

Mongolia, UlaanBaatar

Simulation Exercise on Emergency Telecommunication

13-14 April 2022



Distribution List

Government of Mongolia: National Emergency Management Agency and Ministry of Digital Development and Communication (MDDC)

CO level: UNICEF, Mongolia- Representative, Operations Manager & ICT Officer

HQ level: TECF

RB level: EPR Officer, Bangkok

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Contents

Simulation exercise: Background, goal and objectives			
Sessions: Findings and takeaways			
Session 1: Assessing risk to telecommunication sector			
Session 2: Preparedness for response4			
Session 3: Coordination and responding to a situation5			
Session 4: Damage and loss assessment			
Simulation exercise: Participants' feedback and key recommendations7			
Participants feedback7			
Key recommendations/actions7			
Annexes			



Simulation exercise: Background, goal and objectives

• Background

Mongolia is exposed to a several types of hazards including earthquake, floods, dzud, wildfire, drought and other extreme weather events. Ulaanbaatar, capital faces considerable earthquake risk. In the recent past the country has been hit by earthquakes. Ulaanbaatar, has witnessed high economic activities, infrastructure development and population growth and it has led to increased seimic vulnerability.

In order to assess telecommunication preparedness and identify areas of improvement, the WFP led Emergency Telecommunication Cluster (ETC), UNICEF and the Government of Mongolia jointly conducted a simulation exercise on 13-14 April 2022 in Ulaanbaatar.

• Goal

Improve coordination among key stakeholders for earthquake preparedness in telecommunication sector in Ulaanbaatar and surrounding areas by organizing table- top simulation.

• Objectives

- To bring key stakeholders, including some of the counterparts for NEMA (National Emergency Management Agency) together in a simulated earthquake scenario
- To improve coordination among critical functions in telecommunication preparedness with a problem-solving approach
- To identify common gaps, and challenges among the key stakeholders as part of lesson learnt of the simulation.

Approximately 40 participants from government (NEMA, MDDC, CRC, Ulaanbataar city, Mongolian Post, Radio and Television service provider), mobile networks operators, internet service providers attended the exercise. The participants were divided into 4 groups namely: Policy group comprising NEMA, MDDC and Ulaanbaatar city emergency respone; Mobile neowrk operators (private sector); Network Operators (private sector); Broadcasting agencies (TV, Radio) and Post. In each session, a scenario with injects were provided and each grop analysed the scenario and presented the findings. After presentation, the facilitators provided feedback and summarised the key learnings.

Sessions: Findings and takeaways

Group	Major risks to telecommunication
Mobile network operators Group • Management risk: Lack of emergency plan, Human resource and b Internal regulation	
	 Energy/power supply (Existing UPS/Generators has limited capacity) Fuel supply (shortage, access)
	• Data centre (fuel supply)

Session 1: Assessing risk to telecommunication sector



	Service quality due to damaged infrastructure				
	• Technical infrastructure i.e., spare parts transportation, warehouse of spare parts)				
	• Human resource: Mobile operator staffs, Contractors, and Supplier/Vendors of mobile operators				
	• Support infrastructure such as data centre, warehouse				
	• Fuel transportation due to damage to roads				
Network	• Under cable network /fibre optics damaged to seismic waves				
operators Group	 Mobilisation of human resources in response phase 				
	 Inter-agency coordination mechanism at national level 				
	 Electricity supply/power back for infrastructure 				
	• Shortage of battery				
	 Premises/building holding communication equipment 				
	 Communication tower collapse/partial damage 				
TV/Radio/Post	 Transmission tower damaged/collapsed 				
Group	 Power supply/power back up for running transmission equipment 				
	 Building hosting equipment/human resource for transmission 				
	Human resource for transmission				
	• Social and mental risk to population in case of no/limited transmission				
Policy/Regulation	Standard of communication premises exist but no assessment has been andutad on compliance				
Group	• Consolidated database of talacommunication and network is missing				
	Lock of talocommunication proparadness plan at national level				
	• Lack of referential collaboration for operations and procedure still to be developed				
	Partification of Tampore convention to be done				
	Stacks of tolocommunication and naturarly operators at warehouse				
	• Stocks of telecommunication and network operators at warehouse				
	• viir/iir/vont lietwork uallageu				

Session 2: Preparedness for response

Group	Preparedness and mitigation measures to manage telecommunication risk				
Mobile network	• Energy supply plan:				
operators Group	- Operation procedure for priority supply of fuel by Petrol station to				
	telecommunication operators				
	- Vehicle movement plan for fuel supply during response phase				
	 Labour supply plan/arrangement with vendors 				
	• Equipment supply				
	- Create legal environment for assured supply				
	- Planning for mobilisation of reserve communication				



	 Create service quality plan/procedures Arrangement with government to pre-identify premises for running operations in case structure is damaged Arrangement with Mobile operators for using network operators' infrastructure by mobile operators Develop Standard Operating Procedure for all stakeholders of emergency telecommunication: SEC, Line ministries, MNOs (Mobile Network Operators), Network operators
Network operators Group	 Pre-identify premises for temporary operations Construction of earthquake resistant structure/building Incorporate earthquake resistant features during repair/reconstruction of damaged telecommunication infrastructure Develop coordination plan to support telecommunication operators for emergency response
TV/Radio/Post Group	 Create a database of technicians Prioritisation of services Use of mobile services in areas where transmission is impacted Manual dissemination of information using loudspeakers Disseminate information about relief entitlement and procedure
Policy/Regulation Group	 Government to issue instructions to line ministries to assist telecommunication providers in emergency Create arrangement on joint usage of telecommunication resources in case of emergency Conduct risk assessment of telecommunication assets Develop National Emergency Telecommunication Plan (NETP) Prioritise ratification of Tampere convention Emergency communication dos and don'ts related to communication for public and awareness generation

Session 3: Coordination and responding to a situation

Group	Priorities during emergency telecommunication response
Mobile network operators Group	• Mobile operators will organise meeting of providers to review situation and identify response actions in phased manner
	• Data centre is the highest priority. It also includes power supply and running of air conditioning at data centre.
	• Warehouse condition is assessed
	• Coordination with NEMA for priority supply of fuel to telecommunication centres
	• Coordination with ministry of electricity for restoration of power supply for areas where critical facilities of telecommunication is located



	 After emergency phase, restoration of optical fiber network will be prioritised Transmission ring site will be also prioritised Voice call and SMS service will be prioritised over video during peak load phase Numbers of emergency responder will be prioritised
Network operators Group	 Organize meeting of network operators to coordinate response and prioritize services Rapid damage assessment to be conducted Satellite communication (SCPC) will be used as mobile communication is down Voice call and SMS will be prioritized Mobile vans with antenna will be deployed for emergency communication Work with government for seeking international assistance
TV/Radio/Post	Reach population through mobile communication vans
Group	Create a group for rapid assessment of damage
	Coordinate with government for fuel supply at affordable price Dedie communication can be prioritized
	Kaulo communication can be prioritised Activate operation control to coordinate with NEMA
	• Activate operation centre to coordinate with NEMA
Policy/Regulation	Policy and regulation to be developed to support emergency response
Group	

Session 4: Damage and loss assessment

After group work, the output of damage and loss assessment session was discussed in round table mode and following actions were identified:

- Damage assessment is important but equally important is loss assessment for complete understanding of impact and for recovery
- Develop format and procedure for conducting damage and loss assessment
- Meeting of all operators to jointly plan the assessment
- Stakeholders of damage and loss assessment: Government, MNOs, Insurance companies
- Type of things to be covered: Towers, Building, Rehabilitation cost, medical cost for staff, assessment cost, alternative communication cost.
- Mongolia has three types of assessment
 - Rapid assessment to be conducted within in 48 hours
 - Situational assessment to be conducted within 30 days
 - Rehabilitation assessment should be conducted till 1 year to track recovery progress
- Premises/building holding communication equipment
- Communication tower collapse/partial damage



Simulation exercise: Participants' feedback and key recommendations

Participants feedback

At the end of exercise, an online feedback form was shared with the participants and total 28 response were received. Overall participants mentioned that the exercise was very well organized and it helped them to understand and identify key issues in emergency telecommunication response. The participants also mentioned that the exercise capacitated them to work towards emergency telecommunication preparedness in their organisation.

The average rating by participants on scale of 1 to 5 (1 being the least and 5 the highest) on various Sare as follows:

Parameter	Average rating on scale of 1 to 5
The exercise facilitator and controller gave clear instructions.	3.6
The documents provided during the exercise were useful.	3.3
Overall, the simulation exercise scenario was realistic.	3.7
Overall, the exercise was well structured and organized.	3.8
After the exercise, I am better prepared to respond to emergency telecommunication need	3.6

Key recommendations/actions

Short-term

- UN (United Nations) Humanitarian County Team should be briefed on findings of simulation exercise
- Country HCT Emergency Telecommunication Response Plan should be developed, as part of the Emergency Preparedness and Response (EPR)
- MDDC (Ministry of Digital Development and Communication) is communicating with ITU (International Telecommunication Union) to seek support on NETP development. ETC/UNICEF should brief ITU on simulation exercise findings.

Medium-term

• The process leading to conduct of the simulation exercise shall be shared by ETC at relevant platform.



- Emergency telecommunication plan/section of the EPR andwith the NETP/national telecommunication response plan should have synergy
- The telecommunication mitigation and preparedness findings from the simulation exercise requires deep-dive analysis and NETP process will be the major platform.

Long-term

- Ministry of Digital Development and Communication purse the agenda of Tampere convention
- Simulation exercise on telecommunication can be organised every alternate year to check preparedness and it can be held at national or sub-national levels.



Annexes

Annex 1:

Agenda

Time	Time Agenda				
Day 1					
8:45-9:00	Registration	UNICEF			
9:00-9:30	Opening session	NEMA/MDDC/UNICEF			
	- Remarks by MDDC				
	- Remarks by NEMA				
	- Remarks by UNICEF				
	Group photo				
9:30-9:45	Tea/ Coffee Break				
9:45-10:15	- Earthquake risk profile of Ulaanbaatar	NEMA & ETC			
	- Introduction of participants				
	- Tabletop introduction & objectives				
	- Group formation				
10:15-12:30	Exercise 1: Assessing risk to telecommunication sector and presentation	NEMA & ETC			
12:30-13:30	Lunch Break				
13:30-16:00	Exercise 2: Preparedness for response and presentation	NEMA & ETC			
	(Tea/Coffee break in between)				
	Day 2				
09:00-09:30	Recap Day 1	NEMA			
09:30-12:15	Exercise 3: Coordination and responding to situation and presentation	NEMA & ETC			
	(Tea/Coffee break in between)				
12:15:13:15	Lunch Break				
13:15-15:00	Exercise 4: Damage and loss assessment and presentation	NEMA & ETC			
15:00-15:15	15:00-15:15 Tea/Coffee Break				
15:15-16:00	- Participant feedback	UNIECF/MDDC			
	- Exercise summary				
	- Closing remarks				



Annex 2: Photos

Opening session: Remarks by UNICEF Representative



Response planning by Network Operators group





Assessing telecommunincaiton risk by Policy group



Sharing emergency resposne and coordination plan



Annex	3:
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List of the Participants

д/д	Байгууллага	Албан тушаал	Нэр	Оролцоо
1	Онцгой байдлын ерөнхий газар	Ахлах мэргэжилтэн, дэд хурандаа	Д.Хадбаатар D. Khadbaatar	Чиглүүлэгч Facilitator/ NEMA
2	Цахим хөгжил, харилцаа холбооны яам	БТГ-ын ахлах мэргэжилтэн	Б.Эрдэнэ Erdene	Хянагч Observer/MDDC
3	Онцгой байдлын ерөнхий газар	Хэлтсийн дарга	Ч.Лхамжав Ch. Lkhamjav	Хянагч Observer/NEMA
4	Онцгой байдлын ерөнхий газар	Мэргэжилтэн, дэслэгч	А.Энхбилгүүн A. Enkhbilguun	Хянагч Observer/ NEMA
5	Харилцаа холбооны зохицуулах хороо	ЗБХГ-ын ахлах мэргэжилтэн	А.Уранчимэг A. Uranchimeg	Хянагч Observer/CRC
6	НҮБ-н хүүхдийн сан	мэргэжилтэн	Б.Уранчимэг B. Uranchimeg	Хянагч Observer/UNICEF
7	Цахим хөгжил, харилцаа холбооны яам	ХХБХЗГ-ын ахлах мэргэжилтэн	Г.Болорчимэг G. Bolorchimeg	Оролцогч Participant/ MDDC
8	Цахим хөгжил, харилцаа холбооны яам	БТГ-ын мэргэжилтэн	Ч.Болор-Эрдэнэ Ch. Bolor-erdene	Оролцогч/MDDC
9	Цахим хөгжил, харилцаа холбооны яам	ХХБХЗГ-ын мэргэжилтэн	Б.Тунгалаг B. Tungalag	Оролцогч/MDDC
10	Онцгой байдлын ерөнхий газар	Мэргэжилтэн, хошууч	Б.Хишигбаатар B. Khishigbaatar	Оролцогч/NEMA
11	Онцгой байдлын ерөнхий газар	Мэргэжилтэн, ахмад	М.Мөнгөнбаръяа M. Mungubariya	Оролцогч/NEMA
12	Онцгой байдлын ерөнхий газар	Ахлах мэргэжилтэн, дэд хурандаа	Б.Мягмарсүрэн B. Myagmarsuren	Оролцогч/NEMA
13	Онцгой байдлын ерөнхий газар	Мэргэжилтэн, ахлах дэслэгч	Т.Ууганхүү T. Uugankhuu	Оролцогч/NEMA
14	Харилцаа холбооны зохицуулах хороо	XXCДБXX-ийн дарга' head of department	X.Нинжболор Kh. Ninjbolor	Оролцогч/CRC



15	Харилцаа холбооны	ЗБХГ-ын маргажилтан	М.Ангараг	
зохицуулах хороо		эри -ын мэргэжилтэн	M. ANgarag	oponitor a circ
16	Монгол шуудан	M. Odbayar, officer	Mongol Post LLC	Оролцогч/
17	МХС ХХК		Netcom (medeelel holboonii suljee)	Оролцогч
18	РТС УТҮГ	Ch. Baigalmaa	Radio and TV National Network	Оролцогч
19	Үндэсний дата төв	P. Khangaikhuu, Electronic engineer	National Data center	Оролцогч/
20	Монголын цахилгаан холбоо ХК	D. Boldbaatar, Engineer of Quality assurance department	Mongolian Telecommunication LLC	Оролцогч
21	МҮОНРТ	A. Burenbaatar,	Mongolian National Broadcasting TV and Radio	Оролцогч
22	Скайтал	N. Erdenebaatar, Head of Technical service department	Skytel	Оролцогч
23	Скайтал	N. Tsetsenbileg, officer	Skytel	Оролцогч
24	Юнител	Yadamsuren, Engineer of radio network planning	UNITEL	Оролцогч
25	Юнител		UNITEL	Оролцогч
26	ЖиМобайл	G, Batbayarm Head of transmission network planning	G-mobile	Оролцогч
27	ЖиМобайл		G-mobile	Оролцогч
28	Мобиком	A. Bujin, Senior Officer	Mobicom	Оролцогч
29	Мобиком	A. Mungunkhuyag, manager of technical service department	Mobicom	Оролцогч
30	Ай Эн Мобайл Нэтворкс	T. Enkhbat, Officer	IN Mobile Networks	Оролцогч
31	Монгол сат Нэтворкс	Ts. Dulguuntengis, deputy	Mongol Sat networks	Оролцогч
32	ДДиш	N. Jigjidsuren, VSAT engineer	DDISH	Оролцогч
33	Исатком	Ts. Dulguuntengis, deputy head	ESatCom	Оролцогч



34	Орбитнэт	B. Jigjidsuren, Snr officer	Orbitnet	Оролцогч
35	Мобинэтворкс		Mobinetworks	Оролцогч
36	Ауразон		Aurazon	Оролцогч
37	Skytel	Munkhjargal, officer	Skytel	
38	CRC	Enkhbulag, Officer	CRC	