

# Annual Report 2022-23



**Provincial Disaster Management Authority  
Rehabilitation Department  
Government of Sindh**



The Provincial Disaster Management Authority (PDMA) Sindh has remained steadfast in its mission to build a resilient Sindh in accordance with its mandate, which focuses on disaster risk reduction, preparedness, response, recovery, and mitigation efforts. The primary goal of the Authority is to protect lives, properties, and infrastructure in the face of natural or human-induced disasters.

The Climate Change impacts are witnessed globally including Pakistan. Similarly, the province of Sindh is experiencing the tangible effects of climate change. The consequences include recurring heatwaves, unprecedented rainfall, floods, droughts, and their cascading impacts. Each year, substantial financial resources are diverted towards relief and rehabilitation efforts following weather-related disasters or disturbances in the province. This perpetual cycle of losses and recovery hampers the pace of development and leads to unsustainable growth. Since its establishment, PDMA has encountered numerous challenges, ranging from the devastating super floods of 2010 to the recent Cyclone "BIPARJOY" emergency. However, the most significant event in PDMA's history was the Heavy Rains and Flash Floods of Monsoon 2022, which caused widespread devastation.

Despite limited resources, PDMA efficiently managed this colossal disaster, earning accolades from the Honourable Chief Minister of Sindh during his visit to the Provincial Emergency Operation Center at PDMA Headquarters in Karachi.



The following summary highlights the key events during the financial year 2022-2023:

## **1. Floods 2022**

Last year the Province of Sindh received an average rainfall of **245.4 mm and 443 mm in July and August respectively**, which is **307 and 726 percent above the normal** recorded rain during the month of July and August. The overall **deviation was around 517 percent** from normal rains received in Sindh.

The Provincial Disaster Management Authority (PDMA) proactively initiated preparations for the recurring disaster of monsoon rains and floods in early 2022. Recognizing the significance of this challenge, PDMA developed a comprehensive monsoon contingency plan well in advance of the rainy season. This plan included the formulation of Standard Operating Procedures (SOPs) for all relevant departments, outlining guidelines for pre, during, and post-monsoon activities. It also identified high-risk areas, assessed available resources, and estimated the provisional requirements to effectively address the potential crises.

To enhance operational readiness, PDMA collaborated with the Pakistan Army to organize specialized Training Sessions for Dewatering Machine Operators from different regions of the province. This initiative aimed to equip operators with the necessary skills to effectively operate dewatering machines, ensuring a prompt response during flood situations.

In the aftermath of the devastating heavy rains, the Provincial Disaster Management Authority, played a lead role in executing rescue and relief operations. To optimize efforts and resources, PDMA engaged in a coordinated manner with humanitarian partners, including the United Nations, international non-governmental organizations (INGOs), NGOs, and philanthropists. This collaborative approach ensured the avoidance of duplications and maximized the impact of assistance provided.

By proactively preparing a comprehensive monsoon contingency plan, conducting specialized training, and effectively coordinating with stakeholders, PDMA demonstrated its commitment in mitigating the adverse impacts of monsoon rains and floods in Sindh. These efforts underpin PDMA's dedication to safeguarding the lives and well-being of the province's inhabitants during times of crisis.

The Provincial Emergency Operations Center (PEOC) of PDMA was actively engaged 24/7 in monitoring weather systems and promptly disseminating relevant guidelines to vulnerable areas through various communication channels. The PEOC played a crucial role in saving hundreds of lives by swiftly responding to information provided by the general public in affected areas and efficiently mobilizing rescue teams. PDMA PEOC was also able to timely apprise the higher ups regarding the rising needs of the affected areas using modern technology and satellite data. The province of Sindh sustained huge losses and damages, such as:

• Population Affected	12,356,860
• Deaths	1,045
• Injured	8,422
• House Damaged Fully / Partially	2,087,186
• Livestock Perished	436,435
• Crop Area Affected	3,777,272 Acres
• Total Population Displaced	7,383,023

Considering the volume of devastation, the Prime Minister of Pakistan constituted a committee of Federal Ministers / Advisors / MNAs for ascertaining the impacts and assisting the government of Sindh. The delegation accompanied by Director General PDMA and other senior officials of government of Sindh visited the affected areas of the province and submitted recommendations to the Prime Minister of Pakistan for assisting the Government of Sindh.



## Relief Distribution

Despite the challenges posed by damaged and submerged road networks, PDMA demonstrated its ability to deliver prompt relief to the affected districts. This feat was made possible through the collaborative efforts of national entities such as NDMA, Armed Forces, Pakistan Railways, and others, as well as the support of the international community, including organizations like UNWFP, UN-IOM and other foreign assistance providers. Despite the adverse conditions, PDMA successfully coordinated and mobilized resources to provide immediate assistance, ensuring that relief reached those in need during this critical time.



In order to ensure transparency in relief distribution, PDMA introduced a digital relief distribution system for the first time. This system allowed for the tracking and monitoring of relief activities, providing a transparent and accountable process. Business intelligence tools were employed for data collection, analysis, and visualization, and dedicated portals were developed for information sharing. Satellite imagery and GIS databases were extensively utilized to enhance situational awareness, conduct initial damage assessments, and monitor flood inundation. These technological advancements strengthened PDMA's capacity for effective relief distribution and improved decision-making processes.

The provisional summary of the major relief distribution is as follows:

	PDMA	Others	Total
Tents	722,102	215,185	<b>937,287</b>
Plastic Tarpaulin	503,924	62,043	<b>565,967</b>
Mosquito Nets	2,055,278	1,599,680	<b>3,654,958</b>
Ration Bags	1,795,218	644,715	<b>2,439,933</b>
Blankets	1,817,267	665	<b>1,817,932</b>

*(Note: \* Reconciliation/verification of 440 Tents and 1250 Ration Bags is underway.*

*\* Dispatches from PDMA includes relief from UNHCR & NDMA through PDMA.*

Other essentials i.e. sanitation goods, household items were also provided in order to cater the needs of affected families.

In addition, PDMA actively supported the District Administrations and District Disaster Management Authorities in setting up tent cities across the province to accommodate the displaced population. This collaborative effort aimed to provide shelter and necessary facilities to those affected by the disaster, ensuring their safety and well-being during their time of displacement. PDMA worked hand-in-hand with the district authorities to establish these tent cities, providing the necessary resources and expertise to facilitate a smooth and efficient process. Tent cities were established all over the province with all essential facilities including Water & Sanitation, Health & School Tents etc.



In each tent city, dedicated arrangements were made to establish School Tents, ensuring the uninterrupted continuation of education for children from the affected families. These

specialized tents served as temporary educational facilities, providing a conducive environment for students to pursue their studies despite the challenging circumstances.





## Cooked Food Distribution

In compliance of the directives of Government of Sindh, nutritious cooked meals were diligently provided to the internally displaced persons (IDPs) residing in the relief camps. The provision of cooked food ensured that the IDPs received sustenance and nourishment during their stay in the camps, addressing their immediate nutritional needs and providing them with a sense of comfort during this challenging time.



The Advisor to the Chief Minister of Sindh for Rehabilitation & Relief took charge of chairing a series of coordination meetings. These meetings served as a platform to oversee and monitor the rescue and relief efforts undertaken by various stakeholders. By actively engaging in these meetings, the Advisor ensured effective coordination among all stakeholders involved in the relief and recovery operations.



### Dewatering Activities

Swift dewatering operations were carried out in urban cities across Sindh, including Karachi, Hyderabad, Larkana, Shaheed Benazirabad, and Mirpurkhas, during the monsoon season. These efforts aimed to facilitate uninterrupted daily routines for the people living in these areas. PDMA collaborated with District Disaster Management Authorities (DDMAs) to utilize tractor-mounted dewatering machines (Jhattas) for dewatering activities in villages and agricultural lands throughout the province. Furthermore, PDMA engaged humanitarian organizations such as the International Organization for Migration (IOM), Faizan Global Relief Fund (FGRF), HANDS, and others to assist in dewatering operations in remote areas. Regular meetings were held under the leadership of the Advisor to the Chief Minister Sindh and Chairman of PDMA Board to ensure smooth coordination and implementation of dewatering activities across the province.



## Open Katcheries / Sessions held

Under the leadership of the Director General of PDMA, a delegation of PDMA officers visited various flood affected districts. They conducted 'Open Katcheri' sessions to address the grievances and complaints of the flood-affected individuals. These sessions were attended by respective Deputy Commissioners and senior officers from departments such as Irrigation, Agriculture, Revenue, and Health.

During the 'Open Katcheri' sessions, the public's concerns regarding relief items, ex-gratia assistance for loss of life, compensation for damaged houses, provision of health services, and compensation for crop losses were heard and addressed. The Advisor to the Chief Minister of Sindh for Rehabilitation & Relief emphasized the importance of resolving these issues and ensuring that the grievances were redressed in line with the affected individuals' expectations.

Additionally, complaints related to the damage to educational institutions and the presence of water around school buildings were brought to the attention of the relevant departments for swift resolution. The Government of Sindh extended all possible support to restore life to normal. PDMA Sindh immediately dispatched the required relief goods for distribution among flood affectees.





## Provincial Coordination Meeting with PHF & NHN Members on Flood Response 2022

The Provincial Coordination Meeting was held with Pakistan Humanitarian Forum (PHF), and the National Humanitarian Network (NHN) to strategize and enhance the flood response efforts. This meeting served as a platform for collaboration and coordination among government and non-governmental organizations to effectively address the challenges posed by the devastating floods that occurred in the province.

The collaboration between the PHF and NHN members played a crucial role in pooling resources and expertise to facilitate an efficient and coordinated response. Overall, the Provincial Coordination Meeting with PHF and NHN members on Flood Response 2022 was a significant step towards strengthening the flood response mechanisms in the province.



## 2. Heatwaves

The devastating heatwave of 2015 served as a profound learning experience for PDMA, prompting the Authority to take proactive measures. Building on the lessons learned, PDMA diligently developed Standard Operating Procedures (SOPs) for all relevant government and non-government agencies involved in heatwave management. These SOPs outlined clear responsibilities and provided comprehensive guidelines to be followed in the event of a heatwave.

PDMA recognized the importance of proactive planning and timely dissemination of information, and therefore, at the beginning of each summer season, the developed SOPs were shared with all stakeholders. This ensured that government agencies, non-government organizations, and other entities were well-equipped and aware of their respective roles and responsibilities in addressing the challenges posed by heatwaves. The SOPs aimed to enhance coordination, streamline response efforts, and optimize

resource allocation to effectively mitigate the impacts of heatwaves and safeguard public health and well-being.

By developing and disseminating these SOPs, PDMA demonstrated its commitment to proactive and systematic preparedness, enabling stakeholders to respond swiftly and efficiently in the face of heatwave events.

Furthermore, PDMA in coordination with various humanitarian partners arranged number of trainings on heatwave, besides it established heat stroke centers during threat of heat wave events.

### **3. Relief and Rescue Chase Up Fire Incident**

During the fire incident at Chase Up on Shaheed-e-Millat road, PDMA played a proactive and significant role in assisting the stakeholders involved in the response efforts. PDMA worked closely with entities such as the Karachi Metropolitan Corporation (KMC) and the Fire Brigade to provide valuable support and coordination.

In addition to offering assistance in terms of logistics and coordination, PDMA also played a crucial role in ensuring the provision of cooked food to the affected individuals and response teams.

The Advisor to Chief Minister Sindh for Rehabilitation & Relief accompanied by Director General, PDMA visited the site for several times and supervised the response. By actively participating in the response efforts and collaborating with relevant stakeholders, PDMA showcased its commitment to mitigating the impact of emergencies and providing essential support to affected communities.



## 4. Multi Hazard Vulnerability and Risk Assessment (MHVRA)

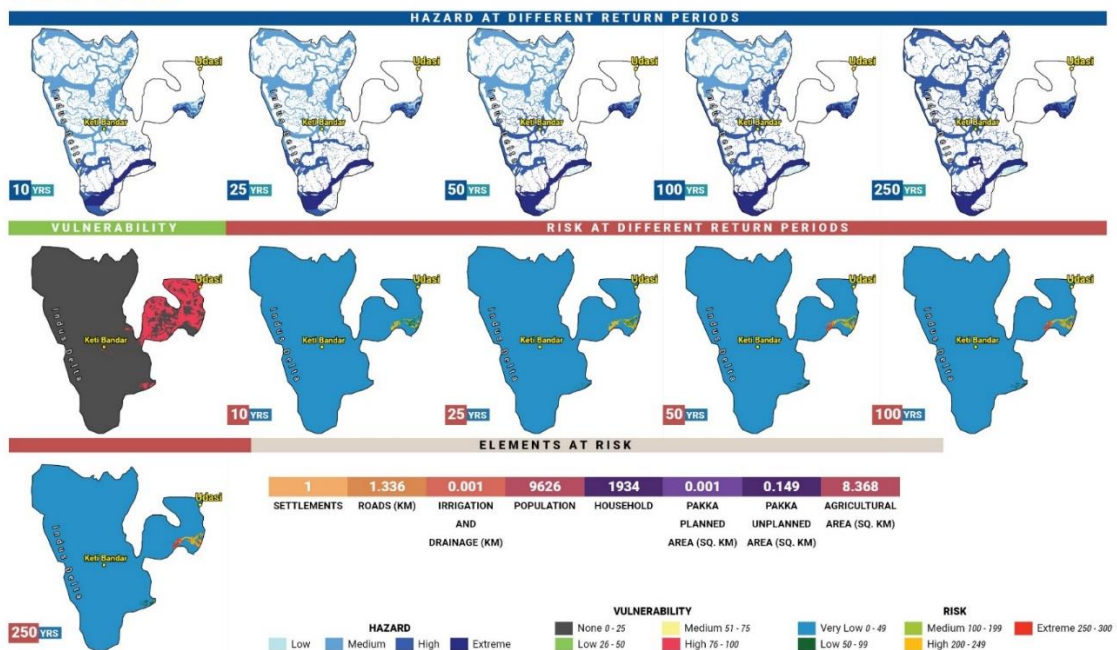
PDMA Sindh through Sindh Resilience Project and in collaboration with SUPARCO (Pakistan Space and Upper Atmosphere Research Commission), conducted Multi-Hazard Vulnerability and Risk Assessments (MHVRA) at the Union Council level for all 30 districts of the province. This comprehensive assessment aimed to identify areas within each district that required special attention and focused interventions in terms of disaster management and resilience-building efforts.

The MHVRA process involved a systematic and detailed analysis of various hazards, vulnerabilities, and risks faced by different communities and geographical regions within each district. PDMA Sindh, with the support of technical experts and utilizing satellite imagery and geospatial data provided by SUPARCO, assessed factors such as exposure to natural hazards, population density, infrastructure vulnerability, and socio-economic conditions.

By conducting MHVRA at the Union Council level, PDMA Sindh aimed to obtain a granular understanding of the specific areas and communities that are most susceptible to various hazards, such as floods, earthquakes, cyclones, and droughts. This assessment facilitated the identification of high-risk areas, enabling PDMA Sindh to prioritize and allocate resources accordingly for preparedness, mitigation, and response activities.

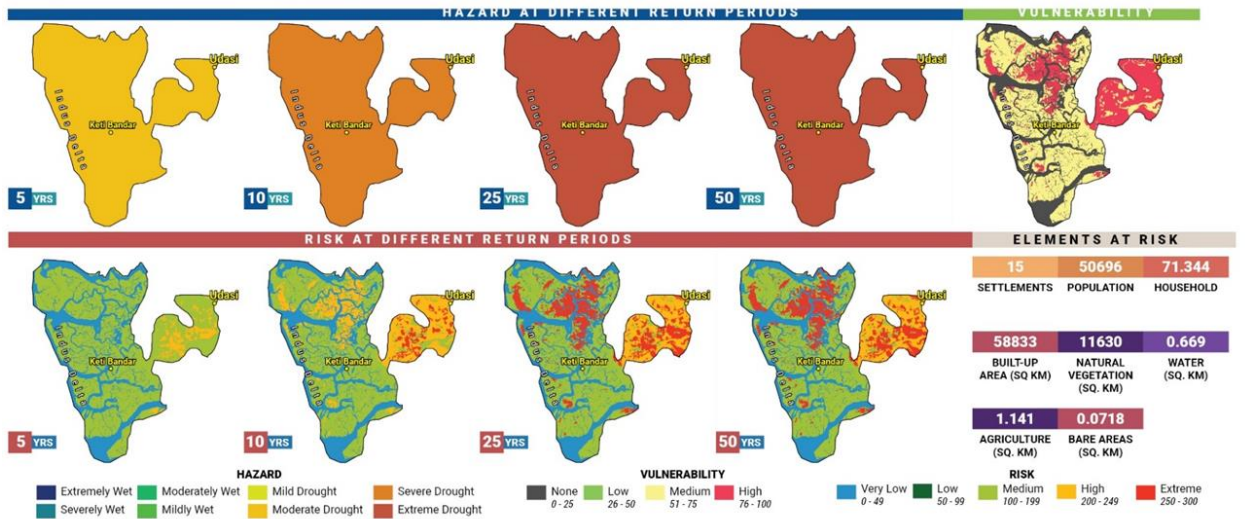
The findings of the MHVRA served as a crucial foundation for evidence-based decision-making, policy formulation, and the development of targeted interventions to enhance resilience and reduce the impacts of future disasters in Sindh.

### FLOODS

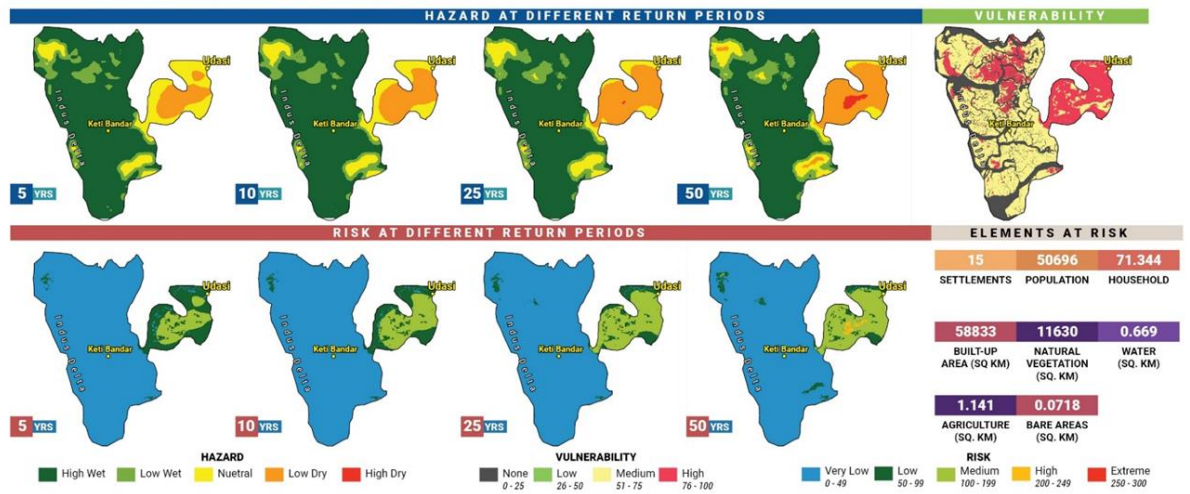




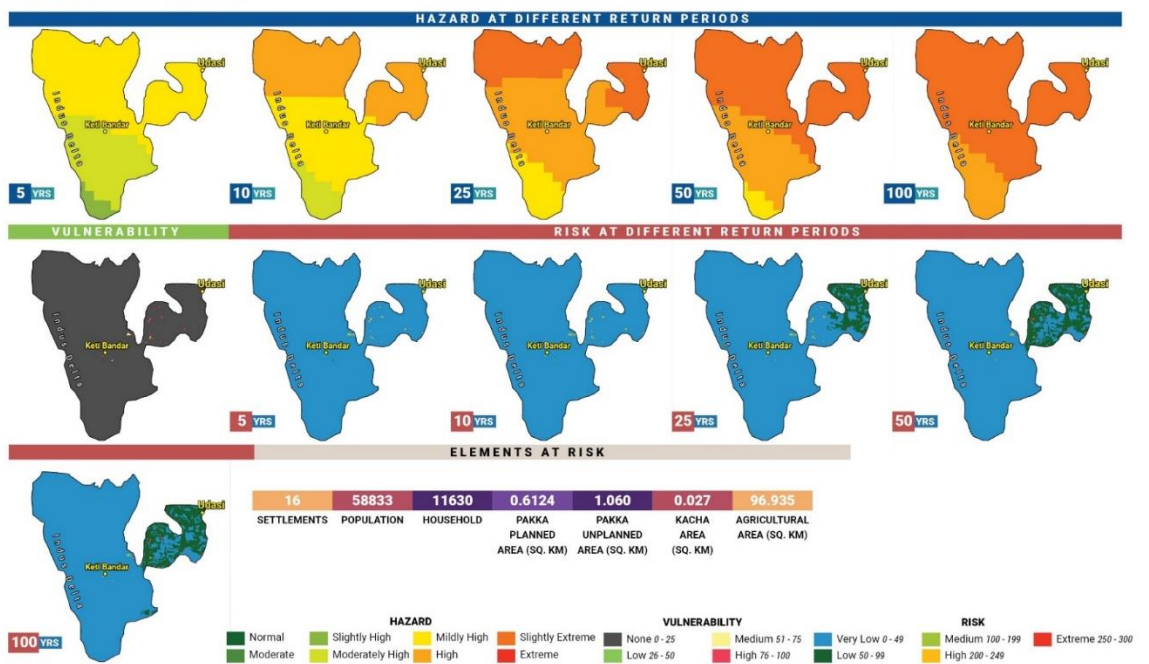
# METEOROLOGICAL DROUGHT



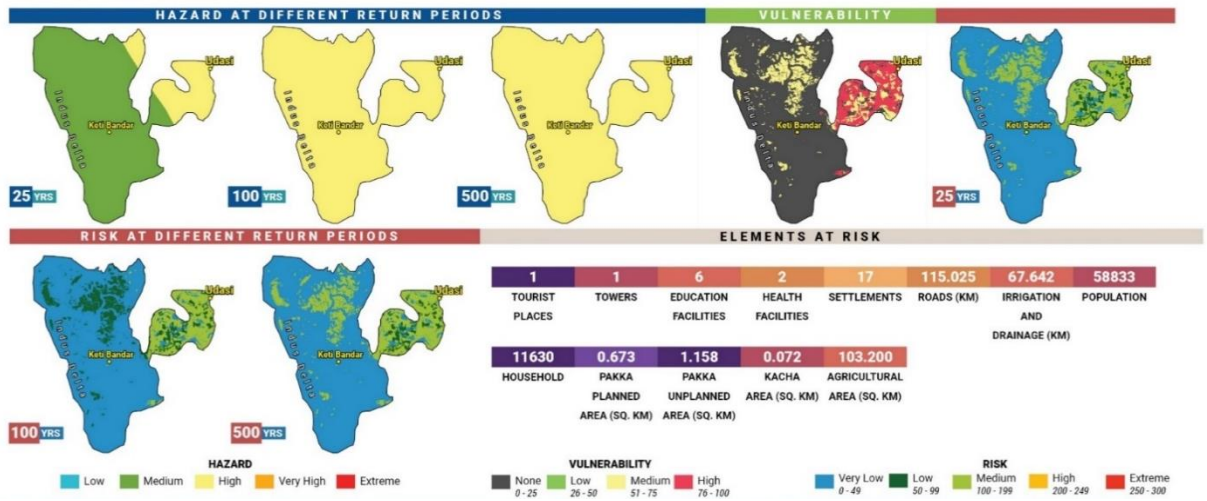
# AGRICULTURAL DROUGHT



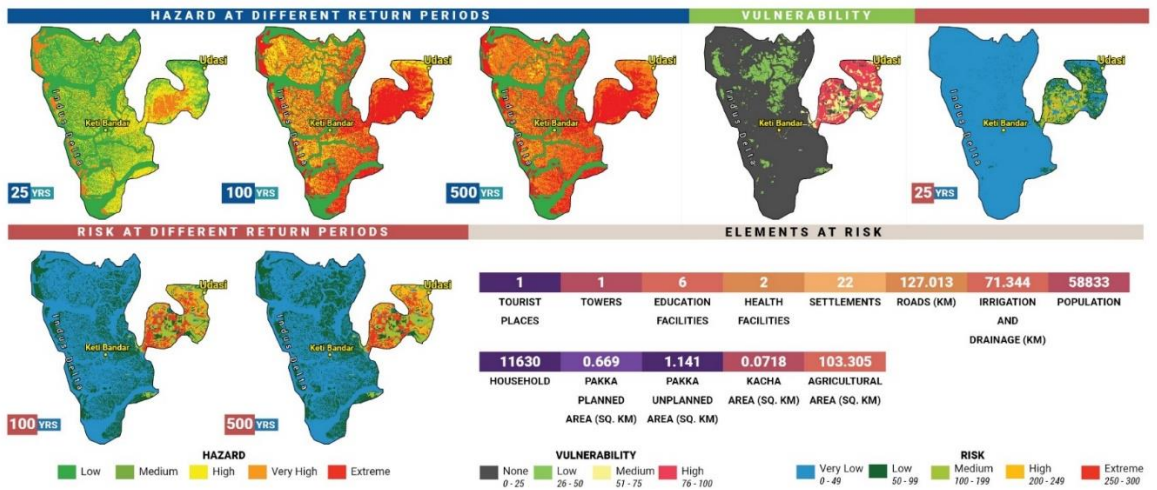
# HEATWAVE



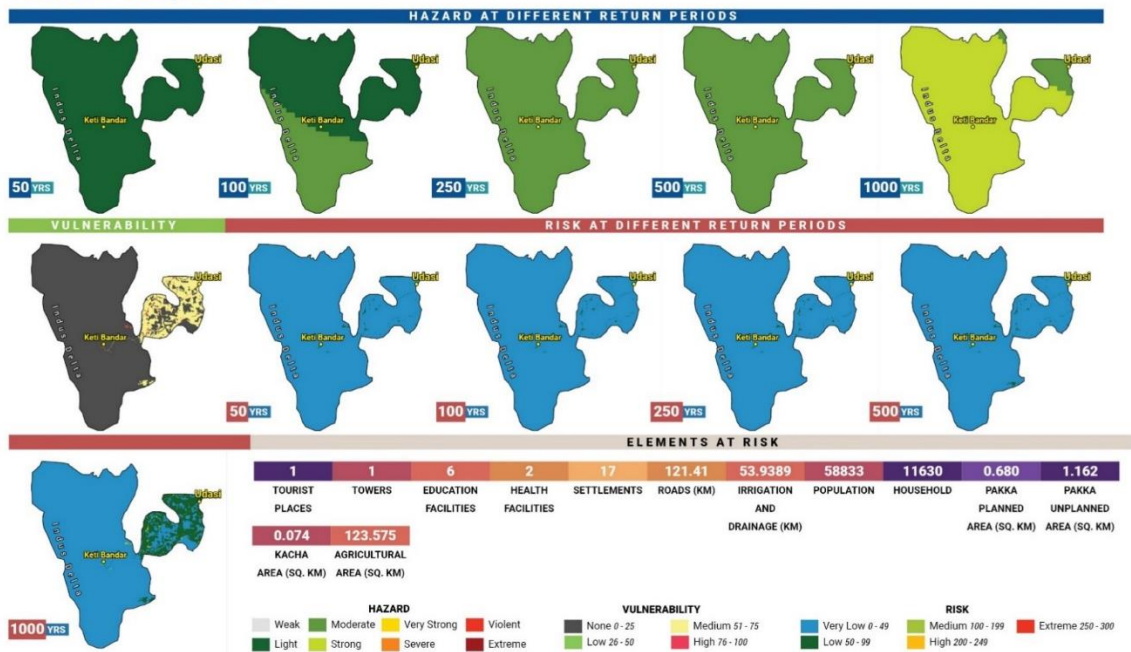
# CYCLONE



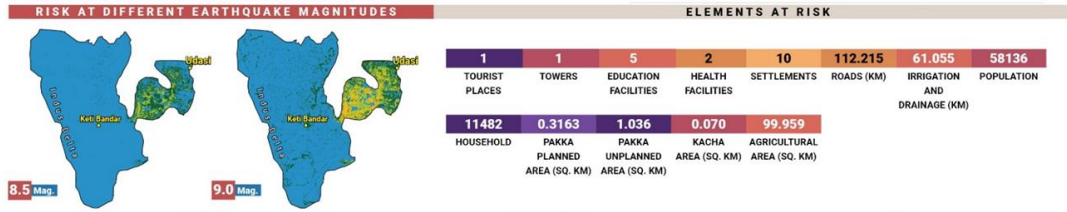
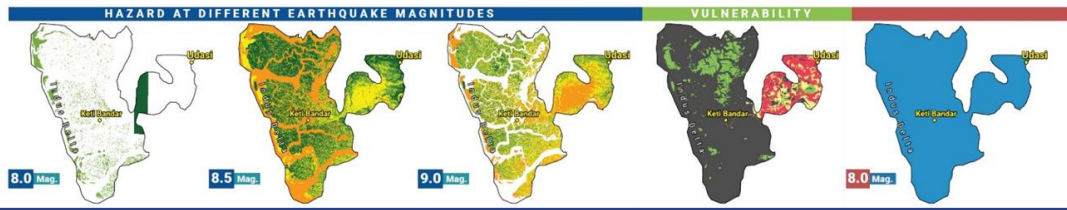
# STORM SURGE



# EARTHQUAKE



# TSUNAMI



**HAZARD**  
 Low Medium High Very High Extreme

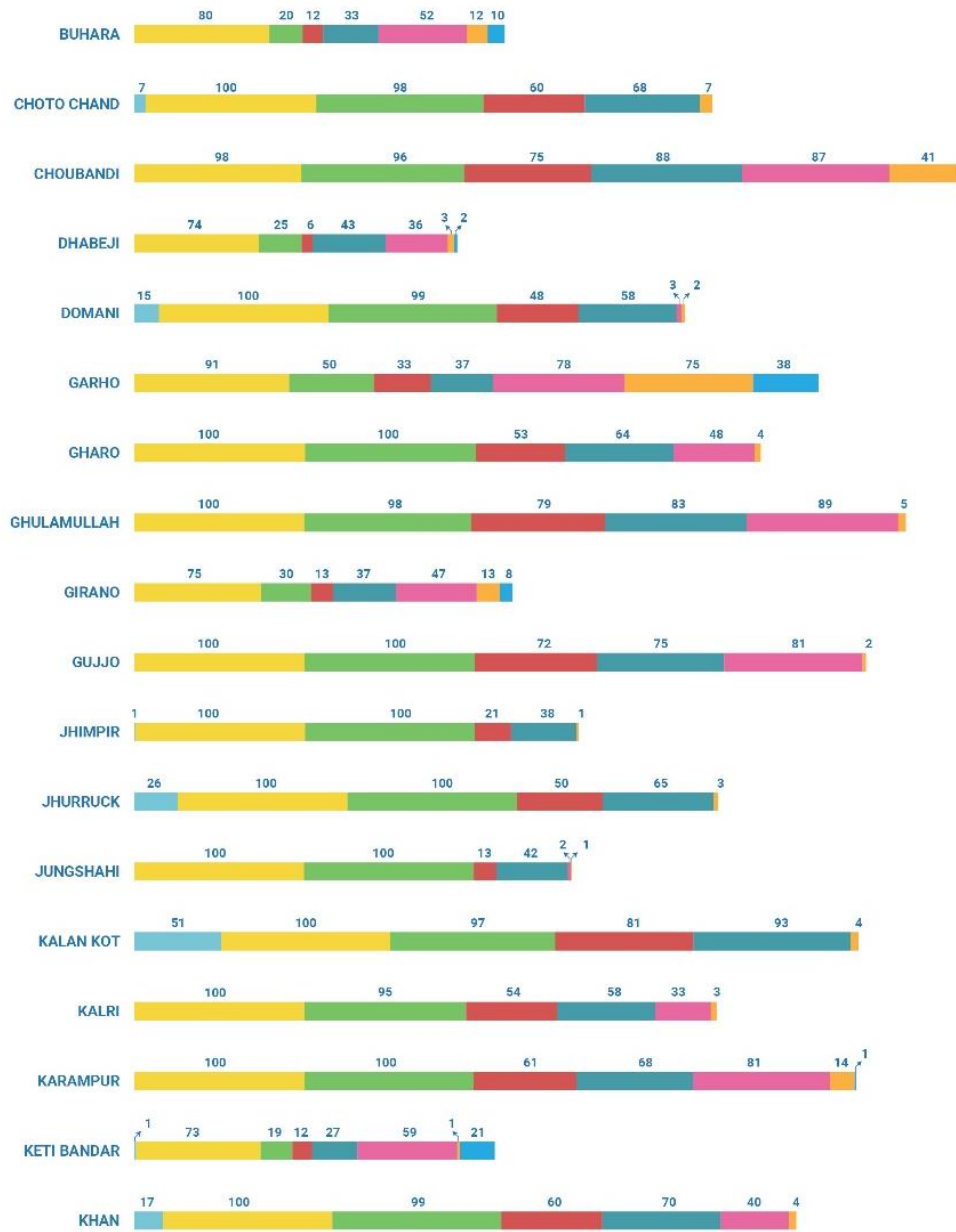
**VULNERABILITY**  
 None 0-25 Low 26-50 Medium 51-75 High 76-100

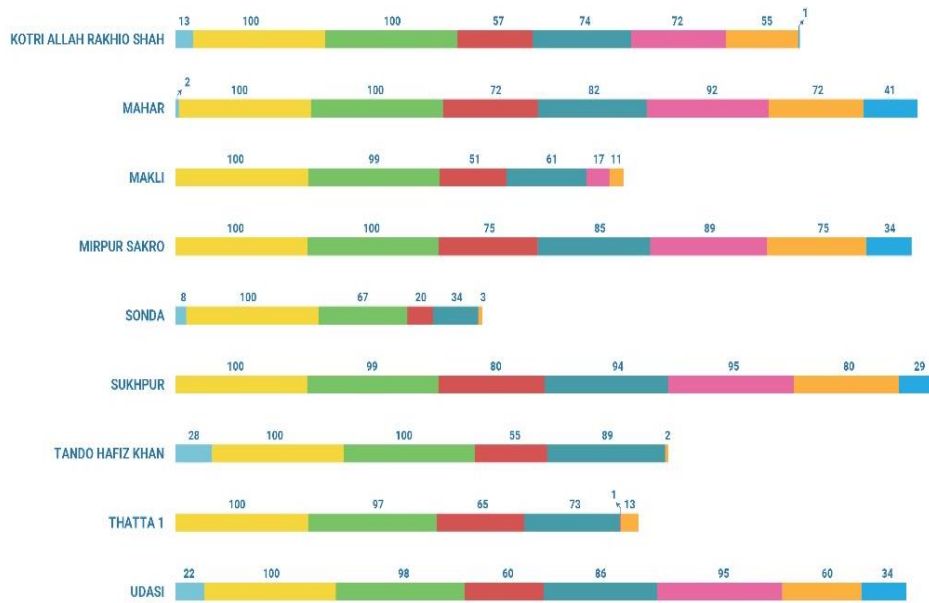
**RISK**  
 Very Low 0-49 Low 50-99 Medium 100-199 High 200-249 Extreme 250-300

# LEGEND

PERCENTAGE OF AREA AT RISK

- FLOOD (FL)
- METEOROLOGICAL DROUGHT (MD)
- AGRICULTURE DROUGHT (AD)
- HEATWAVE (HW)
- CYCLONE (CY)
- STORM SURGE (SS)
- EARTHQUAKE (EQ)
- TSUNAMI (TS)





## 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
		EARTHQUAKE MAGNITUDES							
	Tsunami	8.0 mag. None	8.5 mag. Low to Medium	9.0 mag. Low to High					

## **5. Conduct of Mock Exercises**

The PDMA Sindh, being responsible for managing and mitigating the impact of natural disasters in the province, recognized the importance of proactive measures in preparing for the Monsoon season. Understanding the potential risks and vulnerabilities in certain districts, they collaborated with the respective DDMA units to conduct mock exercises. These exercises aimed to simulate different disaster scenarios that could arise during the Monsoon season, such as floods, heavy rains, and infrastructure damage.

By conducting these mock exercises, the PDMA Sindh and DDMA sought to achieve several objectives. Firstly, they aimed to assess the readiness and response capabilities of the stakeholders involved, including government agencies, emergency services, and local communities. The exercises allowed them to identify any gaps or areas for improvement in their disaster management plans and procedures.

Secondly, the mock exercises provided an opportunity for different stakeholders to coordinate and synchronize their response measures. Effective communication and collaboration are crucial during times of crisis, and the exercises allowed the participants to practice working together seamlessly. This coordination involved sharing information, allocating resources, and ensuring timely and appropriate responses to mitigate the impact of potential disasters.

Overall, the planning and execution of these mock exercises by the PDMA Sindh and DDMA demonstrated their commitment to proactive disaster management. By rehearsing and synergizing their response measures, they aimed to enhance preparedness, coordination, and resilience in the face of the Monsoon season and potential disaster.

## **6. Installation of Tsunami Early Warning System in coastal areas of Sindh**

PDMA Sindh realized the need of Tsunami Early Warning System in Coastal Areas of Sindh. Efforts were taken to initiate the project through National Disaster Risk Management Fund which could not be materialized in the year 2021-2022. This year the project is being undertaken by Government of Sindh. This Authority has floated a tender for hiring of consultancy services for installation of Tsunami Early Warning System in Coastal Areas of Sindh, which is under process and after hiring of consultancy further proceeding of the project shall be completed.

## **7. Establishment of Regional Offices of PDMA Sindh**

The Warehouse is a major capacity of every disaster management institute to store the relief articles safe for use in relief and rescue operations in need. PDMA Sindh with financial assistance of World Food Programme established state of the art Humanitarian Response Facilities (HRF) / warehouses at Jamshoro and Sukkur few years ago while had a rented warehouse in Karachi. However, the capacity of the 3 warehouses was not

enough to cater the needs of whole province. Besides during emergency it was waste of time to move the items from these stations to far-flung areas of other divisions.

PDMA has established its warehouse in Karachi besides the establishment of three regional offices at Larkana, Shaheed Benazirabad and Mirpurkhas under ADP scheme No.3075. The work is in progress and scheduled to be completed by June 2025.



In addition to that, a proposal has been floated to Federal PSDP for establishment of humanitarian response facility at Badin District to meet the needs of coastal areas.

## **8. Establishment of Sindh Emergency Rescue Service (Rescue 1122)**

The diligent efforts of PDMA Sindh over several years have yielded significant achievements in the establishment of the Sindh Emergency Rescue Service 1122. PDMA Sindh took proactive steps by engaging consultancy services to lay the foundation for this crucial rescue service. Additionally, they played a vital role in identifying suitable lands for the establishment of Rescue 1122 offices, ensuring efficient operations and accessibility.

The establishment of the Sindh Emergency Rescue Service 1122 is made possible through Sindh Resilience Project, which is funded by the World Bank. A fleet of Ambulances and other vital equipment and machinery is acquired through the project of Urban Search & Rescue and Health Emergency Services.

To ensure seamless execution, a series of meetings were conducted between PDMA Sindh, the Health Department, Sindh Integrated Emergency & Health Services, and the Sindh Resilience Project. These collaborative efforts and discussions were instrumental in shaping the project's implementation strategy, leading to its successful realization. The establishment of the Sindh Emergency Rescue Service 1122 stands out as a notable achievement for the Government of Sindh during the 2022-2023 period.

The establishment of this rescue service is a visible testament to the commitment and dedication of PDMA Sindh and its partners in enhancing emergency response capabilities in the province. It reflects the government's proactive approach in prioritizing the safety and well-being of its citizens by ensuring prompt and efficient emergency services. The Sindh Emergency Rescue Service 1122 will undoubtedly play a critical role in saving lives, providing timely medical assistance, and contributing to the overall resilience of the province in times of emergencies.

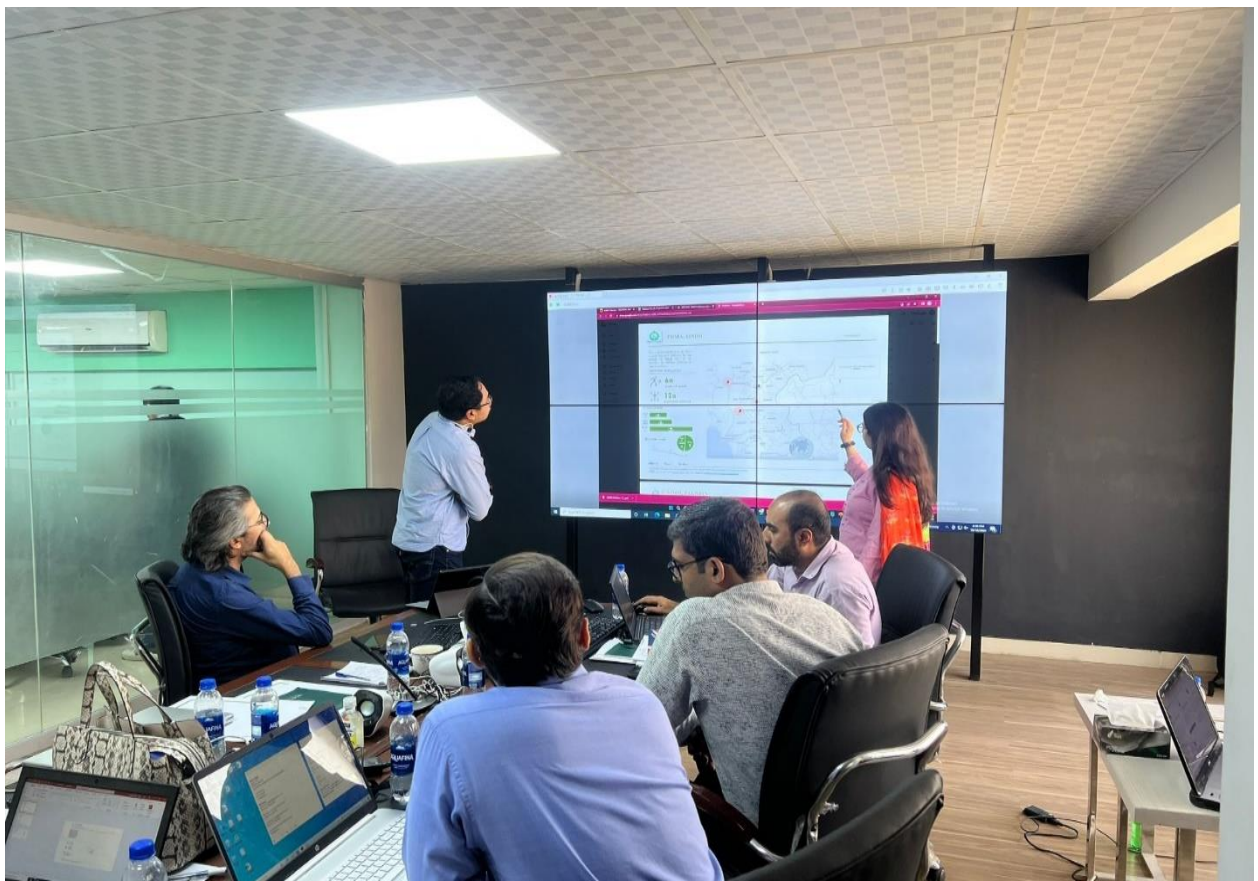






## **9. Workshop on Information Management Organized by PDMA & UN-OCHA**

Accurate and timely information is the key to business success. The same is valid for disaster management. Better management, decision-making, and actions are dependent on gathered and compiled information. In view of the importance of information management, 05 days training session was jointly organized by UN-OCHA and PDMA Sindh at PDMA Head office from 17<sup>th</sup>-21<sup>st</sup> of October 2022. International training facilitators from UN-OCHA conducted the training on important topics such as data collection, compilation, standardization, correction, visualization, and reporting. Officials from PDMA, NDMA, and newly hired provincial Information Management Officers of UN-OCHA from the capital territory Islamabad, Khyber Pakhtunkhwa, Punjab, Balochistan, and Punjab attended the training.



## **10. ADB NFPP-IV mission meeting with Director General, Provincial Disaster Management Authority, (PDMA), Sindh on 16<sup>th</sup> Feb. 2023**

PDMA Sindh is one of the major stakeholders in implementation of National Flood Protection Plan-IV in the province. PDMA is in complete support of Federal Flood Commission, National Disaster Management Authority, National Disaster Risk Management Fund and other stakeholders for implementation of the NFPP-IV framework.



## 11. 17<sup>th</sup> Board Meeting

The 17<sup>th</sup> Board Meeting of Provincial Disaster Management Authority (PDMA) Sindh was held at PDMA Head Office, Karachi, on 31<sup>st</sup> March 2023 under the chairmanship of Haji Rasool Bux Chandio Advisor to Chief Minister Sindh for Rehabilitation & Relief. The meeting was participated by Board Members from different departments, where important policy matters were discussed and strategy for implementation of government policies were decided.



## **12. Implementation of a DRR/EPR and Resilience Building Project**

A meeting was held on April 13th, 2023 at the PDMA HQs in Karachi to discuss the implementation of a DRR/EPR and Resilience Building project. The meeting was attended by several high-ranking officials, including the Director General of Health Services, the Chief Engineer of the Irrigation Department, and the Director General of the Agriculture Department, among others. Representatives from various organizations, including the WFP, UN-OCHA, UNICEF, UN IoM, and INGOs such as Acted and Cesvi, also participated in the meeting.



## **13. Planning & Preparations for Predicted Rains**

Secretary Rehabilitation Department and other high-ranking authorities gather in a virtual conference on April 27<sup>th</sup> 2023, to strategize and plan ahead for the impending rainy season. The meeting aims to identify potential vulnerabilities and ensure that adequate measures are in place to mitigate any adverse impact on the community. The meeting was chaired by the Secretary Rehabilitation Department and co-chaired by Secretary (GA).



#### **14. Visit Of World Bank's Joint Implementation Support Mission**

The Joint Implementation Support Mission of World Bank visited PDMA Sindh Headquarters on 9<sup>th</sup> May 2023 to discuss various aspects of Sindh Resilience Project and Sindh Flood Emergency Rehabilitation Project. The meeting was chaired by Secretary Rehabilitation.



#### **15. PARCO Provincial Contingency Plan – Oil Pipeline**

The Pak Arab Refinery Ltd (PARCO) undertook an important cross-country network of pipelines, including those of its subsidiary – PAPCO, starts from Karachi and goes up to Machhike near Lahore, covering over 2000 KMs. These pipelines have played a major contribution in protecting the environment of our country and reducing congestion on the roads by substituting thousands of tank lorries. As this silent river of fluid energy flowing underground, much of the noise, fatalities and pollution on the surface, thefts and contamination of the product have become a thing of the past.

This pipeline was strategically laid alongside the Indus Highway, a major transportation route in the region. The purpose of this pipeline installation was to facilitate the efficient and reliable supply of fuel to meet the energy needs of the region.

Recognizing the significance of this pipeline and the potential risks associated with its operation, the Provincial Disaster Management Authority (PDMA) of Sindh collaborated with the PARCO team to develop a comprehensive Contingency Plan. The objective of this plan was to effectively manage and respond to any possible emergencies that may arise during the transportation of fuel through the pipeline.

The preparation of the Contingency Plan involved a detailed assessment of potential risks and vulnerabilities along the pipeline route. This assessment included identifying potential hazards, such as leaks, ruptures, or other incidents that could lead to fuel spills,

fires, or environmental damage. By understanding and anticipating these risks, the PDMA Sindh and PARCO aimed to develop proactive measures to mitigate their impact and ensure the safety of the surrounding areas.

The Contingency Plan also outlined the roles and responsibilities of different stakeholders involved in emergency response. It defined the coordination mechanisms between PDMA Sindh, PARCO, local authorities, and other relevant agencies.

## **16. Karachi Radiological Emergency Response Committee**

The Karachi Nuclear Power Plant (KANUPP) is a large commercial nuclear power plant located at the Paradise Point in Karachi. At KANUPP, there is KANUPP Onsite Radiological Emergency Plan (KONREP) and KANUPP Offsite Radiological Emergency Plan (KOFREP). Radiological Emergency Procedures (REPs) are also available which provide detailed guidance on respective response in accordance with On-site emergency plan. The Provincial Disaster Management Authority approved the off-site emergency plan (KOFREP). The KOFREP contains Off-site response actions required to be taken to protect public in case of emergency at KANUPP requiring off-site response. PDMA Sindh has constituted and notified Karachi Radiological Emergency Response Committee (KRERC) for timely implementation of off-site response measures to protect public. Standard Operating Procedures (SOPs) are also in place on respective response actions in line with KOFREP.

Likewise every year, PDMA Sindh in coordination with KANUPP arranged Table Top Exercise of KRERC members this year to rehearse the emergency response mechanism in case of any off-site emergency.

## **17. Management of Humanitarian Response**

The numerous humanitarian agencies including INGOs, NGOs and philanthropists are involved in humanitarian response through out the province for various disasters. The priority of the government is to evolve a mechanism for equal distribution of resources rather duplication of resources by various responders at one place. In this respect, PDMA Sindh monitors the overall response activities of the humanitarian partners. In order to mobilize the resources where most needed, every humanitarian partner is required to inform PDMA for each project before its start and get No Objection Certificate. This way, PDMA Sindh in collaboration with DDMA emphasizes the implementation of government policy.

In the province, there is a significant presence of humanitarian agencies, including international non-governmental organizations (INGOs), non-governmental organizations (NGOs), and philanthropists, actively involved in responding to various disasters. Recognizing the importance of coordinated and efficient resource allocation, the government has prioritized the development of a mechanism that ensures equal distribution of resources and avoids duplication of efforts among multiple responders in a single location.

## **18. Sindh Disaster Management Policy**

The PDMA Sindh prepared draft Sindh Disaster Management Policy (SDMP). The Disaster Management Policy of Sindh aims to achieve following objectives:

- Provide strategic insight for disaster management in the province
- Provide guiding and governing principles and procedures
- Layout well-structured disaster preparedness, mitigation, response, relief, recovery, and rehabilitation strategy
- Layout and implement integrated disaster risk reduction and management
- Streamline disaster management procedures and protocols
- Advancing disaster management from reactive to proactive approach
- Assign clear roles and responsibilities to all relevant stakeholders which directly or indirectly influence disaster risks and disaster management

Formally, the draft policy has been forwarded to wide range of stakeholders for feedback. For public participation in decision making, the draft policy is available on PDMA website for seeking reviews/ suggestions/ comments of interested individuals/ departments/ organizations or any other actors in the domain.

## **19. Tropical Cyclone "BIPARJOY"**

The Pakistan Meteorological Department's Cyclone Warning Center issued first Alert on formation of Cyclonic Storm "BIPARJOY" on 6<sup>th</sup> June and informed that none of the Pakistan Coast is under threat till that moment, however, Provincial Disaster Management Authority (PDMA) started preparations round the clock. Initially necessary resources like Dewatering Pumps, Rescue Boats etc. were moved from Sukkur Warehouse to Jamshoro and Karachi for further deployment on need basis.

The Advisor to Chief Minister Sindh for Rehabilitation & Relief, Haji Rasool Bux Chandio, chaired a meeting to discuss the preparedness strategy for the potential impacts of Tropical Cyclone "BIPARJOY". The meeting, held on 10<sup>th</sup> June 2023 was attended by Mr. Pervaiz Ahmed Seehar, Secretary to Government of Sindh, Rehabilitation Department, Syed Salman Shah, Director General, PDMA Sindh, Deputy Commissioners of Karachi, Hyderabad, and Mirpurkhas divisions, and other officers. The meeting highlighted the vigilant monitoring of the situation by Provincial Emergency Operation Center (PEOC), operationalization of District Emergency Operation Centers for effective coordination, development of a comprehensive contingency plan with evacuation strategies and early warning system implementation, preparedness measures for coastal districts (Karachi South, Malir, Keamari, Korangi, Thatta, Sujawal, and Badin), including keeping machinery, staff, and dewatering machines on standby, and the removal of weak structures like billboards in urban centers due to potential storm winds. A follow up meeting was also held on 12<sup>th</sup> June, 2023 under the chairmanship of Advisor to Chief Minister Sindh for Rehabilitation & Relief, Government of Sindh.



The PDMA developed a comprehensive Cyclone Contingency Plan which covered expected caseload, required resources including heavy machinery, trained human resource, relief stocks etc. and SOPs for concerned departments and authorities for pre, during and post disaster responsibilities. Salient measures taken by PDMA are as under:

- All modes of communications were immediately utilized for public awareness and for taking precautionary measures
- The Fishermen were stopped to venture in the open sea till the situation normalized
- Deputy Commissioners of coastal districts were facilitated to ensure 100% evacuation of vulnerable population well before the rise of emergency situation
- The Government of Sindh released **Rs.90 Million to vulnerable Districts of Thatta (Rs. 20 Million), Sujawal (Rs. 20 Million), Badin (Rs. 20 Million), Hyderabad (Rs.20 Million) and Tharparkar (Rs. 10 Million)** for relief and rescue operations
- The Deployment Plan of Rescue Machinery and Prepositioning of Relief Items was immediately executed by the PDMA Sindh
- More than **84,610 persons**, around **14,496 families** were evacuated including **5,000** from vulnerable areas of Malir, **31,280** Badin, **23,352** Thatta and **24,978** from Sujawal district.
- **101 Relief Camps** were established, **38,715 persons** stayed in relief camps and were served with cooked food and were provided other basic facilities



- All displaced population repatriated to their villages after completion of cyclone and effects.
- **31** Fixed Mobile Medical Camps and **34** Mobile Medical Teams were engaged by Health Department and allied units.
- Besides, **more than 3,580 persons** were attended at Healthcare facilities in relief camps by Mobile Diagnostic & Emergency Health Service of Rehabilitation Department.
- As per initial report of Livestock & Fisheries Department, **44 Livestock Camps** were established, where 58 Veterinary Doctors and 95 Para-Technical (Dispensers) were deployed, **97,156 animals** were provided veterinary services including vaccination and treatment. Assistance provided for safe evacuation of 9,221 animals. 436 animals were reported died.
- More than **300 Rescuers** were engaged by Rescue 1122 along with 87 Ambulances, 06 Rescue Boats, 10 Staff Vehicles, 3 Fire Tenders, 1 Urban Search & Rescue Vehicle, 01 Water Rescue Vehicle, 02 Recovery Vehicles and 01 Dozer etc.
- PDMA Sindh provided **8,000 Tents, 20,000 Ration Bags, 120 Bath Tents, 24,000 Mosquito Nets, 500 Plastic Mats, 4,000 Jerry Cans, 300 Life Jackets, 7,000 Kitchen Sets, 3,000 Plastic Buckets and 3,500 Tarpaulin Sheets** to the affected population through DDMA's of Badin, Thatta, Sujawal, Tando Muhammad Khan, Tando Allahyar, Tharparkar, Mirpurkhas and Umerkot.
- As per the initial reports conveyed by District Disaster Management Authorities (DDMA's) **04 Persons Died, 5 Injured, 2,650 Houses damaged (190 fully damaged & 2460 partially damaged), 10 KM roads (12 roads) damaged, 1 Bridge/Culvert destroyed** and approximately **1019 acres** out of total crop area of 296,775 acres have been damaged, in **Thatta, Sujawal, Umerkot & Tharparkar districts.**
- **Maximum rainfall** recorded was **366.0 mm at Nagarparkar** (District Tharparkar) from 14<sup>th</sup> to 18<sup>th</sup> June.

## 20. Recognition of Efforts

The Honourable High Court of Sindh Bench at Sukkur during the proceedings of CP No.1064 and others of 2022 dated 06.04.2023, recognized and commended the efforts of PDMA:

<u>ORDER SHEET</u>	
<b>IN THE HIGH COURT OF SINDH BENCH AT SUKKUR</b>	
Const. Petitions No. D - 1064, 1068, 1069, 1072, 1075, 1077, 1080, 1081, 1083, 1084, 1087, 1088, 1089, 1091, 1096, 1097, 1098, 1099, 1103, 1104, 1105, 1106, 1108, 1112, 1114, 1125, 1126, 1127, 1132, 1135, 1141, 1146, 1147, 1148, 1151, 1152, 1153, 1154, 1155, 1160, 1162, 1169, 1174, 1180, 1191, 1193, 1213, 1217, 1235, 1259, 1277, 1287, 1300, 1468, 1484, 1549 & 1599 of 2022 and 02, 107, 111, 122 & 493 of 2023	
Date of hearing	Order with signature of Judge

### Hearing of case

1. For orders on CMA No.2732/2023 (I Rule 10, C.P.C.)
2. For orders on CMA No.2733/2023 (I Rule 10, C.P.C.)
3. For non-prosecution of CMA No.5989/2022 (C/A)
4. For hearing of main case

06.04.2023

6. Imdad Hussain Siddiqui, Director Operations, PDMA, Sindh is present and files detailed compliance reports of the committee constituted under orders of this Court on 08.02.2023, in respect of four (04) Districts i.e. Sukkur, Khairpur, Naushahro Feroze and Ghotki, which are taken on record. He submits that overall 90% to 95% stagnant water has been removed from the said districts. Mr. Ghulam Shabbeer Shar, leading Advocate in these matters, though objects the percentage given by the Director Operations, PDMA, Sindh, but concedes that his performance remains outstanding and he has carried out all the given assignments with dedication and devotion. We appreciate the efforts of PDMA, however, we extend the tenure of the aforesaid committee for further one month with direction to ensure complete removal of the stagnant rain water from the aforesaid four (04) districts.

## **CONCLUSION:**

The Provincial Disaster Management Authority (PDMA) Sindh has proven its unwavering commitment to building a resilient Sindh by effectively addressing disaster risk reduction, preparedness, response, recovery, and mitigation efforts. Despite facing numerous challenges, the Authority remains steadfast in its mission to protect lives, properties, and infrastructure in the face of natural or human-induced disasters.

Climate change impacts have become increasingly evident in Sindh, with recurring heatwaves, unprecedented rainfall, floods, and droughts causing substantial financial losses and hampering sustainable development. However, the PDMA has proactively responded to these challenges, notably exemplified during the Heavy Rains and Flash Floods of Monsoon 2022. It actively collaborated with national and international entities, employing innovative technologies like digital relief distribution systems, satellite imagery, and GIS databases to enhance relief operations' efficiency and transparency.

PDMA's efforts also extended to preparedness for predicted rains, the establishment of regional offices, and the formulation of the Sindh Disaster Management Policy. The Authority's effective management during the Tropical Cyclone "BIPARJOY" demonstrated its ability to mobilize resources and coordinate relief operations efficiently.

Despite limited resources, PDMA's proactive approach and collaborative efforts have contributed significantly to mitigate the impacts of disasters in Sindh. The acknowledgement of the Authority's efforts by the people of Sindh, as well as the Honourable High Court of Sindh, has further motivated its dedication to building a resilient province. PDMA shall continue its efforts for disaster preparedness and risk reduction, ensuring a safer and more sustainable future for the people of Sindh.