HUMANITARIAN CONNECTIVITY CHARTER PAKISTAN WORKSHOP 2024

Co-organised by the GSMA, UNICEF and ITU

Marriott Hotel, Islamabad, Pakistan

11-12 December 2024

Workshop Agenda

Day 1 – December 11th

Time	Session	Speaker	Description
08:30	Registration and coffee reception		
09:00	Welcome	GSMA	
09:05	Keynote addresses	Major General (R) Hafeez Ur Rehman, PTA, Chairman; Brig. Tahir Malik, ED Tech, NDMA	Leadership from the NDMA and PTA will kick off the workshop.
09:25	Fireside chat with mobile industry leaders	Moderator: GSMA, Speakers: Awais Vohra, Telenor Pakistan, CTO; Syed Atif Raza, PTCL/Ufone 4G, Group CCO; Ali Fahd, Jazz, Vice-President Marketing	A discussion with leaders from the mobile industry on the power of mobile to build more disaster resilient societies
09:55	Mobile for Humanitarian Innovation programme overview	GSMA	GSMA will present an overview of the organisation and highlights of engagements in Pakistan as well as explain in more depth the Mobile for Humanitarian Innovation programme's work.
10:10	Early warning systems and anticipatory action	ITU, NDMA, USF	Experts will deliver an informative session on global best practices for Early Warning Systems (EWS) and Anticipatory Action (AA). A brief overview of the Early Warnings for All (EW4All) initiative will be provided by the ITU. The NDMA and USF will present details on Pakistan's context. Q&A at the end of session.
11:10	Coffee break		
11:25	Innovation in Disaster Resilience	ConnectHear, Viamo Pakistan, Buraq Integrated Solution, CIS Pvt Ltd, CBi (OCHA-UNDP)	GSMA Innovation Fund grantees and CBi will present on their cutting-edge work delivering innovative solutions related to disaster resilience in Pakistan.
12:25	Interactive session and ice breaker: 'marketplace'	All participants	Each company/org has a 'booth' where they talk about a key initiative, participants circulate between the different booths. Please the organisers if you are interested in having a booth.
13:10	Lunch		Group photo during the break
14:10	Breakout session: roles and responsibilities in	ITU, MoITT, PTA; All participants	The ITU will provide an overview of international guidelines and best practice on NETPs. Then MoITT will give a brief overview of Pakistan's National Disaster

	disaster management		Telecommunication Plan and PTA will present about previous efforts undertaken during disasters i.e. floods, covid, etc. and its role in Disaster Telecommunications in general with regards to regulations, readiness, etc. We will then all break out into groups to consider how this can be operationalised.
15:10	Ensuring inclusion in disaster resilience - panel discussion	UNICEF, NDMA, ConnectHear, Jazz, PRCS	A panel discussion on how to ensure the needs of vulnerable populations, including children, elderly and persons with disabilities, are considered in disaster resilience plans.
16:10	Regulatory challenges and opportunities - panel discussion	GSMA, PTA, NDMA, ITU, Jazz, PTCL/Ufone, Telenor	Panellists will discuss their perspectives on the regulatory challenges they face related to mobile-enabled disaster resilience as well as potential solutions and opportunities.
17:10	End of day 1		

Day 2 – December 12th

08:30	Coffee reception		
09:00	Keynote addresses	Dr Hanif, WeatherWalay, World Bank; Bilal Anwar, NDRMF, CEO	Experts in DRR will kick-off day 2 of the workshop.
09:20	Recap of day 1 and agenda overview	CBi	
09:30	Tabletop disaster simulation exercise	ITU, UNICEF; all participants	In groups we will simulate a disaster where everyone plays role of their agency/org/company. Everyone will need to work together to find a solution. This exercise will also help highlight currents gaps in coordination.
12:30	Lunch		
13:30	Breakout session: EWS roadmap	GSMA, All participants	In breakout groups we will create a draft roadmap to design, create and operationalise a mobile-enabled EWS in Pakistan
14:15	Interactive wrap up session - way forward	GSMA, All participants	This will help ensure the key learnings from the event are captured.
15:00	Coffee break & departure to NDMA		
16:00	Site visit + networking mixer	NDMA	The NDMA will arrange a tour of the NEOC followed by an informal networking mixer.
17:00	End of day 2		

Workshop highlights

Day 1

Keynote address by NDMA/PTA and fireside chat with leadership from the mobile industry

Effective communication is crucial during crises, requiring continuous operations around the clock. Regulatory bodies like the Pakistan Telecommunication Authority (PTA) are pivotal in ensuring seamless connectivity. The telecom sector's role must align with broader disaster management frameworks to create a holistic approach. Challenges such as the high cost of establishing weather stations in Pakistan were discussed, along with innovative solutions like using electromagnetic radiation data for weather predictions, as highlighted by Telenor Pakistan's CTO, Mr. Awais Vohra. Companies such as Jazz and PTCL/Ufone demonstrated successful collaborations, including early flood warnings and network redundancy measures.

GSMA and HCC Overview

The GSMA, established in 1987, is a global organization uniting mobile network operators (MNOs) to enhance mobile connectivity worldwide. The Humanitarian Connectivity Charter, launched in 2015, promotes principles and best practices to improve preparedness, response, and recovery during emergencies. Pakistan, recognized for its unique challenges and opportunities in disaster management, has been identified as a priority country under this initiative. The event today and tomorrow seeks to build on previous engagement by the GSMA and provide further support related to mobile-enabled disaster resilience.

Early Warning Systems (EWS)

Early Warning Systems are essential in bridging the gap between alert issuance and actionable responses by the public. ITU presented the Early Warnings for All (EW4All) initiative highlighting the crucial role that all the pillars that form the initiative have for building comprehensive early warning systems. Focusing on pillar 3 of the EW4All initiative, where ITU is the lead, it was highlighted the need to use all technologies for disseminating alerts, but that national coordination mechanisms need to be in place for alert dissemination. In this regard, the National Disaster Management Authority in Pakistan has made significant progress in this area, including the development of a national emergency operations centre and the launch of the "Pak NDMA Disaster" mobile application. Statistics indicate that 97.9% of the global population is covered by mobile networks, and in Pakistan, 76.5% of the population has mobile subscriptions, enabling extensive EWS implementation. Discussions emphasised the need for robust policies, laws, and coordination frameworks to ensure the success of EWS initiatives.

The Universal service fund provided insights on the work being undertaken. Universal and inclusive ICT services aim to ensure equal access and participation in ICTs for all individuals, regardless of their background or abilities. These services strive to bridge the digital divide by providing affordable and reliable connectivity, devices, and digital literacy training to marginalised communities. They promote inclusivity by accommodating diverse needs, such as accessible interfaces for people with disabilities and multilingual support for different language speakers. Universal and inclusive ICT services foster a more equitable society by empowering individuals with the tools and opportunities to fully participate in the digital age.

Inclusivity in disaster resilience

Inclusivity in disaster resilience was a key focus of the panel discussion. This panel discussion included panellists with a wealth of experience in the area, representing different organizations such as the National Disaster Management Authority (NDMA), UNICEF, ConnectHear,Jazz and Pakistan Red Crescent Society (PRCS). Marginalized groups such as women, children, and persons with disabilities, who comprise 16-19% of Pakistan's population, often face significant barriers in disaster preparedness and response. Recommendations included adopting a "disability lens" in disaster planning, strengthening systems to ensure equitable support, and fostering collaboration between public and private sectors. The ideal goal should be that all policies and processes related to disaster resilience, such as Early Warning Systems, need to ensure that no one is left behind. Technology was highlighted as a crucial enabler for bridging gaps and promoting inclusivity, and that all organizations need to work collaboratively in order to ensure that inclusion is given the priority that it needs

Innovative Initiatives

Several innovative initiatives were showcased during the meeting. ConnectHear focuses on providing AI-driven solutions for individuals with hearing disabilities to ensure critical life-saving assistance. Viamo introduced offline generative AI tools that offer disaster resilience information and practical advice for managing crises such as heatwaves and floods. CIS Pvt Ltd presented water quality monitoring kits powered by AI, which alert users about water safety and automate improvement processes. BIS Solutions highlighted their mobile-based early warning systems for floods, landslides, and agricultural risks, featuring weather predictability tools and customized interfaces.

Breakout Session: Roles and responsibilities in disaster management

The session began with presentations made by ITU on National Emergency Telecommunication Plans, PTA on country level implementation of the Emergency Telecoms Regulation and their role in disaster management and a presentation by MoITT on the overall structure relevant frameworks and plans. Following the presentations, discussions centred around the roles and responsibilities of the stakeholders exploring what has worked and where there are gaps and how to improve those gaps.

Group 1 emphasised the need for targeted and automated information dissemination, enhancing connectivity with local bodies and rescue teams. Group 2 identified gaps in inclusivity during past crises, such as floods and COVID-19, and suggested developing systems that cater to women and persons with disabilities. Group 3 focused on improving the quality of information by using multiple weather monitoring models and fostering public-private partnerships to ensure reliable dissemination. These discussions highlighted the importance of continued collaboration and proactive measures from a multi-stakeholder perspective to enhance disaster management.

Regulatory challenges and opportunities - panel discussion

The panel discussion, moderated by Saira Faisal from GSMA, featured esteemed speakers including Abdul Khan (PTA), Rashid Khan (Telenor Pakistan), Maritza Delgado (ITU), Mudassir Hussain (Jazz), and Col. (R) Jawad Habib (Ufone/PTCL). The session explored critical regulatory challenges and opportunities in disaster management and telecommunications. It was highlighted that a multi-stakeholder approach is required to develop policies, legal and regulatory frameworks and to be able to implement these frameworks for effective use of technologies for disaster management. Collaboration and incentives are essential for all parties involved. ITU highlighted the need to implement Cell Broadcast to disseminate early warning alerts to people that at risk in a timely manner with actionable actions.

Key takeaways from the session highlighted the immense potential of leveraging telecommunications for disaster resilience. It was noted that Pakistan's telecommunications infrastructure has already achieved significant milestones, such as the transmission of over 2.2 billion early warning messages during the recent floods. Panellists emphasised the importance of regulatory frameworks that enable swift action, such as Europe's model of regulatory authority over message dissemination during crises. Examples from organizations like PTA underscored the need for policies ensuring uninterrupted services during disasters. This also includes the incentives and who (the organizations) that need to take on the costing/investments.

Closing remarks

Day 1's discussions and presentations underscored the vital role of collaboration, innovation, and inclusivity in disaster preparedness and response. Strengthening regulatory frameworks, enhancing the use of AI and technology, and fostering public-private partnerships were identified as key strategies for building resilient systems. Inclusion of marginalized groups and targeted capacity-building initiatives were deemed essential for creating a sustainable and equitable approach to disaster management.

Day 2
Keynote addresses by World Bank and NDRMF

Dr Hanif, consultant at the World Bank, emphasised the need to work together across multiple aspects of disaster management to achieve an effective EWS. He underscored the linkages between accurate forecasts and disseminating early warnings quickly via mobile networks in order to provide lifesaving information to the affected population in time. Bilal Anwar, CEO of NDRMF, echoed the need to collaborate as well as find sustainable funding mechanisms for EWS that properly incentives all stakeholders. He also elaborated on how advancements in disaster modelling can help inform EWS and preparedness efforts.

Tabletop disaster simulation exercise

Building on training the GSMA, ITU and UNICEF received on delivering disaster simulations, we ran a short, 3-hour version of a tabletop simulation exercise. The scenario centred on a flood that started in Sindh Province, drawing on real event to make the exercise more valuable. Participants were actively in engaged in all groups and demonstrated the interest to better leverage mobile for disaster resilience in Pakistan. Key challenges identified include public reluctance to evacuate due to concerns about belongings and the need for better-managed camps. It was suggested mobile could be used to better understand the needs of the affected population, which could then inform enhanced evacuation camp design.

A resounding sentiment was the importance of each chain in the EWS working properly, since even the best EWS cannot overcome a lack of proper anticipatory or early action. Additionally, the need for an updated National Emergency Telecoms Plan was identified that underlines the proper method of disseminating Early Warning Systems, especially using Cell Broadcast. It was also suggested that Pakistan adopts the Common Alerting Protocol (CAP) in the EWS used to send out alerts to the affected population.

During the response phase of the simulation there seemed to be a reliance of military equipment and personnel. It was also suggested to include military personnel during disaster resilience planning.

The whole exercise was conducted to better understand the extent to which national procedures, early warning systems, and frameworks were in place to ensure a swift response to disasters. The exercise also tested the cooperation among various stakeholders involved in disaster management in Pakistan. Additionally, the session provided an opportunity to identify solutions to the challenges simulated during the exercise, many of which are encountered in real-life scenarios, particularly during recent floods. As a conclusion, there is a need to enhance collaboration and stop working in silos to improve coordination mechanisms among different stakeholders.

Breakout session: EWS roadmap

This session focused on creating actional goals for participants to achieve in the near (6 months), medium (12 months) and long (24 months) term. Highlights included in the next six months creating a working group that meets at regular intervals to discuss how to move this work forward (mobile-enabled DRR/EWS). In the next 12 months, participants hope Pakistan will be added as a priority country for the UN's EW4All initiative, which would pave the way for a greater level of international support. In the next 24 months, participants would like to have successfully tested elements of an enhanced mobile-enabled EWS and see Cell Broadcast implemented.

Site visit - NDMA's National Emergency Operation Centre

Participants were able to join a site visit of the NDMA's National Emergency Operations Centre (NEOC) to better contextualise the response coordination efforts on the government's side. The inaugural ceremony of NEOC was held in Oct 2023 and it was constructed in 90 days. The centre draws on a variety of data sources both domestic and international to provide a comprehensive analysis of risks posed by natural hazards.

Key takeaways

The presentations and discussions from the workshop suggested it could be useful to explore how the following areas could be enhanced.

1. Risk Assessment and Data Collection
- Collaborate with meteorological, seismic, and disaster management agencies for real-time monitoring.

2. Strengthening Detection and Monitoring Systems
- Upgrade weather radars, seismic sensors, and satellite systems for timely hazard detection.
- Integrate technologies like IoT and AI for improved data accuracy and forecasting.
- Partner with international organisations for technical support and expertise.

3. Establishing Communication and Dissemination Protocols
- Develop a multi-channel alerting system (SMS, radio, TV, mobile apps, sirens).
- Implement the Common Alerting Protocol (CAP) to ensure uniform alerts.
- Implement Cell Broadcast technology to disseminate alerts using mobile networks
- Train media and telecom operators to disseminate warnings effectively.
- Develop standard operating procedures for better coordination and collaboration

4. Community Awareness and Capacity Building
- Conduct community-level training and drills for disaster preparedness.
- Educate stakeholders on interpreting and responding to warnings.
- Develop targeted awareness campaigns, especially in vulnerable regions.
- Include people with disabilities to build capacity for emergency response

5. Institutional Coordination and Policy Integration

- Strengthen coordination among PDMA, PTA, MIOTT, USF, and other local authorities,
- Ensure EWS is integrated into national disaster management policies.
- Allocate sustainable funding for system operation and upgrades.

6. Regular Testing, Evaluation, and Improvement
- Conduct regular drills and tests to assess EWS efficiency.
- Gather feedback from communities and stakeholders for improvements.
- Adapt systems based on evolving hazards and technological advancements**.**
- Adapt systems for inclusion of people with disabilities

Annexes

I. Participating organisations

Action against Hunger	Telenor
Buraq Integrated Solution	Ufone/PTCL
CBi	UN RC Office
CIS Pvt Ltd	UNESCO
ConnectHear	UNICEF
Ericsson	UNOCHA
Federal Floods Commission	USF
German Red Cross	Viamo Pakistan
GSMA	WeatherWalay
ITU	WFP
Jazz	World Bank
LUMS	WWF
MoITT	
Muslim Hands	
National Humanitarian Network (NHN)	
NDMA	
NDRMF	
Pakistan Humanitarian Forum (PHF)	
Pakistan Red Crescent Society	
PTA	
Qatar Charity	

II. Useful resources and links

- [Humanitarian Connectivity Charter (HCC)](#)
- [GSMA Innovation Fund](#)
- [National Emergency Telecommunication Plans (NETPs)](#)
- [Disaster Connectivity Map](#)
- [Early Warnings for All Initiative (EW4ALL)](#)
- [Building a Resilient Industry: How Mobile Network Operators Prepare for and Respond to Natural Disasters](#)
- [Cell Broadcast for Early Warning Systems: A review of the technology and how to implement it](#)
- [Enhancing inclusion in mobile-enabled risk communications: Lessons from South Africa](#)
- [Connectivity in Crisis: The Humanitarian Implications of Connectivity for Crisis-Affected Communities](#)
- [ETC-ITU Checklist](#)