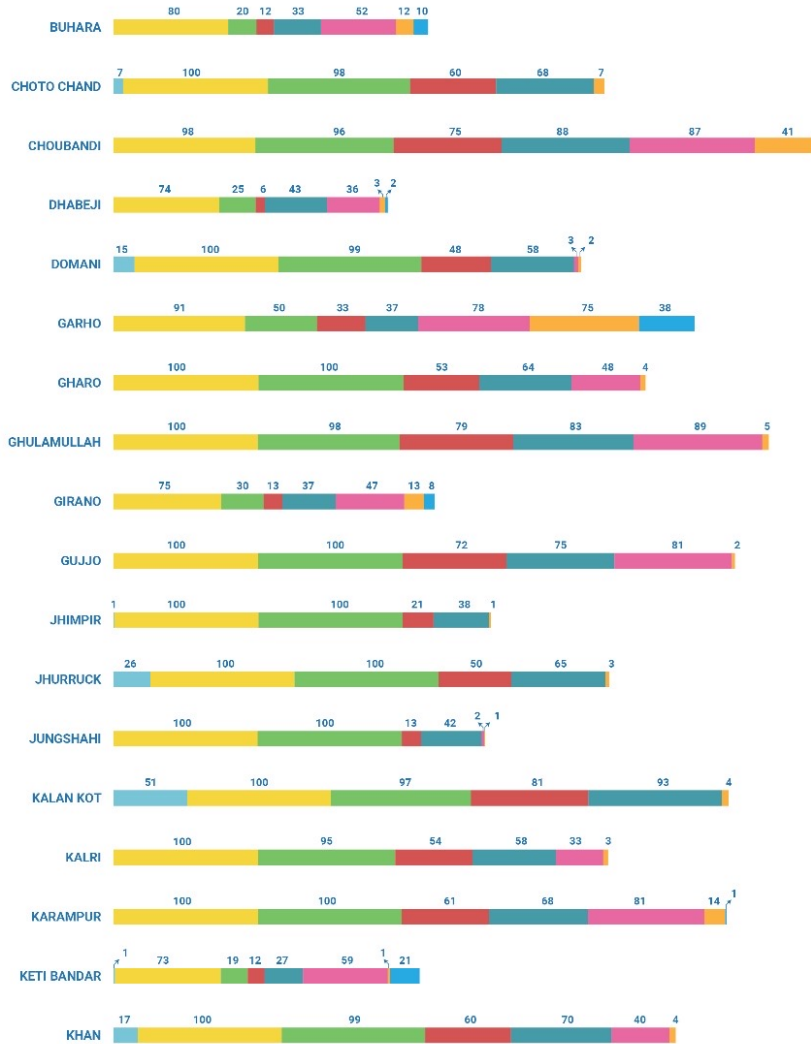
		RETURN PERIODS							
		5 YRS	10 YRS	25 YRS	50 YRS	100 YRS	250 YRS	500 YRS	1000 YRS
HAZARD	Flood	●	Low to High	Low to Extreme	Low to Extreme	Low to Extreme	Low to Extreme	●	●
	Metrological Drought	Medium to High	Medium to Extreme	Medium to Extreme	Medium to Extreme	●	●	●	●
	Agricultural Drought	Low to Medium	Low to High	Low to High	Low to High	●	●	●	●
	Heatwave	Low to High	Medium to High	Medium to High	Low to Extreme	●	●	●	●
	Cyclone	●	●	Low to Medium	●	Low to Medium	●	Low to Medium	●
	Storm Surge	●	●	Low to Medium	●	Low to Medium	●	Low to Extreme	●
	Earthquake	●	●	●	Low	Low	Low	Low	Low to Medium
	Tsunami	8.0 mag. None	8.5 mag. Low to Medium	9.0 mag. Low to High					

EARTHQUAKE MAGNITUDES

MHVRA AT UC LEVEL



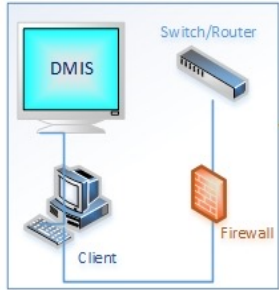
LEGEND



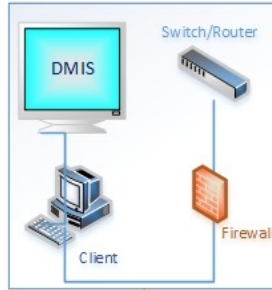
Disaster Management and Information System (DMIS)

SYSTEM ARCHITECTURE FOR DMIS

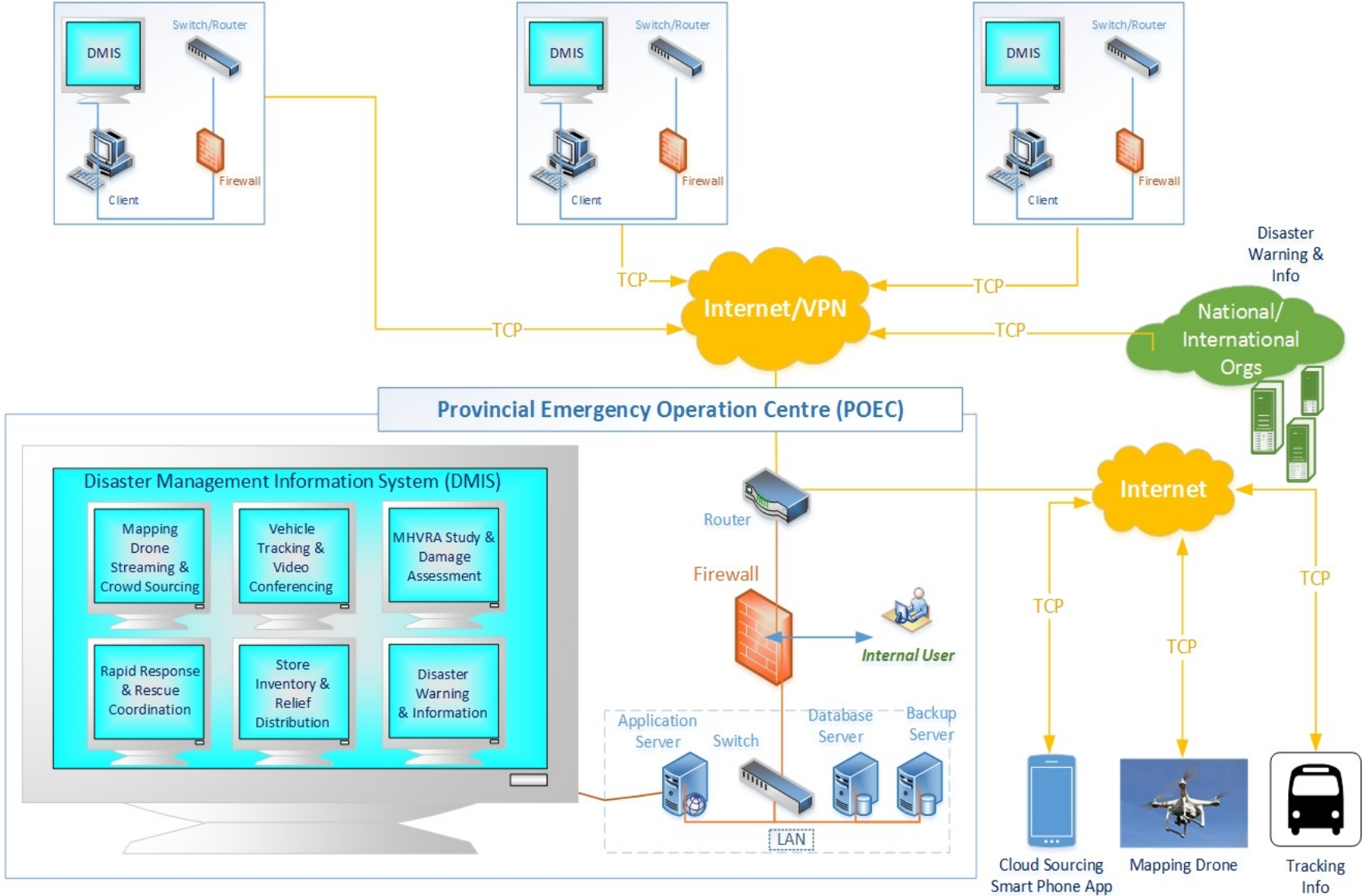
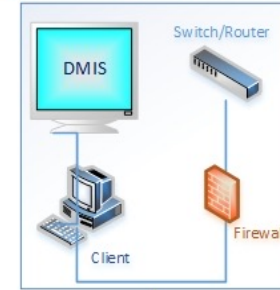
District Emergency Operation Centre (DEOC) - 1



District Emergency Operation Centre (DEOC) - 2



District Emergency Operation Centre (DEOC) - 3



DMIS



saeed
admin

- Dashboard
- Modules →
- Users
- About
- Contact Us
- Logout

Disaster Management Information System

PDMA, Sindh, Pakistan

Weather Information

Thatta, Sindh, Pakistan

Date: 29-12-2020

Temp
32.5 C
Feel like 32.8 C

Humidity
16%

Visibility
2.4 km

Wind
14.8 km/h WNW

Wind Gusts
16.3 km/h%

Pressure
1018 mb

Alerts

Thatta, Sindh, Pakistan

No Recent Events



MHVRA
Study Catalogue



Rapid Damage
Assessment System



Store Inventory &
Relief Distribution System



Disaster Warning &
Information



Rapid Response &
Rescue System



Vehicle
Tracking



Video
Conferencing



Sindh GIS



Mapping
Drone Streaming

DMIS

Disaster Management Information System
PDMA, Sindh, Pakistan

Sindh Hazard and Risk Atlas - Buhara

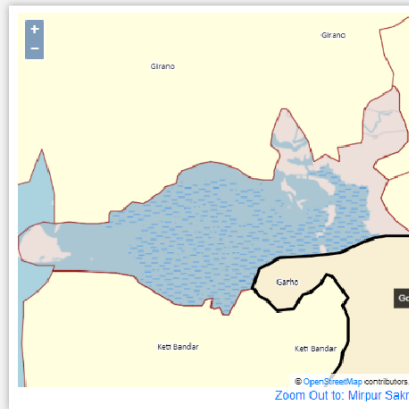
Thatta / Mirpur Sakro / Buhara



REPORT

Search...

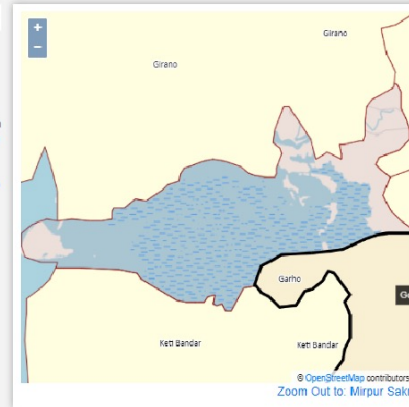
Riverine Flood	Medium To High
Heatwave	Low To Extreme
Cyclone	Medium To High
Tsunami	90 Low To High
Meteorological Drought	Medium To Extreme
Agricultural Drought	Low To Medium
Storm Surge	Low To Extreme
Earthquake	Low To Medium



Search...

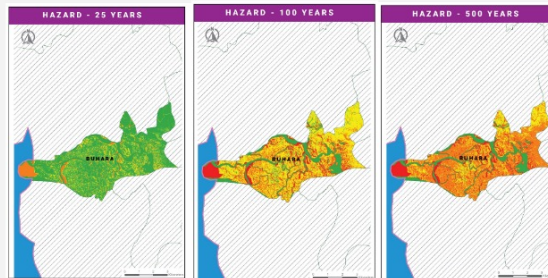
Storm Surge

The UC is affected by storm surges and majority of the area is in "Medium" to "High" risk zones. The creek area present towards the western part of UC is highly affected by storm surge and parts of the land are in "Extreme" zone. However, the vulnerability of these areas is between none to "Medium", with the mangrove area in "Medium" vulnerability. Overall risk of the UC is majority "Very Low" to "Low", due to no population or agriculture being present in these areas. However, the northeastern part of the UC, where the land cover is mostly cropland falls into the "Medium" risk zone for 25 to 100 years and in 500 to 1000 years it is in "Medium" to "High" risk.



Hazard

None-0 Low-1 Medium-2 High-3 Extreme-4

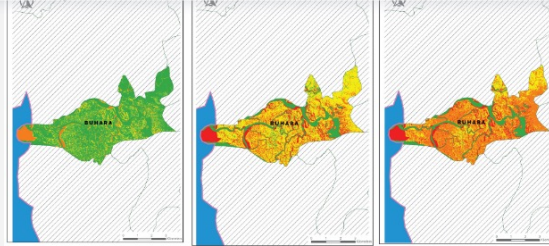


Risk

Very Low 0-49 Low 50-99 Medium 100-199 High 200-249 Extreme 250-300

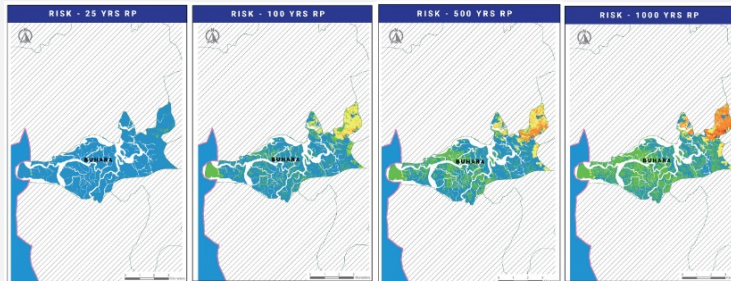
DMIS

Disaster Management Information System
PDMA, Sindh, Pakistan



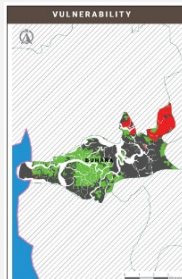
Risk

Very Low 0-49 Low 50-99 Medium 100-199 High 200-249 Extreme 250-300



Vulnerability

None 0-25 Low 26-50 Medium 51-75 High 76-100



DMIS – STORE INVENTORY AND RELIEF DISTRIBUTION

QR Code Scanner



DMIS – INVENTORY STORE AND RELIEF DISTRIBUTION



The screenshot displays the DMIS (Disaster Management Information System) web application interface. The browser address bar shows 'localhost/DMIS/inventory/'. The page title is 'Disaster Management Information System PDMA, Sindh, Pakistan'. The main heading is 'Store Inventory & Relief Distribution'. A navigation menu includes 'Item Store', 'Goods Authorization', 'Packet Formation and Distribution', 'Goods Distribution', 'Goods Distribution Locations', and 'Reports'. A sidebar on the left shows the user 'saeed admin' and menu items: Dashboard, Modules, Users, About, Contact Us, and Logout. A 'New item' button is visible in the top right of the main content area. A 'New Item' modal form is open, containing the following fields: 'Tent' (dropdown), 'Width: 6ft, Length: 6ft, Height: 10ft' (text), and 'Number' (text). Below the form are 'Submit' and 'Reset' buttons. A QR code is displayed at the bottom of the modal. A success message 'localhost says Successfull!' is shown in a small white box at the top center of the page.

DMIS – INVENTORY STORE AND RELIEF DISTRIBUTION



← → ↻ localhost/DMIS/inventory/ ☆ * 🗖 ⋮

DMIS Disaster Management Information System
PDMA, Sindh, Pakistan

Store Inventory & Relief Distribution

Item Store Goods Authorization Packet Formation and Distribution Goods Distribution Goods Distribution Locations Reports

Item Store

Item Name:

Specifications:

Balance:

Source:

Quantity:

Receiving Date:

Entry Date:

Receiving Info:

DMIS – INVENTORY STORE AND RELIEF DISTRIBUTION



← → ↻ localhost/DMIS/inventory/ ☆ * ⌵

DMIS

Disaster Management Information System
PDMA, Sindh, Pakistan

Store Inventory & Relief Distribution

Item Store Goods Authorization Packet Formation and Distribution Goods Distribution Goods Distribution Locations Reports

Goods Authorization

Authority:

Communication Mode:

Number:

Delivery Details:

Date:

- Dashboard
- Modules →
- Users
- About
- Contact Us
- Logout

DMIS – INVENTORY STORE AND RELIEF DISTRIBUTION



localhost/DMIS/inventory/

DMIS

Disaster Management Information System
PDMA, Sindh, Pakistan

Item Store Goods Authorization Packet Formation and Distribution Goods Distribution Goods Distribution Locations Reports

Goods Distribution

Item Code
*Place cursor in code text box

Item Name Save

Specification Save

Quantity Add Item

Returnable	Item Name	Specification	Unit	Quantity	
<input checked="" type="checkbox"/>	tent	width: 6ft, lengt	number	50	<small>Delete</small>

Destination

Vehicle Number

Authority Save

Addressee

Address

Date

Event Save

Event Date Calendar

Affected District Save

Cancel Submit

DMIS – INVENTORY STORE AND RELIEF DISTRIBUTION



localhost/DMIS/tcpdf/rapid_response_reports/itemsDispatchReport.php

Date: 29 December 2020



PROVINCIAL DISASTER MANAGEMENT AUTHORITY

addressee
address

Subject: Goods Dispatch (Delivery ID: 260)

Following Items are being dispatched against the request/instructions from DG PDMA Sindh dated: 2020-12-29 by Letter communication.

Item ID	Item Name	Specifications	Quantity	Category
1114	tent	width: 6ft, length: 6ft, height: 10ft	50 number	Returnable

You are requested to acknowledge the delivery of items.

Received By

DMIS – INVENTORY STORE AND RELIEF DISTRIBUTION



← → ↻ localhost/DMIS/inventory/ ☆ ⚙️ 👤 ⋮

DMIS

saeed admin

- Dashboard
- Modules →
- Users
- About
- Contact Us
- Logout

Disaster Management Information System

PDMA, Sindh, Pakistan

Store Inventory & Relief Distribution

Item Store Goods Authorization Packet Formation and Distribution Goods Distribution Goods Distribution Locations Reports

Packet Formation and Distribution

Item Name:
Quantity:
Unit:

Item Name	Quantity	Unit	
Rice	10	KG	<input type="button" value="Delete"/>
Flour	10	KG	<input type="button" value="Delete"/>
Cooking Oil	5	Litre	<input type="button" value="Delete"/>

Packet Name:
Quantity:
Destination:
Vehicle Number:
Authority:
Addressee:
Address:


DMIS – INVENTORY STORE AND RELIEF DISTRIBUTION



← → ↻ localhost/DMIS/tcpdt/rapid_response_reports/packetDispatchReport.php

REPORT 1 / 1

Date: 29 December 2020



PROVINCIAL DISASTER MANAGEMENT AUTHORITY

addressee
address

Subject: Packet Dispatch (Delivery ID: 260)

20 packets of Ration-1 (2222) containing following items are being dispatched against the request/instructions from DG PDMA Sindh dated: 2020-12-29 by Letter communication.

Item Name	Quantity
Rice	10 KG
Flour	10 KG
Cooking Oil	5 Litre

You are requested to acknowledge the delivery of packets.

Received By

+

+

-

DMIS – INVENTORY STORE AND RELIEF DISTRIBUTION



localhost/DMIS/Inventory/

DMIS

Disaster Management Information System
PDMA, Sindh, Pakistan

Store Inventory & Relief Distribution

Item Store | Goods Authorization | Packet Formation and Distribution | Goods Distribution | Goods Distribution Locations | Reports

Packet Formation and Distribution

Item Name:
Quantity:
Unit:
[Add Item](#)

Goods Dispatch

District: [Select](#)
Disaster: [Select](#)
From: [Calendar](#)
To: [Calendar](#)
[Generate Report](#)

[Delete](#)
[Delete](#)
[Delete](#)

Packet Name:
Quantity:
Destination:
Vehicle Number:
Authority: [Select](#)
Addressee:
Address:

DMIS – INVENTORY STORE AND RELIEF DISTRIBUTION



localhost/DMIS/tcpdf/rapid_response_reports/goodsDistributionReport.php

Date: 29 December 2020



PROVINCIAL DISASTER MANAGEMENT AUTHORITY

Goods Dispatch Report

District: Thatta

Disaster: Flood
Date: 2020-12-26

Sr. No.	Item/Packet	Type	Quantity
1	tent	Item	50

Disaster: Flood
Date: 2020-12-26

Sr. No.	Item/Packet	Type	Quantity
1	Ration-1	Packet	20

Packet Details

Packet Name: Ration-1

Sr. No.	Item Name	Quantity	Unit
1	Rice	10	KG
2	Flour	10	KG
3	Cooking Oil	5	Litre

DMIS – STORE INVENTORY AND RELIEF DISTRIBUTION



STORE INVENTORY AND GOODS DISTRIBUTION



ADD ITEM

DISTRIBUTE ITEMS

SEND DATA

STORE INVENTORY AND GOODS DISTRIBUTION

Item ID: 1114

Item Name: Tent

Specifications: Width:6ft, length:6ft, height:10ft

Unit: Number

RESET

SAVE

BACK

STORE INVENTORY AND GOODS DISTRIBUTION

Date: 2019-9-22

Time: 13:45:02

Latitude: 0.0

Longitude: 0.0

Select Category: Item

Item/Packet: 1114

SCAN ITEM

Item Name: tent

Specifications: width:6ft, length:6ft, height:10ft

CNIC: 4320358635991

SCAN CNIC

Name: Aamir Ali

Deliver ID: 260

CNIC FRONT

CNIC BACK

STORE INVENTORY AND GOODS DISTRIBUTION

Item/Packet: 1114

SCAN ITEM

Item Name: tent

Specifications: width:6ft, length:6ft, height:10ft

CNIC: 4320358635991

SCAN CNIC

Name: Aamir Ali

Deliver ID: 260

CNIC FRONT

CNIC BACK



SUBMIT

DMIS – RAPID DAMAGE ASSESSMENT



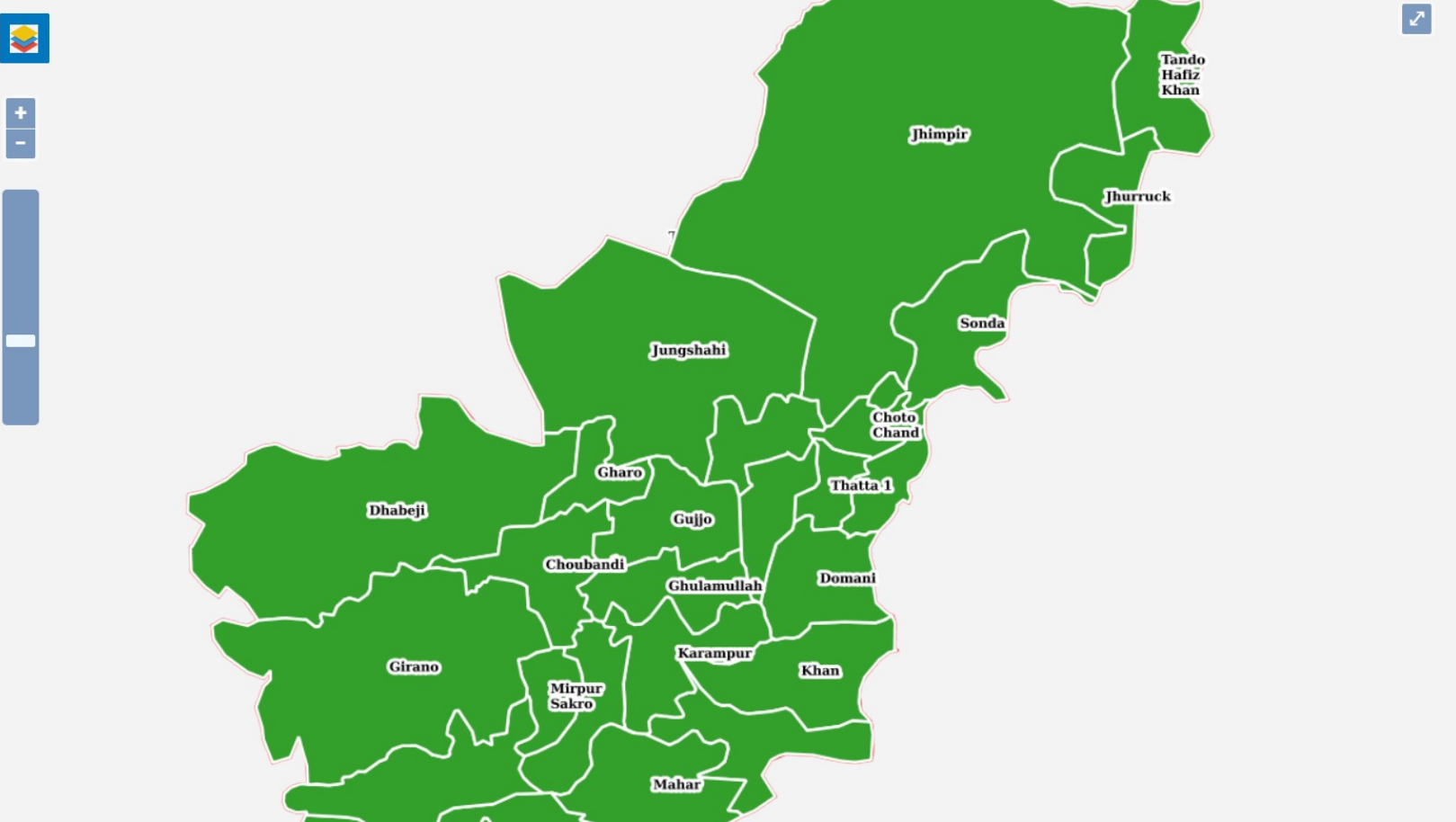
Disaster Management Information System

PDMA, Sindh, Pakistan



Shape File KML File Draw Report Info

Search... User Guide



DMIS – RAPID DAMAGE ASSESSMENT

Disaster Management Information System
PDMA, Sindh, Pakistan

6

Shape File | **KML File** | Draw | Report | Info

Search... User Guide

Step-1:- Load File for damaged Assessment
(ii) KML File

.....

Skip ← Back Next →

Jhampir, Tando Hafiz Khan, Jhurruck, Sonda, Jungshahi, Choto Chand, Gharo, Thatta 1, Dhabeji, Gujjo, Choubandi, Ghulamullah, Domani, Girano, Mirpur Sakro, Karampur, Khan, Mahar

Activate Windows
Go to PC settings to activate Windows.

DMIS – RAPID DAMAGE ASSESSMENT



Disaster Management Information System PDMA, Sindh, Pakistan



Shape File KML File Draw Report Info Search... User Guide

Layers

- Buildings
- Points
 - Settlements
 - Bridges
 - Bus Stops
 - Education Facilities
 - Grain Mandi
- Line
 - Roads

DMIS – RAPID DAMAGE ASSESSMENT



Disaster Management Information System

PDMA, Sindh, Pakistan



Shape File KML File Draw Report Info Search... User Guide

DMIS – RAPID DAMAGE ASSESSMENT



Disaster Management Information System

PDMA, Sindh, Pakistan



Save Info
View Records
Report

Map View Data View

Name	Type	Effected Area (sq km)
▼ Thatta	Districts	0.1
▼ Thatta	Tehsils	0.1
Jungshahi	Ucs	0.1

⏪ < 1 > ⏩
1-3 of 3

Name	Total
Roads (KM)	1.2
Railway Line (KM)	0.4
Ambulances	0
Buildings Structures	0
Bus Stops	0
Education Facilities	0
Fire Stations	0
Food Storage	0
Grid Stations	0
Health Facilities	0
Industries	0
Mobile Towers	1
Petrol Pumps	0

⏪ < 1 > ⏩
1-18 of 18



Provincial Disaster Management Authority
Sindh Pakistan

Rapid Damage Assessment

Administrative Boundaries

Name	Type	Effectted Area(km ²)
Thatta	Districts	0.1
Thatta	Tehsils	0.1
Jungshahi	Ucs	0.1

Number of Total Effectted POI

Name	Value
Roads (KM)	1.2
Railway Line (KM)	0.4
Ambulances	0
Buildings Structures	0
Bus Stops	0
Education Facilities	0
Fire Stations	0
Food Storage	0
Grid Stations	0
Health Facilities	0
Industries	0
Mobile Towers	1
Petrol Pumps	0
Police Stations	0
Post Offices	1
Protected Areas	0
Tourist places	0

DMIS – RAPID DAMAGE ASSESSMENT

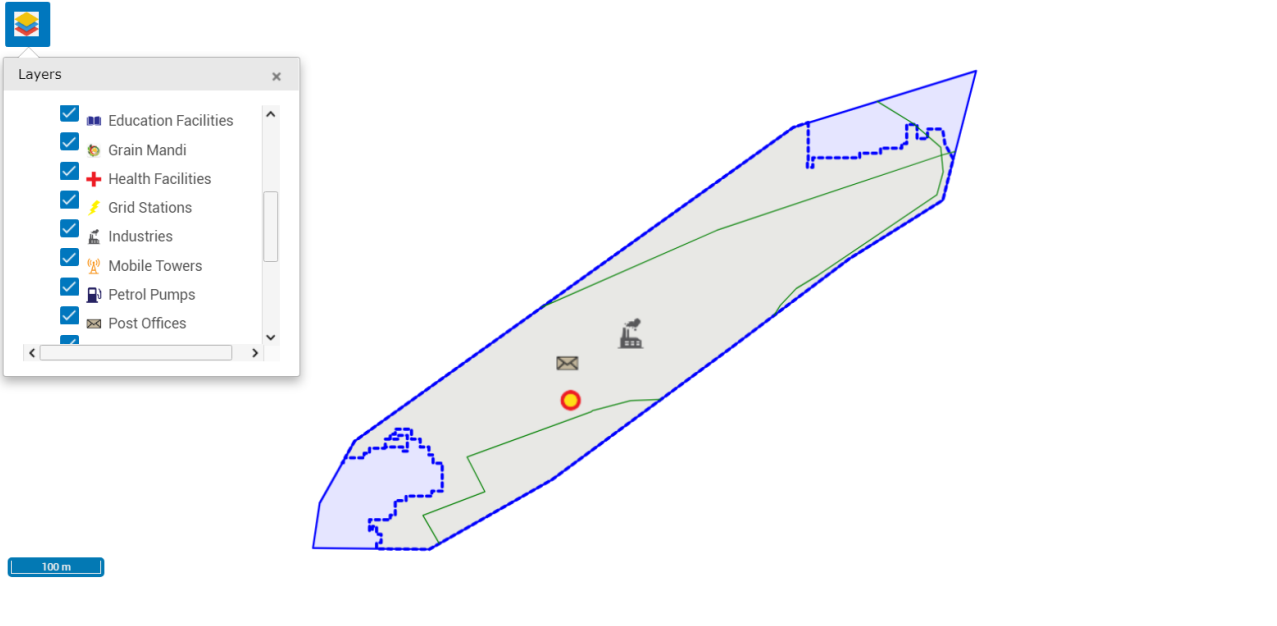


Disaster Management Information System PDMA, Sindh, Pakistan



Save Info View Records Report

Map View Data View



DMIS – RAPID DAMAGE ASSESSMENT



Disaster Management Information System PDMA, Sindh, Pakistan



Save Info View Records Report

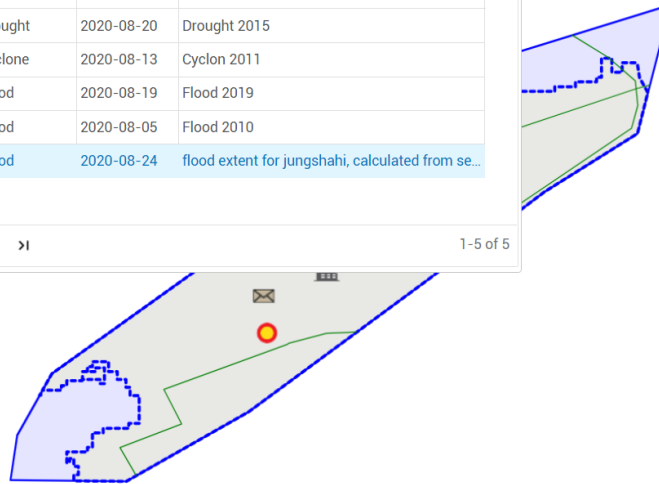
Map View Data View



User Name	Event Type	Created Date	Event Detail
Zubair	Drought	2020-08-20	Drought 2015
Farman	Cyclone	2020-08-13	Cyclon 2011
Zahid	Flood	2020-08-19	Flood 2019
Zubair	Flood	2020-08-05	Flood 2010
aamir ali	Flood	2020-08-24	flood extent for jungshahi, calculated from se...

Navigation: < < 1 > >

Page: 1-5 of 5



100 m

DMIS
Disaster Management Information System
PDMA, Sindh, Pakistan

Search...
Info Update/Delete Point Add Point Layers Export Map Measure

10 km

New Requests

Name	Type	created_at	created_by	mode	Approve	Discard
No data to display						

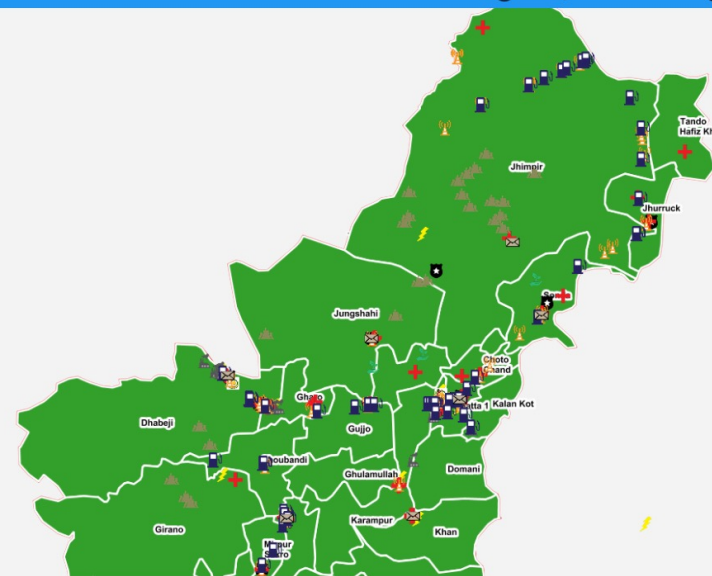


Table of contents

- Base Layer
- Raster Layers
- Administrative Boundaries
 - Districts
 - Ucs
- Point Data
 - Grid Stations
 - Police Stations
 - Ambulances
 - Fire Station
 - Health Facilities
 - Education Facilities
 - Settlements
 - Bus Stops
 - Grainmandi
 - Industries

localhost/DMIS/Sindh_GIS/

DMIS Disaster Management Information System

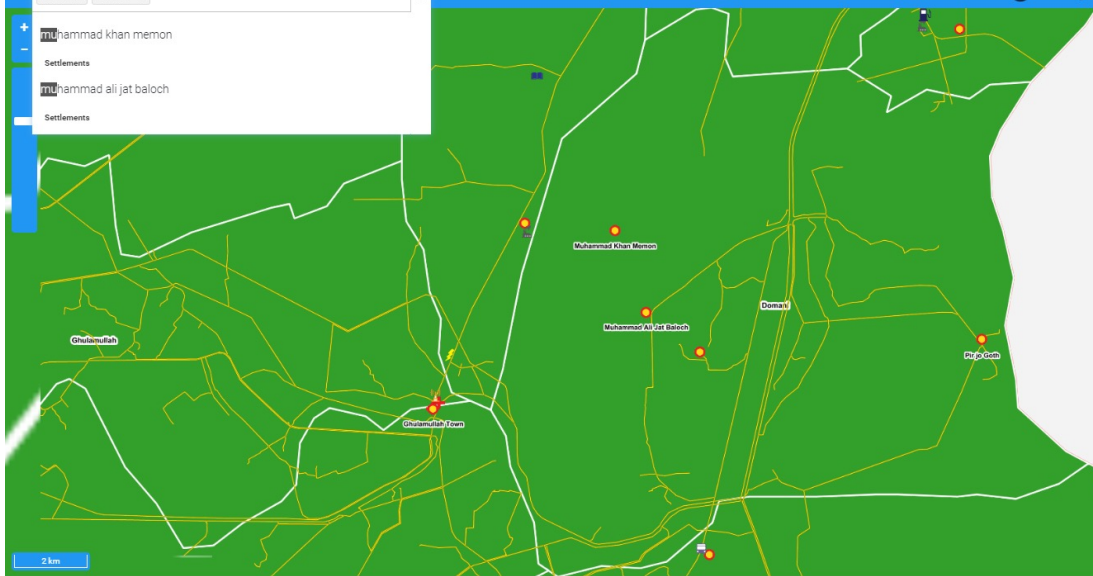
PDMA, Sindh, Pakistan

Info Update/Delete Point Add Point Layers Export Map Measure

Search: [hammad khan memon] [hammad ali jat baloch]

Table of contents

- Base Layer
- Raster Layers
- Administrative Boundaries
 - Districts
 - Ucs
- Point Data
 - Grid Stations
 - Police Stations
 - Ambulances
 - Fire Station
 - Health Facilities
 - Education Facilities
 - Settlements
 - Bus Stops
 - Grainmandi
 - Industries



2 km

New Requests

Name	Type	created_at	created_by	mode	Approve	Discard
No data to display						

localhost/DMIS/Sindh_GIS/

DMIS Disaster Management Information System

PDMA, Sindh, Pakistan

Search...

Info Update/Delete Point Add Point Layers Export Map Measure



Information

Boundary

District	Tehsil	UC
Thatta	Mirpur Sakro	Karampur

Line

Points

Name	Category
Aga Khan Hospital Ghulamullah	Health Facilities
Ghulamullah Town	Settlements

200 m

New Requests

Name	Type	created_at	created_by	mode	Approve	Discard
No data to display						

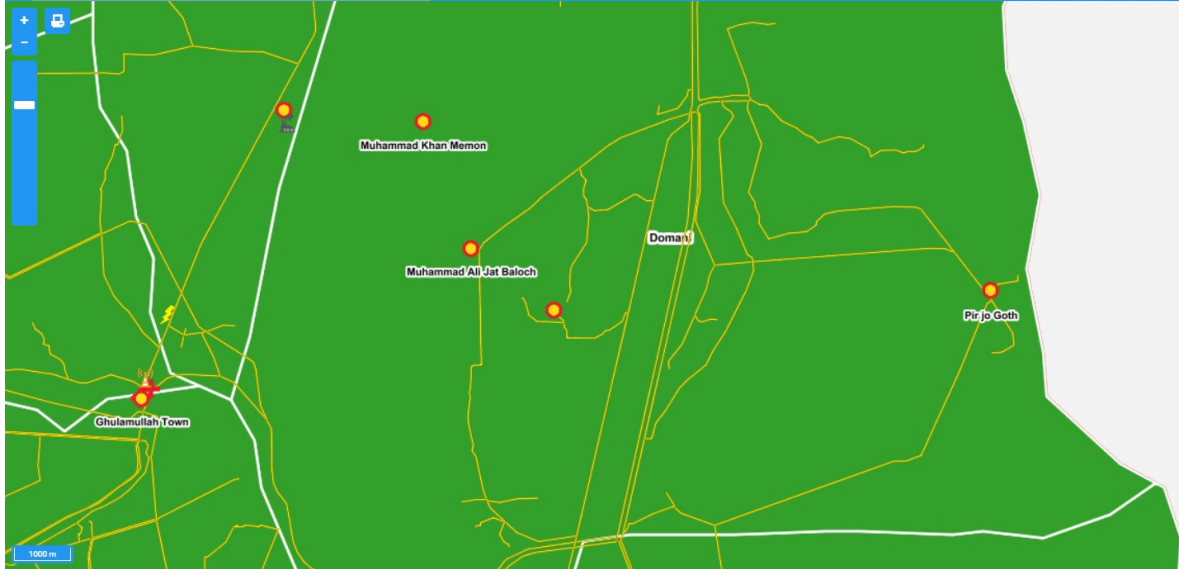
localhost/DMIS/Sindh_GIS/

DMIS Disaster Management Information System

PDMA, Sindh, Pakistan

Search...

Info Update/Delete Point Add Point Layers Export Map Measure



Export Map

Settings:

Title: Domani

Font: Courier-Bold

Color: green

Export PDF

New Requests

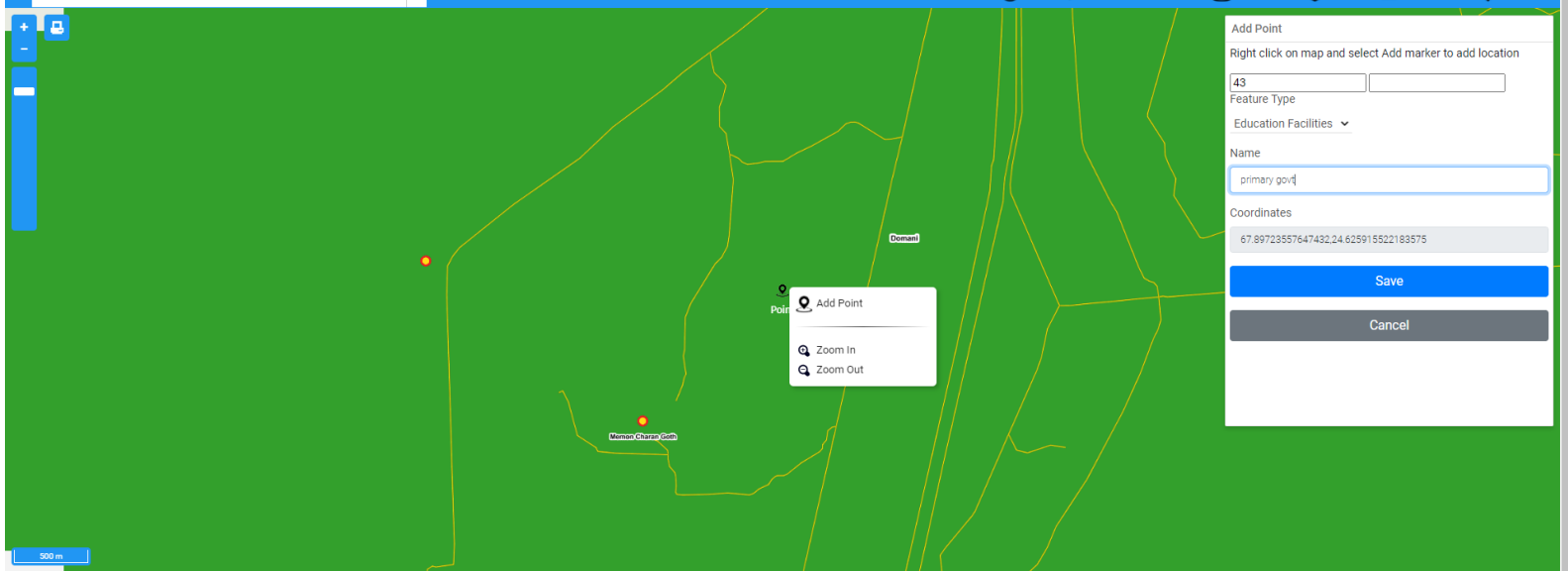
Name	Type	created_at	created_by	mode	Approve	Discard
primary govt	education_facilities	11:24:24.866435+05	43	inserting	Approve	Discard

localhost/DMIS/Sindh_GIS/

DMIS Disaster Management Information System

PDMA, Sindh, Pakistan

Info Update/Delete Point Add Point Layers Export Map Measure



Add Point

Right click on map and select Add marker to add location

43

Feature Type

Education Facilities

Name

primary govt

Coordinates

67.89723557647432,24.625915522183575

Save

Cancel

New Requests

Name	Type	created_at	created_by	mode	Approve	Discard
No data to display						

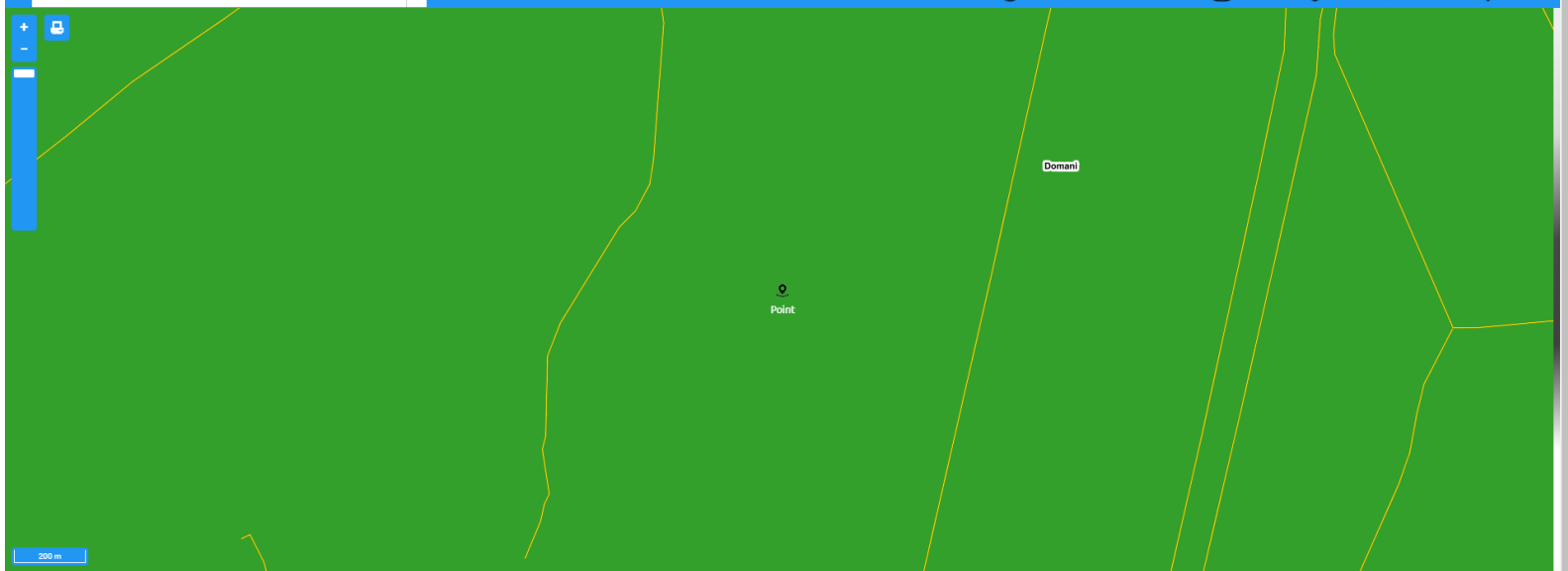
localhost/DMIS/Sindh_GIS/

DMIS Disaster Management Information System

PDMA, Sindh, Pakistan

Search...

Info Update/Delete Point Add Point Layers Export Map Measure



200 m

New Requests

Name	Type	created_at	created_by	mode	Approve	Discard
primary govt	education_facilities	11:24:24.866435+05	43	inserting	Approve	Discard

DMIS	Disaster Management Information System PDMA, Sindh, Pakistan
Disaster Warnings	
	Event Type : Flood recorded at : 2020-08-06
	Event Type : Insect Infestation recorded at : 2020-02-01
	Event Type : Cold Wave recorded at : 2020-01-13
	Event Type : Earthquake recorded at : 2019-09-24
	Event Type : Epidemic recorded at : 2019-09-01
	Event Type : Flood recorded at : 2019-07-15
	Event Type : Epidemic recorded at : 2019-05-14
	Event Type : Drought recorded at : 2018-09-06
	Event Type : Epidemic recorded at : 2017-09-03
	Event Type : Flood recorded at : 2017-01-13
	Event Type : Flood recorded at : 2016-06-01
	Event Type : Flood recorded at : 2016-03-14
	Event Type : Earthquake recorded at : 2015-10-26

DMIS

Disaster Management Information System

PDMA, Sindh, Pakistan

Disaster Warnings

Event Type : Flood recorded at : 2020-08-06

Heavy rainfall started in Sindh and Baluchistan from the 6 August and continued till the 7 August with intermissions. Continuous rain over a period of 24 hours caused massive flooding in Karachi, Hyderabad, Shaheed Benazirabad and Dadu of Sindh province. However, Tehsil Johi in Dadu district is the area which is greatly affected by flash floods. It has been reported that floods are not only damaging infrastructures and houses but also destroyed crops in Johi Tehsil. Government of Sindh has declared 80 villages in Dadu district as "Calamity Affected Areas". The floods also hit different parts of Baluchistan including Kacchi, Sibbi, Harnai, Naseerabad, Jafferabad and Jhal Magsi districts where Jhal Magsi and Jafferabad districts as the most affected areas according to the rapid needs' assessment report. On 18 August, the Government of Baluchistan also declared emergency in Jhal Magsi district.

Dadu district, located at the border between Baluchistan and Sindh, was the worst hit area in recent monsoon floods. Multiple breaches reported in 'Flood Protection Embankment' on 8 August, which triggered flooding in at least 200 villages in Johi Taluka (Tehsil), Dadu district. According to the data collected from Revenue Department at Taluka Revenue Office Johi by PRCS teams, 109 villages in 84 Dehs (villages) of seven UCs (out of total 14 UCs) of Taluka Johi were hit by flood/flash flood. Total population in these affected UCs is approximately 136,520 which is scattered, and these type of topography makes them more vulnerable and inaccessible.

Torrential rains that lashed 22 districts of Baluchistan province on 7 August caused flooding and damaged bridges and highways, cutting off highways Gwadar-Karachi, Quetta-Jacobabad from main cities. Several parts of the province were inundated with floodwaters and the paramilitary personnel were called in to evacuate people to safer areas. In Bolan area, flash floods swamped and damaged the main Quetta-Sibi highway at various points, cutting off the area with the provincial capital. Initially, it has been reported that Jhal Magsi, Jafferabad, Sibi, Harnai, Naseerabad and Kachi districts areas are badly affected by the floods. In Jhal Magsi district alone, six UC and 40 villages are completely washed away by heavy floods. Apart from damage of infrastructures and destruction to houses, seven persons are reported dead and more than 50 are injured, and the floods washed away standing crops and livestock on its way in district Jhal Magsi and Jafferabad. ([IFRC, 20 Aug 2020](#))

Monsoon rains and associated flooding continue to affect Pakistan, resulting in at least 90 fatalities and injuring 40, according to national authorities. More than 1,080 houses, 5 bridges and 10 roads have been damaged or destroyed. On 24-25 August, rescue operations in Karachi, and Dadu Districts (Sindh Province) saw the evacuation of 1,544 individuals, after flooding and landslides. Media report 3 people killed and hundreds of homes and streets inundated. Additional rain and thunderstorms are forecast over most of Pakistan on 26-27 August. ([ECHO, 26 Aug 2020](#))

THANK YOU