

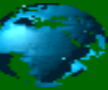


National Disaster Management Authority (NDMA) - Pakistan

Evacuation Preparedness and Management

Case Study of Balochistan District Kachhi

Brief : Date



01 Pakistan Disaster's Context

02 Reasons for Changing Disaster Pattern in Pakistan

03 overview of Evacuation and its Importance

04 Case Study Overview of Kachhi District

05 Vulnerable population/ Areas

06 Evacuation Plan

07 Communication channels

08 Community Engagement

09 Legal and Ethical Consideration

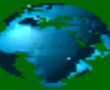
10 Post Evacuation Recovery

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14 Conclusion



Hydro-Meteorological Hazards



**Flash
Floods**



**Urban
Floods**



**Riverine
Floods**



GLOF



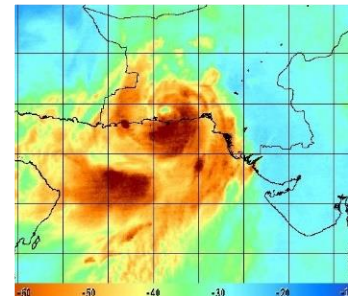
**Avalanch
es**



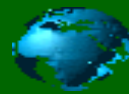
**Landslide
s**



Drought



Cyclones



Man-Made Hazards



Industrial & Technical



Oil Spills



Fires



Epidemics & Pandemics



Displacements



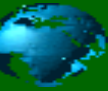
Air Crashes



Train Crashes



Ship Fires

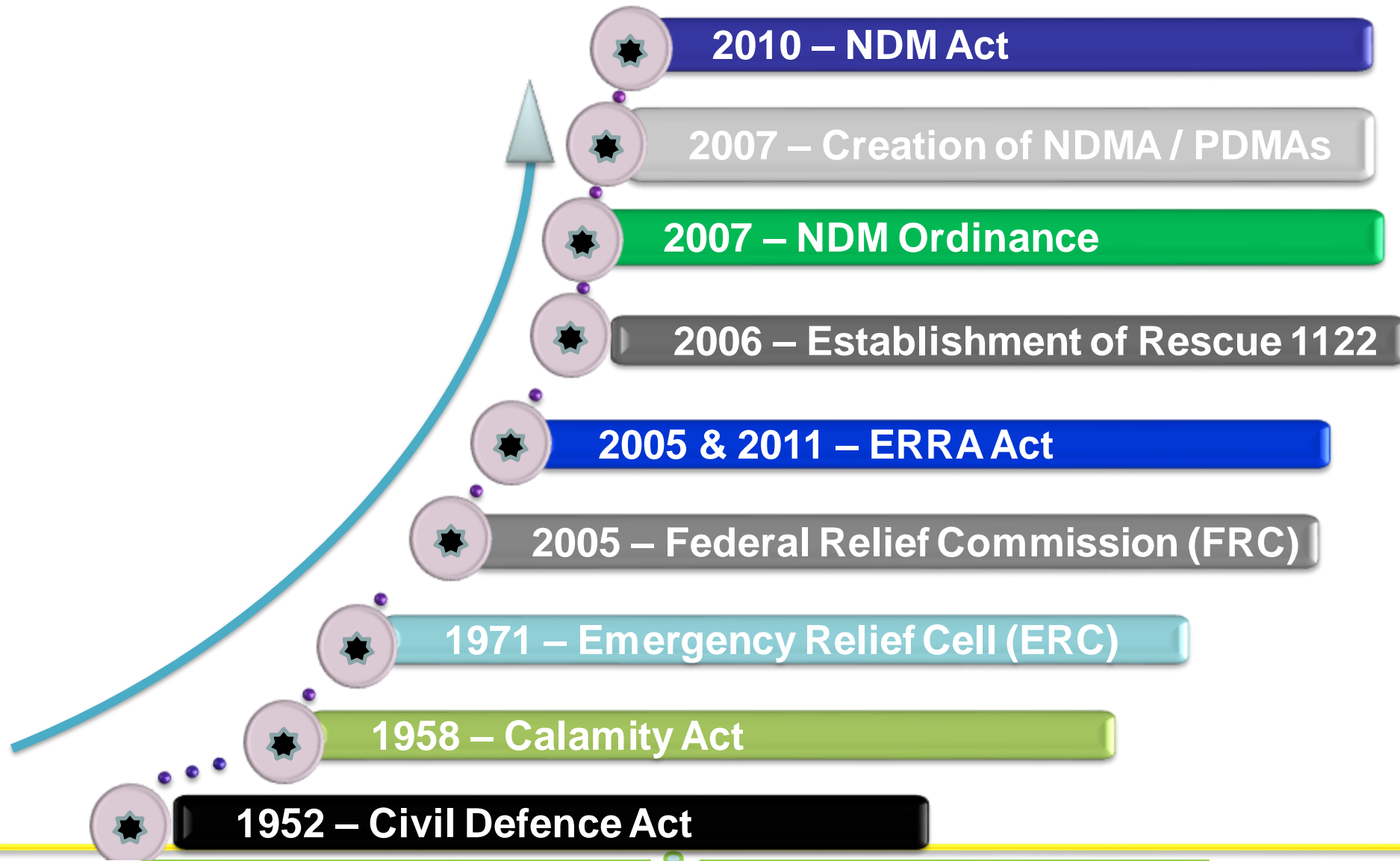
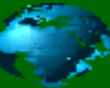


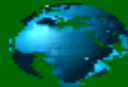
➤ **CLIMATE CHANGE**

- Rising Temperature
- Shifting Monsoon
- Changing flood patterns in Pakistan
- Inclusion of drought / GLOF / Heat wave in the climate matrix of Pakistan

➤ **RAPID URBANISATION**

- Urban Flooding





OVERVIEW OF EVACUATION AND ITS IMPORTANCE



- **Evacuation** refers to the organized and timely movement of people from a potentially dangerous or hazardous area to a safer location.
- This process is typically implemented in response to



Natural
disasters

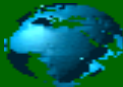


Man-made
emergencies



Other situations that pose a
threat to human life and
well-being.

Evacuations are crucial for minimizing the impact of disasters and ensuring the safety of individuals and communities



TYPES OF EVACUATIONS



Natural Disasters



Man-Made Disasters



Public Health Emergencies



Security Threats



Infrastructure Failures



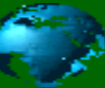
Search and Rescue Operations



Military Operations



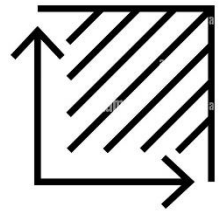
Space Weather Events



Kachhi District in central Balochistan, Pakistan.

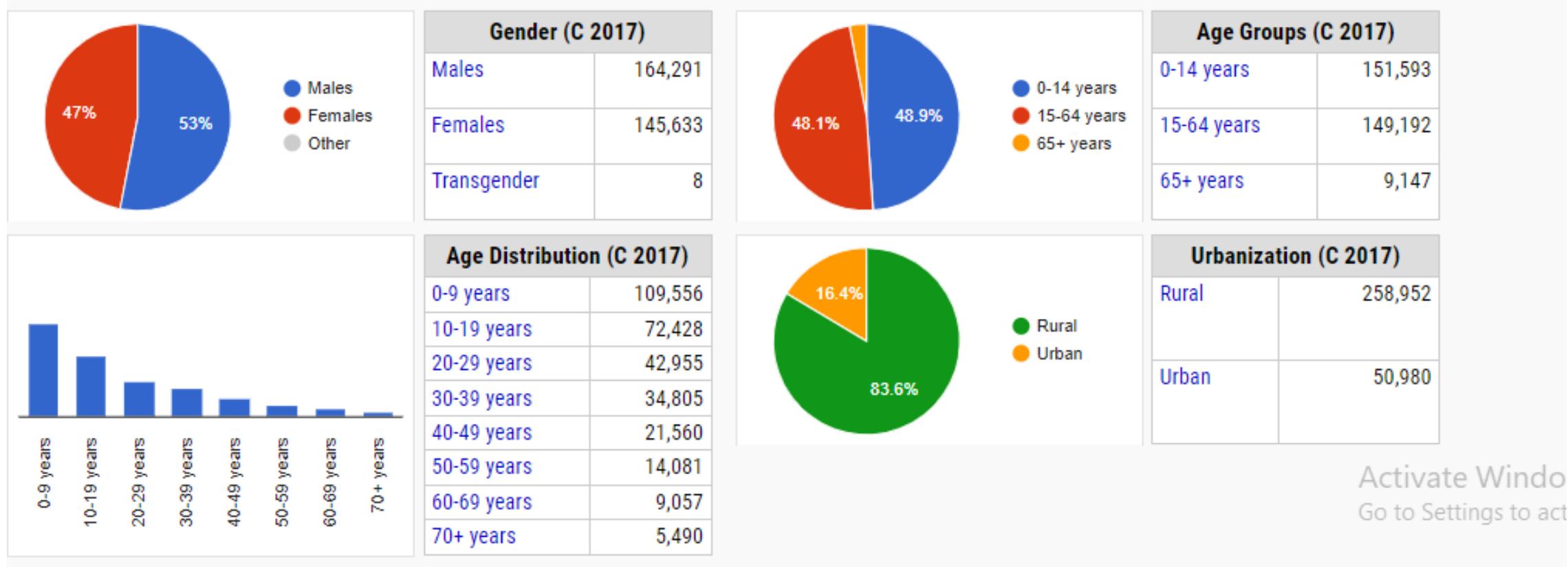


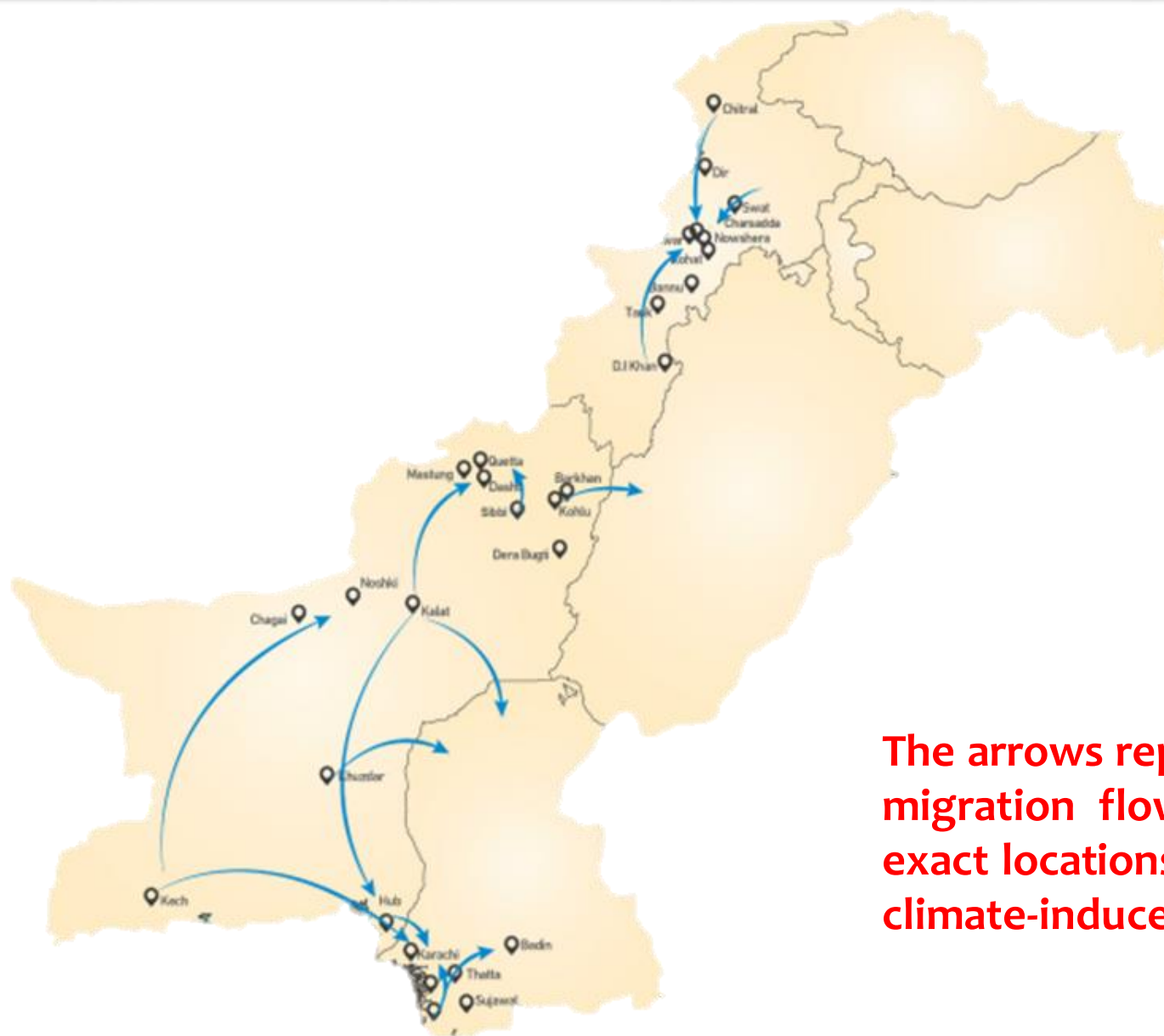
309,932 Population



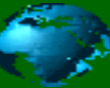
5,682 km² Area







The arrows represent the direction of the migration flow and not necessarily the exact locations of out-flow and in-flow of climate-induced migrations



S. No	Vulnerable area	Tehsil
1.	Flood Vulnerable Areas	Tehsil Bhag Tehsil Dhadar Tehsil Sanni Sub Tehsil Balanari Sub Tehsil Khattan
2.	Earthquake Vulnerable Areas	Entire District
3.	Landslide Vulnerable Areas	Tehsil Dhabar Tehsil Mach
4.	Famine Vulnerable Areas	Entire District
5.	Drought Vulnerable Areas	Tehsil Bhag Tehsil Dhadar Tehsil Sanni Sub Tehsil Balanari Sub Tehsil Khattan



Damages / Loss Report



Casualties	<ul style="list-style-type: none">• M 12• F 09• C 03
Injured	<ul style="list-style-type: none">• M 39• F 06• C -
House Damages	<ul style="list-style-type: none">• Completely 2560• Partial 5100

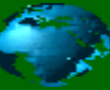
Road (KM)	<ul style="list-style-type: none">• 105.0
Bridge	<ul style="list-style-type: none">• 3-B HW• 1-B PR
Livestock	<ul style="list-style-type: none">• 27193

Agriculture Crops	<ul style="list-style-type: none">• 95905 Acre
Dams / Over Flowed	<ul style="list-style-type: none">• Mach City Link Bridge Partially collapse



Relief Activities

14



Tent

2330

Quits

600

Jerry Cane

1200

Mosquito Net

11400

Water Cooler

1100

Kitchen Set

400

Charpoy

300

Tarpaulin

1600

Plastic Mate

1000

Gas Cylinder

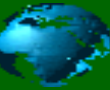
500

Food Packages

3450

Water Tank 400gln

5



Preparedness Activities and measures taken in advance to ensure effective response to the impact of hazards including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations



Early warning The provision of timely and effective information, through identified institutions, to communities and individuals so that they could take action to reduce their risk and prepare for effective response

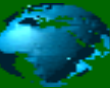


EMERGENCY

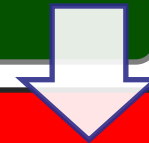
Emergency management The management and deployment of resources for dealing with all aspects of emergencies, in particularly preparedness, response and rehabilitation



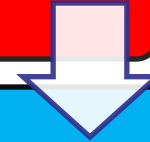
Monitoring and Evaluation to assess the effectiveness of climate evacuation plans over time. Regularly review and update plans based on new climate data, previous evacuations



Establishment of the DDMA and relevant committees at District level as per the National Disaster Management Ordinance 2006



The command, coordination and organization structure along with efficient trained personnel



Effective notification and communication facilities



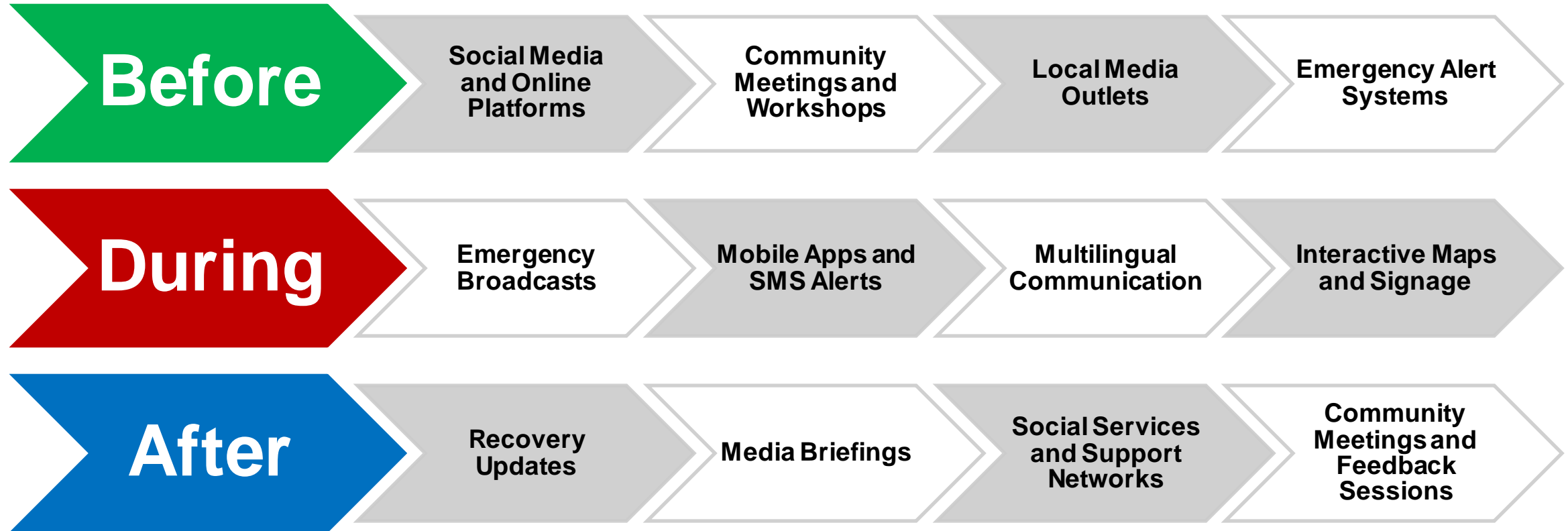
Proper training of concerned personnel

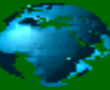


Regular review and updating of plan

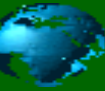


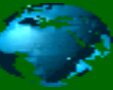
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Understanding legal and ethical considerations is crucial in the context of evacuations, where decisions directly impact the safety, well-being, and rights of individuals and communities.

- Right to Life and Safety Informed Consent and Communication
- Protection of Vulnerable Populations
- Property Rights and Compulsory Evacuations
- Provision of Aid and Resources



Compliance with Laws and Regulations

Decision-makers must ensure that their choices align with existing laws and regulations. Failure to comply may result in legal consequences.

Protection of Rights and Freedoms

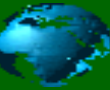
Ethical decision-makers recognize that respecting individual rights is not just a legal requirement but a fundamental ethical principle. Decisions should uphold human dignity and individual autonomy.

Fairness and Justice

Laws may prescribe principles of fairness and justice, such as anti-discrimination statutes. Legal decisions should be impartial and avoid unjust biases.

Consideration of Stakeholder Interests

Decision-makers must navigate laws that require consideration of the interests of various stakeholders, including employees, customers, and the public.



Damage Assessment

Re-entry Planning

Infrastructure Rehabilitation

Housing Assistance

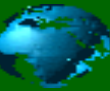
Community Support Services

Resilience Building



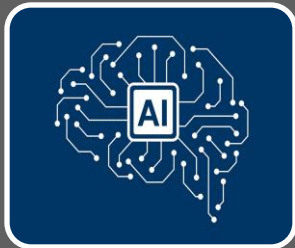
Addressing the physical and mental health needs of evacuees is crucial during and after an evacuation. Displacement from homes, exposure to traumatic events, and the challenges of living in temporary shelters can have significant impacts on both physical and mental well-being.





Geographic Information Systems (GIS)

- GIS technology helps in **mapping** and **analyzing** evacuation routes, allowing for the identification of the most efficient and safe pathways. This ensures that evacuees can be directed away from danger zones.



Artificial Intelligence (AI) and Predictive Analytics

- AI algorithms can analyze historical data to predict the potential impacts of disasters, helping authorities make **informed decisions** regarding evacuation orders and resource allocation



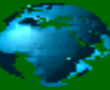
Robotics and Drones

- Drones equipped with cameras and sensors can be deployed for search and rescue operations, providing a **bird's-eye view of affected areas**.



Communication and Coordination

- **Social Media Platforms** Leveraging social media platforms can enhance communication during evacuations. Authorities can use these platforms to disseminate information, receive feedback from the public, and address concerns.



Pakistan Government Initiatives



Pakistan formulated its National Climate Change Policy in 2012 to address the challenges posed by climate change. The policy aimed at mainstreaming climate change into national development plans and promoting sustainable development.



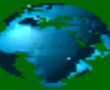
Pakistan actively participates in international forums and agreements related to climate change, such as the United Nations Framework Convention on Climate Change (UNFCCC). The country collaborates with other nations to address global climate challenges.

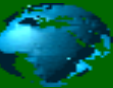


The Green Pakistan Programme was launched to enhance and protect the country's natural resources. This initiative included tree plantation drives, biodiversity conservation efforts, and measures to combat land degradation



Lessons Learned





- Evacuation preparedness and management are critical for **safeguarding communities** from the impacts of natural disasters.
- The case study of Balochistan District Kachhi highlights the importance of understanding **local challenges**, **learning from past incidents**, and **implementing best practices** to ensure the safety and well-being of the population.
- Continuous improvement and **adaptation to evolving circumstances** are key principles in building a resilient and effective evacuation strategy.