



History of disasters and their management in Pakistan

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Abstract

Pakistan is vulnerable to disaster risks from various hazards, including avalanches, cyclones/storms, droughts, earthquakes, epidemics, floods, glacial lake outbursts, landslides, pest attacks, river erosion, and tsunami. Human-induced hazards that threaten the Country include transport, industrial, oil spills, urban and forest fires, civil conflicts, and internal displacements of communities due to multiple factors. High priority hazards in terms of their frequency and scale of impact are:- earthquakes, droughts, flooding, Wind Storms, and Landslides that have caused widespread damages and losses in the past. And now COVID-19 has also given negative impacts. This research study addresses the history of disasters and how the institutions of Pakistan have somehow managed to overcome them.

Keywords: history of disaster, management, Pakistan

Introduction

A disaster is a sudden, catastrophic event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its resources. Though often caused by nature, disasters can have human origins. Disasters can take many different forms, and the duration can range from an hourly disruption to days or weeks of ongoing destruction (Niekerk, 2019).

This paper describes the list of the various natural and artificial, or technological disasters that can impact a community. Natural disasters include agricultural diseases & pests, damaging Winds, drought and water shortage, earthquakes, emergency diseases (pandemic influenza), extreme heat, floods and flash floods, hail, hurricanes and

tropical storms, Landslides & debris flow, Thunderstorms and lighting, Tornadoes, Tsunamis, Wildfire, Winter and ice storms, Sinkholes and the most recent COVID-19. At the same time, artificial and technological types of disasters include hazardous materials power service disruption & blackout, nuclear power plant and nuclear blast, radiological emergencies, chemical threat and biological weapons, Cyber-attacks, explosions, civil unrest. The paper also describes the roles and functions of NDMA (National Disaster Management Authority) and its respective decentralized authorities in their respective provinces of Pakistan and the most recent NCOC (GOP, 2020).

Disasters in Pakistan

History of earthquakes in Pakistan

Table 1: Timeline of all the major earthquakes that have struck Pakistan.

Date	Description	Location
February 8, 2017	A 6.3 magnitude earthquake hit parts of Baluchistan; residents of the affected areas were woken up and ran out of their houses in fear and shock. However, no damage or casualties were reported.	Gwadar, Makran and Pasni
April 10, 2016	7.1 magnitude earthquake jolted parts of Khyber Pakhtunkhwa and Punjab, causing fear and panic among residents who vacated buildings for the duration of the almost 'three-minute-long quake.'	Khyber Pakhtunkhwa and Punjab
October 26, 2015	A strong earthquake measuring 7.7 magnitudes struck major cities of Pakistan, including the northern areas. Strong tremors were also felt in Kabul and New Delhi.	Hazara, Hunza, Swat, Kabul and New Delhi.
September 24, 2013	A massive earthquake killing over 800 people, injuring hundreds, and flattening thousands of houses in the southwestern province.	Baluchistan
April 16, 2013	A strong earthquake measuring 7.9 magnitudes hit Quetta, with tremors felt in different parts of Pakistan, Iran, India, and some gulf countries. The earthquake's epicenter lay in the Sarwan area of Iran, which lies close to the Pak-Iran border. About 34 people were reported killed, while 80 were reported to be injured, with some 10,000 houses damaged due to the quake.	Pakistan, Iran, India, and some gulf countries.

April 4, 2013	An earthquake struck the Northern Areas of Pakistan, including FATA, measuring 5.4 magnitudes.	Hazara, Hunza, Swat and KP
Feb 17, 2013	A 5.5-magnitude earthquake struck the northern areas of Pakistan, including FATA.	Nowshera, Peshawar, Malakand, Shangla, various areas of Gilgit and Baltistan, Lower Dir, and Khyber tribal regions.
December 29, 2012	A 5.8-magnitude earthquake struck the Hindu Kush region of Afghanistan, and tremors were felt in Pakistan.	Afghanistan
July 18, 2012	A moderate earthquake measuring 5.7 magnitudes jolted several parts of the CountryCountry. Its epicenter was in Koh Hindukush, according to the met office. The quake lasted a few seconds, but no casualties were reported.	Koh Hindukush
July 12, 2012	An earthquake measuring 6.1 magnitudes. The epicenter was calculated as 194 kilometers deep under the Hindukush range, while no losses were reported.	The northern areas of Islamabad, Rawalpindi, K.P., and Punjab.
May 25, 2012	An earthquake of mild intensity hit. No casualties were reported.	Quetta and adjoining areas
May 12, 2012	A medium magnitude earthquake shook parts of Sorab in Quetta. No casualties were reported.	Quetta
January 19, 2012	A medium magnitude earthquake (measuring 4.5 magnitudes) lasted for 30 seconds and affected the earthquake's epicenter lay 90 kilometers from Quetta in the Achakzai area of Ziarat District. No casualties were reported.	Areas of Quetta, Ziarat, Khanozai, Pishin, Harnai, Qila Abdullah and Toba Achakzai.

Source: Prepared by Researcher

Emergency diseases

Dengue fever

Dengue fever is endemic in Pakistan, with a seasonal rise in cases. However, recently, the transmission of dengue fever has intensified in the Country with increased incidence and

geographic expansion. Apart from the KPK province, sporadic cases have also been reported from Punjab, Sindh, and Baluchistan. The tsunami reached a maximum run-up height of 13 m (40 feet) along the Makran coast (Chaudhry, 2017).

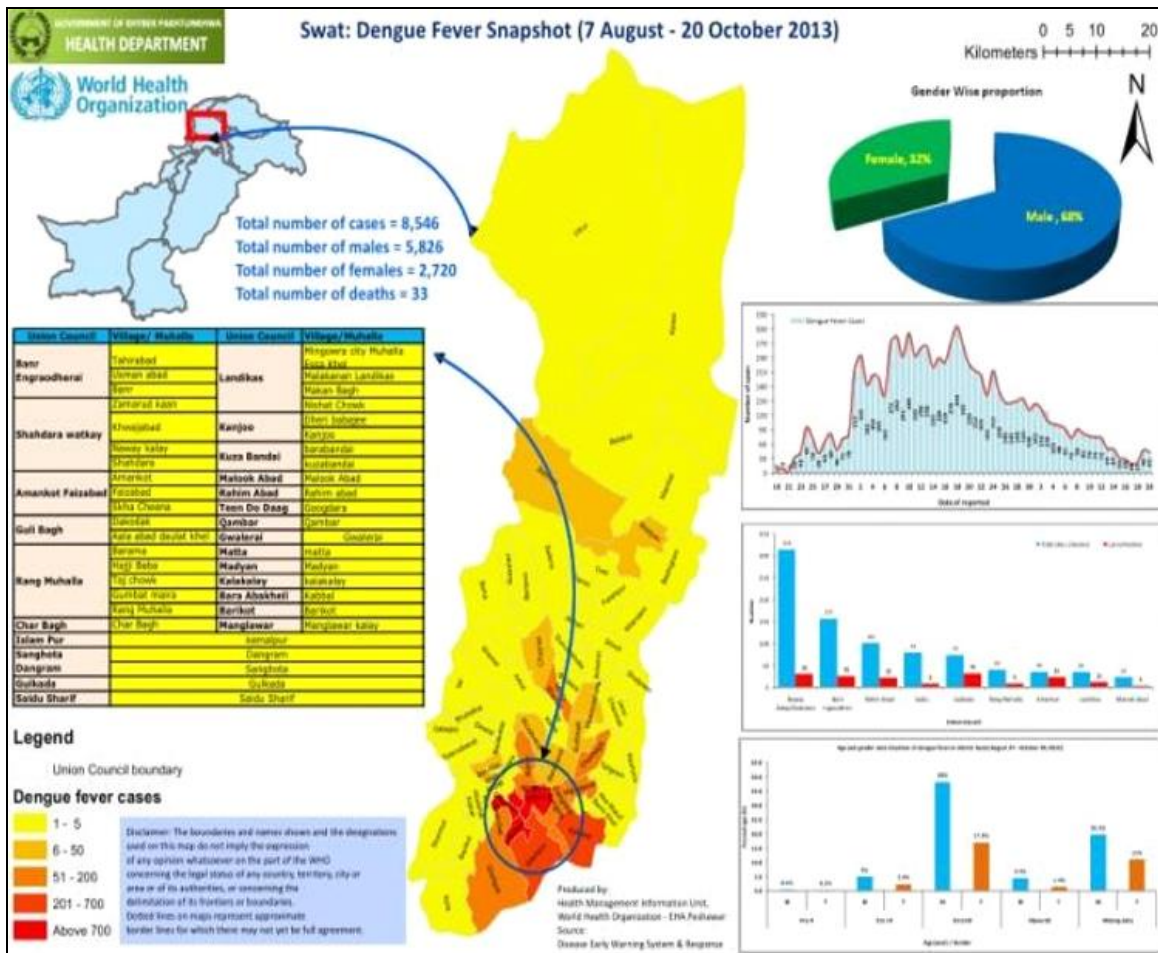


Fig 1: Monsoon-related hazards, WAPDA profile.

September 29, 2013 – An outbreak of dengue fever has been reported in the Swat district of Khyber Pakhtunkhwa (KPK) province in Pakistan. As of September 25, 2013, a total of 6376 suspected cases, including 23 deaths (case-fatality rate 0.36%), were reported from this District since August 7, 2013. Laboratory test performed at the National Institute of Health (NIH) in Islamabad, Pakistan, confirmed the diagnosis and detected three serotypes of dengue fever (DEN-1, DEN-2, and DEN-3) as the causative strain of this current outbreak.

Floods in Pakistan

Pakistan is vulnerable and prone to numerous disasters, both natural and artificial. Heavy rains and floods have become a regular phenomenon during the monsoon since the year 2010. The floods in Pakistan began in late July 2010, resulting from heavy monsoon rains in the Khyber Pakhtunkhwa, Sindh, Punjab and, Baluchistan regions of Pakistan, which affected the Indus River basin.

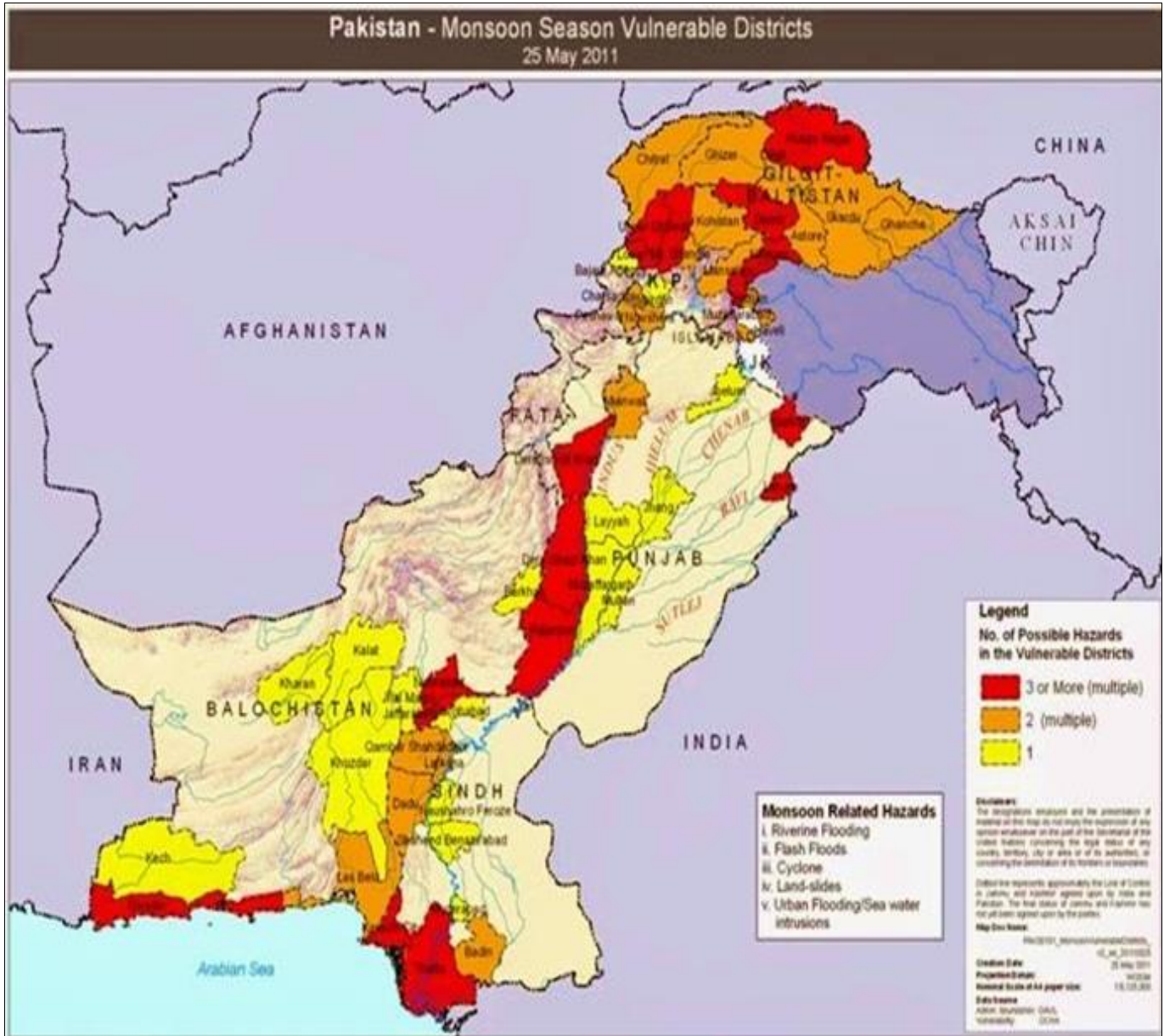


Fig 2: Moonsoon season vulnerable districts

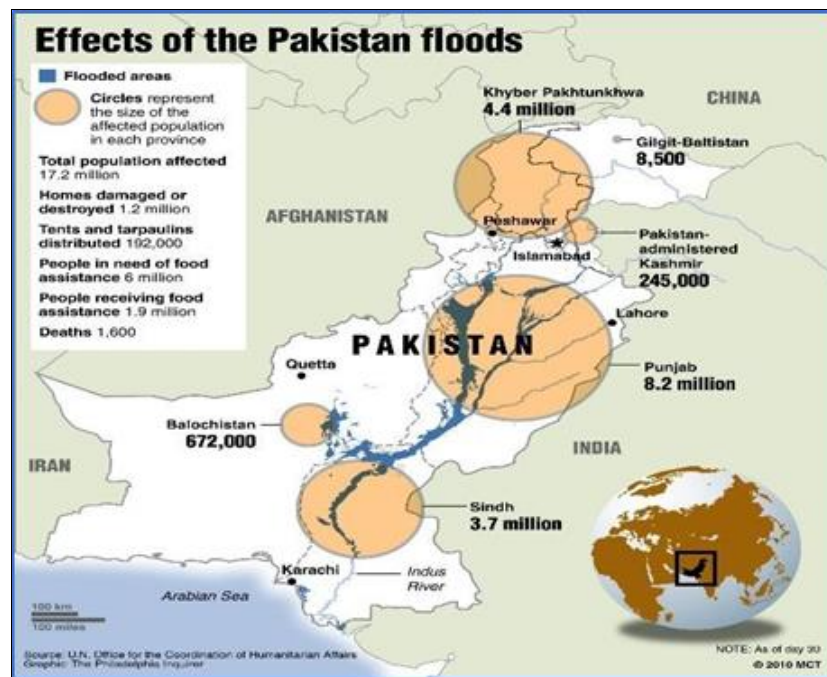


Fig 3: Flood zones in Pakistan.

The waves destroyed fishing villages and caused great damage to port facilities. More than 4,000 people died from the combined effects of the earthquake and the tsunami, but the tsunami caused most deaths. The tsunami destroyed Khudi, a fishing village about 30 miles west of Karachi, killing its entire people. At Dabo Creek, 12 fishermen were swept out to

sea. Below is the map showing all the hazard-prone areas, including heavy rainfall, tsunami, floods, cyclone, flash floods, urban flooding, etc., in Pakistan (DAVIES, 2014).

Extreme heat in Pakistan

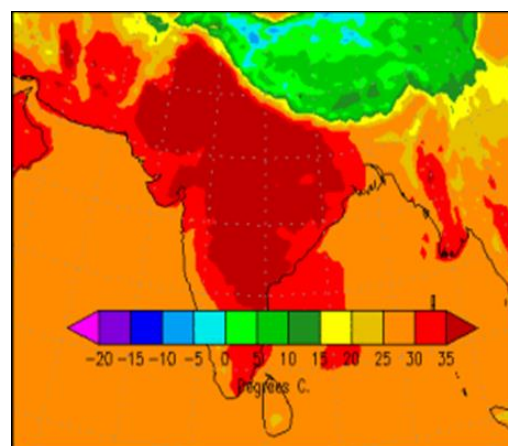


Fig 4: Map showing temperature range

Every year cities of Pakistan face extreme heat consequences, which causes disastrous conditions in the Country Country. An intense heatwave has swept Pakistan, reaching above 40 degrees Celsius (118 degrees Fahrenheit) in many cities.

Pakistan must prioritize and adequately finance extreme heat resilience and mitigation to achieve its regional geo-economic ambitions.

Across South Asia, warming temperatures are contributing to a loss in crop production. “Mega-heat waves” will become more frequent over the next 40 years. Heat stress is a health hazard that causes illnesses, injuries and can even lead to

death (AlukO, 2021).

Explosions in Pakistan

Terrorism in Pakistan has become a major and highly destructive phenomenon in recent years. The annual death toll from terrorist attacks has risen from 164 in 2003 to 3318 in 2009, with 35,000 Pakistanis killed between September 11, 2001, and may 2011, and the major loss was observed in December 2004.

Explosions in Pakistan

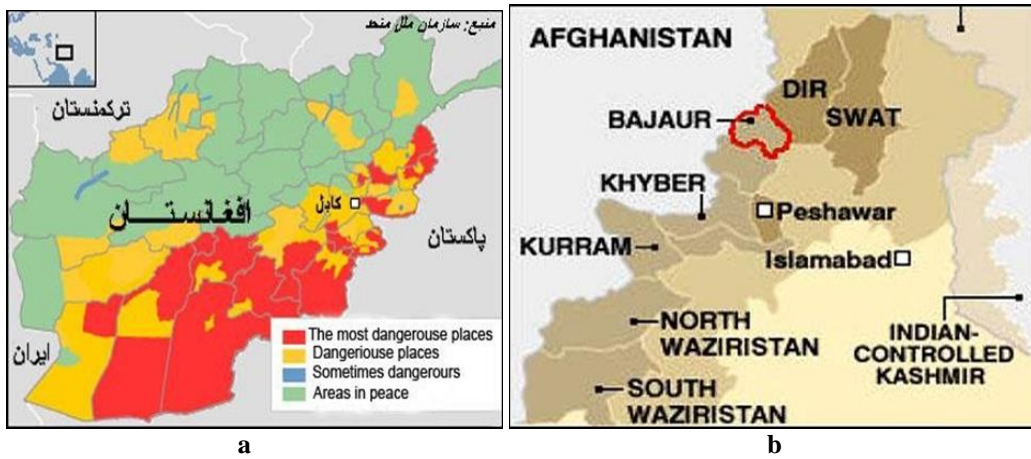


Fig 5a and b: Shows (terrorist attacks)

Peshawar, Pakistan: At least three people were killed and 50 others wounded when a bomb explosion ripped through a Shiite Muslim procession in central Pakistan Security was high as the religious minority marked Ashura during the holy month of Muharram, a flashpoint for sectarian violence in previous years. Authorities have suspended mobile phone services in major cities as a security measure during Ashura processions. Residents in many urban centers were

experiencing signal jams. The streets leading to procession routes were also blocked. Ashura commemorates the Prophet Mohammed's grandson Hussain's killing at the Battle of Karbala in 680 AD. The defining moment of the religion's schism and the birth of Shiite Islam (Toon, 2021).

Droughts in Pakistan

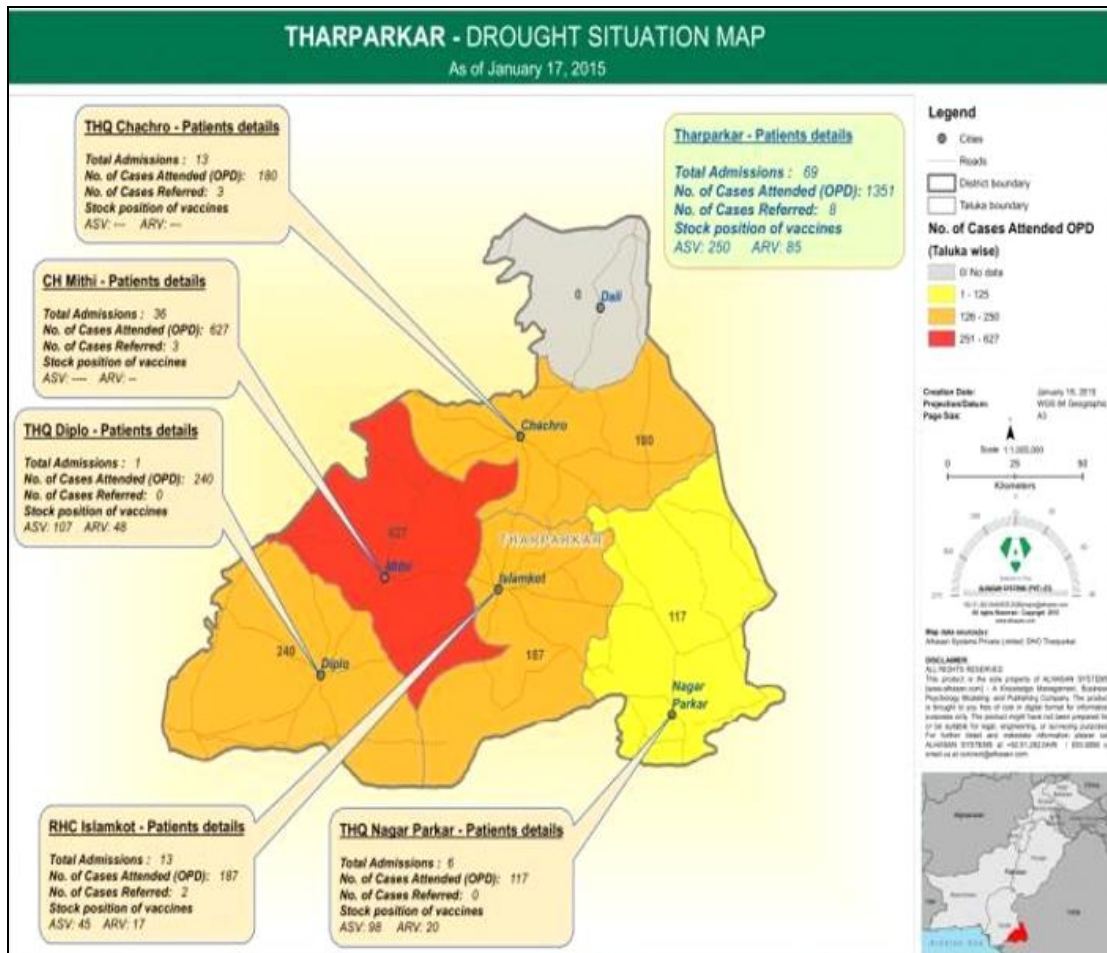


Fig 6: Droughts in Pakistan

Drought in Pakistan has become a frequent phenomenon in the Country Country.

The drought of 1998–2002 is considered the worst in 50 years. According to a report issued by the Economic Survey of Pakistan, drought is one of the factors responsible for poor growth performance. Baluchistan, especially the western and central parts of the province, remains in the grip of drought almost year-round. It has been found that the temperatures of the region of seasonal low, developing as a semi-permanent feature over parts of Sindh, Baluchistan, and adjoining areas of Southern Punjab, also contribute significantly towards pulling moisture from the Arabian Sea during monsoons.

Statistical evidence shows a reasonably good linkage between the temperatures of May and the monsoon rains. Such temperature changes may be associated with increased CO2 and other greenhouse gases, but these factors are yet to be established (Krakauer, 2019) [13].

Famine in Pakistan

Hunger in Pakistan has killed many people and affected the lives of many more, especially children. After a drought hit the Tharparkar district of Pakistan's southern Sindh Province earlier this year, at least



Fig 7: showing famine and drought vulnerable areas

132 young children died, many as a result of malnutrition. Famine killed people in Sindh, Pakistan, on March 22, 2014. Most Hindus die due to severe drought in the Centre of population near the Thar Desert and receive rain less. Children become mad due to poor nutrition and lack of clean drinking water in the region that 1 million 250 thousand people live.

One hundred seventy-six people, 136 of them children, died due to famine. Children were affected most by the famine (Kalair, 2017).

Drone attacks in Pakistan

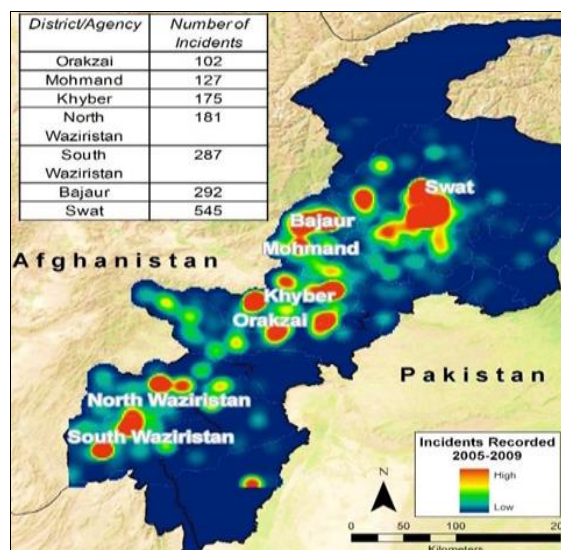


Fig 8: Tribal areas affected by drone attack by U.S., AFP.

THURSDAY, a U.S. drone attack killed 11 insurgents at a militant compound in Pakistan's tribal region near the northwestern border with Afghanistan. Between 2004 and 2018, the United States government attacked thousands of targets in Northwest Pakistan using un crewed aerial vehicles (drones) operated by the United States Air Force under the operational control of the Central Intelligence Agency's Special Activities Division. Most of these attacks were on targets in the Federally Administered Tribal Areas along the Afghan border in Northwest Pakistan. These strikes began during the administration of United States President George W. Bush and increased substantially under his successor Barack Obama. Some in the media referred to the attacks as a "drone war."

The operations in Pakistan were closely tied to a related drone campaign in Afghanistan, along the same border area. These strikes have killed 3,798–5,059 militants and 161–473 civilians. Among the militant deaths are hundreds of high-level leaders of the Afghan Taliban, the Pakistani Taliban, the Islamic State, Al-Qaeda, the Haqqani Network, other organizations, with 70 Taliban leaders killed in one ten-day period of May 2017 alone (Saleem, 2014).

Managing Disaster

In any serious disaster, a gap develops between resource needs and resource availability. This gap will worsen in a severe pandemic due to global supply chain disruptions or delays. Governments and aid organizations will be overwhelmed responding to all who need assistance at the same time. Your plan should assume that there will be little or no assistance coming from outside the municipality. It is of prime importance that the municipal leaders read, discuss, and study their national, regional/state, and district pandemic response plans to understand:

- What plans are already in place?
- What are preparedness and response resources available?
- The municipal level plan fits into the national pandemic response structure as municipal leaders. You will be responsible for keeping the population healthy, calm, and safe during the 6 to 12 weeks of each severe pandemic wave (remember, there could be as many as three waves). Your actions can determine whether there are many deaths or relatively few.

It is strongly recommended that your municipal leadership teamwork within existing disaster preparedness and response structures in the municipality. There is no reason to change a disaster management system that works. Existing plans and resources are the foundation on which to build a local pandemic plan. Therefore, before launching a pandemic preparedness and response effort in a municipality, the first step should be to read and follow the directions of the national, regional/state, or district pandemic response plan. Finally, flu prevention protocols should always be exercised to protect against infection during any gathering before or during a pandemic.

The most important goals of successful municipal pandemic management are to

- Have a strong enough organizational structure to manage

- a pandemic in the municipality
- Continually assess needs, identify resources, plan the response, and implement the plan.
- Keep the number of deaths to a minimum (Saqib, 2015).

National Disaster Management Authority (Pakistan)

Introduction

National Disaster Management Authority (NDMA) is an autonomous and constitutionally established federal Authority mandated to deal with the whole spectrum of disasters and their management in the Country.

The NDMA formulates and enforces national disaster policies at federal and provisional levels and collaborates closely with various government ministries, military forces, and United Nations-based organizations to jointly coordinate efforts to conduct its disaster management, search and rescue, and wide range of humanitarian operations in the Country and abroad. The NDMA aims to develop sustainable operational capacity and professional competence to undertake its humanitarian operations at its full capacity.

Codified under Article 89(1) of the Constitution of Pakistan, the institution is chaired by the appointed chairman, either civilian or military officer, or direct reports to the Prime Minister of Pakistan as its chief operations coordinator. The institution is currently chaired by Major-General Saeed Aleem of the Pakistan Army as its appointed chairman (Shami, 2010).

Table 2: Overview of NDMA

Agency overview	
Formed	August 17, 2007; 8 years ago
Preceding	Ministry Of Climate Change
Jurisdiction	Constitution of Pakistan
Headquarters	Islamabad
Agency executive	major-general asghar-nawaz,PA, chairman
Website	www.ndma.gov.pk

Operational Scope and Constitutional Definition

The functions and duties are defined and set by the Constitution of Pakistan in Article 239I in Chapter1. The Commission charged with the following duties:

1. To act as the implementing, coordinating, and monitoring body for disaster management;
2. To prepare the National Plan to be approved and implement, coordinate and monitor the implementation of the National policy;
3. To provide necessary technical assistance to the Provincial Governments and the Provincial Authorities for preparing their disaster management plans by the guidelines laid down by the National Commission.
4. To coordinate response in the event of any threatening disaster situation or Disaster.
5. National Disaster Management Authority (NDMA) is the lead agency at the Federal level to deal with the whole spectrum of Disaster Management Activities. It is the executive arm of the National Disaster Management Commission (NDMC), which has been established under the Chairmanship of the Prime Minister as the apex policy-making body in the field of Disaster. In a disaster,

all stakeholders, including Government Ministries/ Departments/Organizations, Armed Forces, INGOs, NGOs, and U.N. Agencies, work through and form part of the NDMA to conduct one window operation (Hussain, 2017).

Aims of NDMA

NDMA aims to develop sustainable operational capacity and professional competence to undertake the following task: -

1. Complete spectrum of disaster risk management at the national level.
2. Act as Secretariat of the NDMC to facilitate implementation of DRM strategies. 3- Map all hazards in the Country Country and conduct risk analysis regularly.
3. Develop guidelines and standards for national and provincial stakeholders regarding their role in disaster risk management.
4. Ensure the establishment of D.M. Authorities and Emergency Operations Centers at provincial, District, and municipal levels in hazard-prone areas.
5. Provide technical assistance to federal ministries, departments, and provincial D.M. authorities for disaster risk management initiatives.
6. Organize training and awareness-raising activities for capacity development of stakeholders, particularly in hazard-prone areas.
7. Collect, analyze the process, and disseminate inter-sectoral information required in an all-hazards management approach.
8. Ensure appropriate regulations are framed to develop disaster response, volunteer teams.
9. Create a requisite environment for the participation of media in DRM activities.
10. Serve as the lead agency for NGOs to ensure their performance matches accepted international standards, e.g., the SPHERE standards.
11. Served as the lead agency for international cooperation in disaster risk management. This will include information sharing, early warning, surveillance, joint training, and common standards and protocols required for regional and international cooperation.
12. The coordinated emergency response of the Federal Government in the event of a national-level disaster through the National Emergency Operations Centre (NEOC).
13. Require any government department or agency to make available such men or resources for emergency response, rescue, and relief (White, 2020).

Role of NDMA, as assigned in NDM Act 2010 are as under

1. Act as the implementing, coordinating, and monitoring body for disaster management.
2. Prepare the National Plan to be approved by the National Disaster Management Commission.

3. Implement, coordinate and monitor the implementation of the National policy, i.e., National
4. Disaster Management Plan.
5. Lay down guidelines for preparing disaster management plans by different Ministries or departments and the Provincial Authorities.
6. Provide necessary technical assistance to the Provincial Governments and the Provincial Authorities for preparing their disaster management plans under the guidelines laid down by the National Disaster Management Commission.
7. Coordinate response in the event of any threatening disaster situation or Disaster. Lay down guidelines for or give directions to the concerned Ministries or Provincial Governments and the Provincial Authorities regarding measures to be taken in response to any threatening disaster situation or Disaster.
8. Promote general education and awareness about disaster management.
9. Perform such other functions as the National Disaster Management Commission may require to perform (Iqbal, 2021).

Mandate of NDMA

1. Act as the implementing, coordinating, and monitoring body for disaster management.
2. Prepare the National Plan to be approved by the National Commission.
3. Implement, coordinate and monitor the implementation of the national policy.
4. Lay down guidelines for preparing disaster management plans by different Ministries or Departments and the Provincial Authorities.
5. Provide necessary technical assistance to the Provincial Governments and the Provincial
6. Authorities for preparing their disaster management plans under the guidelines laid down by the National Commission.
7. Coordinate response in the event of any threatening disaster situation or Disaster.
8. Lay down guidelines for or give directions to the concerned Ministries or Provincial Government and the Provincial Authorities regarding measures to be taken in response to any threatening disaster situation or Disaster.
9. For any specific purpose or general assistance requisition, the services of any person
10. and such person shall be a co-opted member and exercise such power conferred upon him by the Authority Authority in writing.
11. Promote general education and awareness about disaster management.
12. Perform such other functions as the NDMC may require it to perform (Khan, 2018).

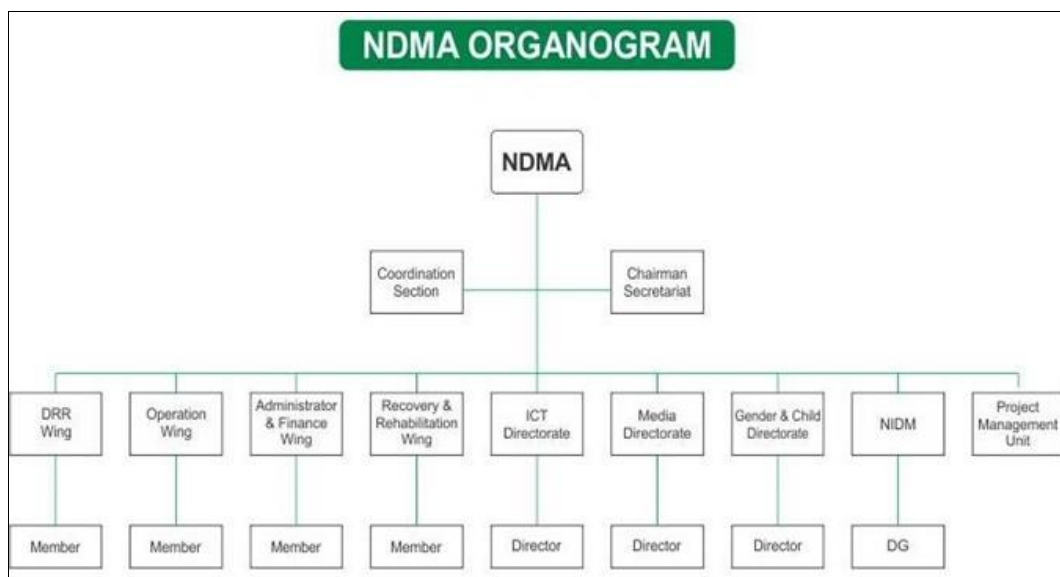


Fig 9: Organogram of NDM

Functions of various wings

To carry out the assigned tasks/functions, NDMA is divided into three wings; Administration & Finance, Disaster Risk Reduction, and Operations, which have the following functions to play

Administration & finance (A&F) wing

- Provide all administrative support for NDMA Operations Wing.
- Ordering, procurement, transportation, and record-keeping of relief goods.
- Management of Human Resources-related matters.
- Management/maintenance of NDMA transport vehicles.
- Management of all administrative matters.
- All finance and Audit matters.

Disaster risk reduction (DRR) wing

- Handling all matters related to Disaster Risk Reduction Policies, Risk Insurance, Flood related issues, Disaster Awareness, and National Disaster Management Committee (NDMC).
- All matters related to NDMP, including implementation, project execution, and evaluation.
- Monitoring and evaluation of plans, strategies at the National, Provincial, District level, and civil sector.
- Mainstreaming of Disaster Risk Reduction into the development sector.
- Management of International Cooperation, Global Frameworks, and regional organizations.
- Coordination with United Nations Agencies, Bilateral / Multilateral Organizations, and International Non-Government Organizations (INGOs) / Non-Governmental Organizations (NGOs).

Operations Wing

- Operation of National Emergency Operations Center (NEOC).

- Relief and Rescue Operations (inland and foreign).
- Situation Updates / Briefs.
- Contingency Planning.
- All matters related to Urban Search and Rescue (USAR) Teams.
- Briefs / Presentations for Prime Minister, President, Members of Senate & National Assembly, and other Dignitaries.
- Coordination of relief efforts with Federal / Provincial Authorities, Armed Forces, and Organizations.
- Contingency Plans for the full spectrum of disasters faced by Pakistan (Shah, 2020).

Provincial Disaster management authority (PDMA)

Provincial Authority shall be responsible for implementing policies and plans for disaster management in the province. Without prejudice to the generality of the preceding provisions, the Provincial Authority may:-

1. Formulate the provincial disaster management policy obtaining the approval of the Provincial Commission;
2. Coordinate and monitor the implementation of the National Policy, National Plan, and Provincial Plan;
3. Examine the vulnerability of different parts of the province to different disasters and specify prevention or mitigation measures;
4. Lay down guidelines to be followed for preparation of disaster management plans by the Provincial Departments and District Authorities;
5. Evaluate preparedness at all governmental or non-governmental levels to respond to Disasters and to enhance preparedness.
6. Coordinate response in the event of Disaster;
7. Give directions to any Provincial department or Authority regarding actions to be taken in response to Disaster.
8. Promote general education, awareness, and community training in this regard.
9. Provide necessary technical assistance or advise district authorities and local authorities for carrying out their

- functions effectively;
10. Advise the Provincial Government regarding all financial matters about disaster management.
 11. Examine the construction in the area, and if it thinks that the standards laid down have not been followed, it may direct the following to secure compliance with such standards.
 12. Ensure that communication systems are in order and disaster management drills are being carried out regularly; and
 13. Perform such other functions as the National or Provincial Authority may be assigned to it (Routray, 2018).

District disaster management authority (DDMA)

Composition of DDMA

- Each Provincial Government shall establish a District Disaster Management Authority for every District as soon as possible after issuing of notification under sub-section (1) of section 13 by notification in the Official Gazette.
- The District Authority shall consist of such members, as may be prescribed by the Provincial Government. Unless the rules otherwise provide, it shall consist of the following members, namely:
 - Head of the local council at the district level (by whatever name called) who shall be Chairperson, ex-officio;
 - The District Coordination Officer;
 - The District Police Officer ex-officio;
 - The Executive District Officer, Health; and
 - Such other district-level officers, to be appointed by the District Government (Ansari, 2020).

Mandate of DDMA

1. Subject to the NDMA Act 2010, the District Authority shall be the district planning, coordinating, and implementing body for disaster management and take all measures for disaster management in the districts under the guidelines laid down by the National Authority and the Provincial Authority.
2. Without prejudice to the generality of preceding provisions, the District Authority may-
 - Prepare a disaster management plan, including a district response plan for the province.
 - Coordinate and monitor the National Policy, Provincial Policy, National Plan, Provincial Plan, and District Plan.
 - Ensure that areas in the District vulnerable to disasters are identified, and measures for the prevention of disasters and mitigation of its effects are undertaken by the departments of the Government at the district level as well as by the local authorities;
 - Ensure that the guidelines for prevention, mitigation, preparedness, and response measures as laid down by the National Authority and Provincial Authority are followed by all departments of the Government at the district level and local authorities in the District;
 - Give directions to different authorities at the district level and local authorities to take such other measures for the prevention and mitigation of disasters as may be necessary;
 - Lay down guidelines for the preparation of disaster

- management plans by the departments of the Government at the districts level and local authorities in the District;
- Monitor the implementation of disaster management plans prepared by the departments of the Government at the district level;
- Lay down guidelines to be followed by the departments of the Government at the district level;
- Organize and coordinate specialized training programs for different levels of officers, employees, and voluntary rescue workers in the District;
- Facilitate community training and awareness programs for the prevention of disasters or mitigation with the support of local authorities, governmental and non-governmental organizations;
- Set up, maintain, review and upgrade the mechanism for early warnings and dissemination of proper information to the public;
- Prepare, review and update district-level response plans and guidelines.
- Coordinate with, and give guidelines to local authorities in the District to ensure that pre-disaster and post-disaster management activities in the District are carried out promptly and effectively;
- Review development plans prepared by the departments of the Government at the district level, statutory, authorities or local authorities to make necessary provisions therein for prevention of Disaster or mitigation;
- Identify places and buildings which could, in the event of a disaster situation, be used as relief centers or camps and make arrangements for water supply and sanitation in such buildings or places;
- Establish stockpiles of rescue and relief materials or ensure preparedness to make such materials available at short notice;
- Provide information to the Provincial Authority relating to different aspects of disaster management;
- Encourage the involvement of non-governmental organizations and voluntary social- welfare institutions working at the grass-root level in the District for disaster management;
- Ensure communication systems are in order, and disaster management drills are carried out periodically; and
- Perform such other functions as the Provincial Government or Provincial Authority may assign to it or as it deems necessary for disaster management in the District (Sattar, 2021).

NCOC Roles and Responsibilities

Establish an emergency operations center

- Work from a shared physical location
- Identify pandemic response sector representatives Include many already identified municipal leaders and disaster response personnel.
- Serve as the center of all pandemic planning and response
- Keep the mayor updated and informed regarding the status of the pandemic, the status of all pandemic response activities, and the status of all available resources

- Support the needs of all responders.

Continually assess needs, identify resources, and plan for response

Remember to read and follow the directions of the national, regional/state, or district pandemic response plan. These plans will serve as the basis for building a municipal response. You and your disaster response team will need to focus on accomplishing the following goals simultaneously. The primary goal will be to keep the number of deaths in a municipality to a minimum, so first consideration should be given to what people need to stay alive during a severe pandemic.

Implement the response

- Period to be covered by the plan
 - Objectives to be achieved during the coming shift
 - Delegation of work detailing which EOC sector representatives are responsible for which specific tasks to achieve the objectives of the day
 - Expected weather forecast as this can greatly impact the mobility of resources and transport of personnel
- Reminder of personal protective measures (social distancing, personal hygiene)

Prepare for community recovery

This municipal pandemic management tool is cyclical. Once the municipal leaders have finalized the organizational structure, assessed needs, identified resources, and developed a municipal plan, the daily update meetings and response implementation should be repeated as long as resources and capable personnel are needed. Strong municipal pandemic management is one of the most important steps toward the future recovery following a pandemic. However, there are numerous other activities municipal leaders can undertake to enhance and accelerate the municipality's recovery following a pandemic. These activities include those that reduce fear (of going without food, of getting the flu, of death, crime, and violence) and that restore confidence (in Government, in fellow citizens, and in the ability to make a living) (Ashraf, 2021).

Conclusions

Though Pakistan suffers from many natural and artificial disasters, Prevention & Mitigation are the methods that aim to support the overall DRR strategy in Pakistan. It is also being implemented by following the CBDRM phenomena. The methodology is based on risk assessment, disaster preparedness but emphasizes structural activities. Risk assessment to make appropriate plans and implement concrete actions to reduce and eliminate disaster risks through genuinely sound disaster risk reduction interventions. In disaster preparedness, the major activities include local capacity building/institutional development, mass-scale education and awareness-raising, school safety plans, facilitation and coordination with government line departments and key actors for disaster risk reduction and advocacy activities with Government at tehsil, district, provincial and national level, training of selected community

members, first aid training, drills/role plays, search and rescue training at Union Council and village level, simulation exercises, mock drills, integration of disabled people, women, children, and minorities.

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