EMERGENCY TELECOMMUNICATIONS CLUSTER

Mission Report
Madagascar
ETC Preparedness

ROI Data Collection and ICT Working Group Engagement

By Ria SEN, ETC Global Preparedness Officer

1 Mission Overview

In general terms, the mission sought to pilot the Return of Investment (ROI) methodology by collecting data and information, to gather inputs from past Cyclone Batsirai.

The mission took the opportunity to advocate for the rate of return on emergency preparedness investments model, strengthened relationships with in-country stakeholders (government, humanitarian, private sector, and communities) involved in emergency telecommunications preparedness, and deepened collaboration under specific activities with the key national entity, the National Office for Risk and Disaster Management (BNGRC).

To achieve this, the specific deliverables for the preparedness ICT mission were:

- Pilot the ROI approach devised by the ETC Preparedness team, including:
  - Data collection.
  - Populating the template.
  - And subsequently, suggesting improvements to the approach.
- Participate and lead design of the second national ICT Working Group Meeting to be held in person in Madagascar in July 2022, after the first two concluded successfully in Q3 2021. These series of meetings were closely organized by the ETC Preparedness team and the CO, and the Global ETC Preparedness Officer led that mission.
- Assisting the Working Group to revisit/adopt the standard term of reference; b) identify any missing stakeholders; and c) gather feedback/gaps on ways to improve ICT preparedness amongst working group members.
- The “lessons learned” component of the above working group meeting will include a reflections session on the IT preparedness and response, with respect to Tropical Cyclone Batsirai, and capture the ways forward to improve the preparedness in future.

1.1 Mission Arrangements and Participants

- This mission was conducted by the ETC Global Preparedness Officer.
- This mission was in close collaboration and joint design with the WFP Country Office in Madagascar, specifically the IT team.

- The mission was from 1-11 July.
- The entire mission took place in Antananarivo, the capital city of Madagascar.
- Administrative/logistical support was provided by the ETC/TECF and the WFP CO.
- The cost of the mission was incurred by Global ETC.

1.2 Mission Schedule

In terms of the activities by day, the mission schedule broadly followed was:

Dates	Activity
1 July 2022	*Travel into Tana.*
2-3 July	*Weekend.*
4 July	*First half of the day:* Meeting with WFP CO Management and WFP CO team. *Second half of the day:* Final preparations for the National ICT Working meeting.
5-6 July 2022	Lessons Learned/National ICT Working Meeting Consultations with National ICT Working Group members to understand emergency telecommunications gaps, opportunities, and challenges. The consultations will serve to: 1 Ratify National ICT Working Group TOR. 2 Ratify and adopt Workplan of the said Working Group. 3 Hear from national stakeholders on the preparedness and response with respect to emergency telecoms in this past cyclone season, and the steps to meet the needs and challenges. 5 Meet with private sector entities, specifically MNOs, to hear of the infrastructural and overall connectivity challenges, in the light of the current cyclone season.
7-8 July 2022	ROI data collection.
9-10 July	*Weekend.*
11 July	De-brief with IT Office. Travel back to Rome.

1.3 Mission Highlights

1.3.1 Part I: National ICT Working Group engagement and delivery support

Overview

The detailed agenda is contained in Annex 1 to this report.

- Participants: 57 participants in total including BNGRC, WFP, ETC, civil society, Mobile Network Operators (MNOs), and United Nations (UN) entities.

- General remarks:
    - The participation of UN agencies was low, only OCHA, UNICEF and WFP were present
    - The presentations made were from BNGRC, WFP/ETC and ITU, with interactive group sessions where participants could present the highlights of their work and learnings from the Batsirai response.
    - All the 4 telecom operators participated (Blueline, Airtel Madagascar, Telma Madagascar, Orange Madagascar), in a rare first instance, reflecting the criticality of this resilience agenda amongst the private sector.

- WFP/ETC and ETC Partners interventions:
    - The Head of IT of Madagascar shared reflections from the emergency preparedness and response to Batsirai, framing the discussions head at the Working Group effectively.
    - The ETC Global Preparedness Officer presented South-South learnings in a dedicated presentation, to share cross-country experiences, as well as linkages to the recently concluded mission on the community feedback mechanism set-up. Interest was expressed by the national partner to participate in a government champions experience-sharing meeting, should the ETC host this engagement in future.

- In a virtual mode:
  - The ETC Operations Officer and the Head of IT in the Mozambique Country Office jointly presented a 'lessons learned' and quick highlights summary of ongoing activities in Mozambique in IT preparedness and response, also serving as inspiration to Madagascar. Opportunities for joint capacity development, particularly in drone capacitation, were shared and of mutual interest.
  - ITU presented resources and assistance on the Tampere Convention and National Emergency Telecoms Plan. The national partner expressed clear interest to examine both processes and may choose to pursue these with ITU.

Output from group sessions:

Five groups were convened to reflect on lessons learned, good practices, and recommendations. The thematic areas each group covered were distinct, and allowed for structured multisectoral recommendations.

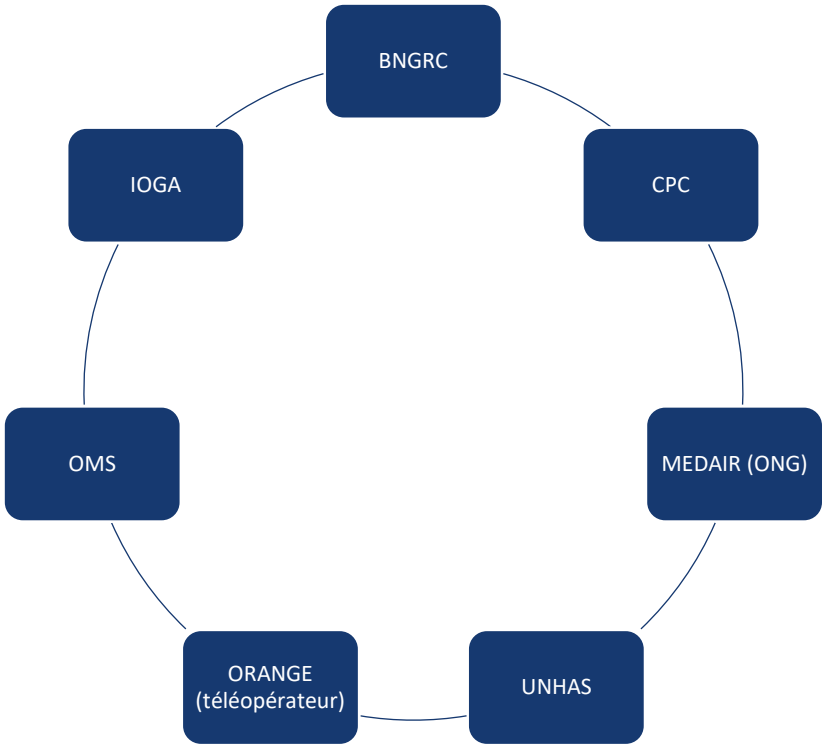
Group 1: National government: roles, responsibilities and coordination provisions

LESSONS LEARNED	GOOD PRACTICES	RECOMMENDATIONS
- Non-uniform data used - Texts that are not clear or insufficient (with respect to the legal framework) to advance facilitation procedures - Delay in interventions (example: deployment of helicopters) - Lack of equipment to respond to the disaster, particularly in times of emergency	- Involvement of the ICT multi-sector national working group in the response (e.g., digitalization of data collection...) - Equipment deployed in advance - Sufficient pre-positioned stocks - Private sector initiative	**Coordinating means facilitating:** - Strengthen coordination (e.g., BNGRC, African Union Commission) - Facilitate procedures for importing emergency telecommunications equipment - Facilitate the delivery of equipment - Devise an effective action plan (who does what) - Define government expectations for accountability of sector groups - Send a government representative to each intervention (example: BNGRC) - Strengthen preparedness (anticipation) - Solicit stakeholders to respect the single action plan - Pooling efforts - Update information (e.g., focal point listing for all agencies) - Update available resource maps - Set up a dashboard to guide actions and interventions

Group 2: External coordination with other main sectoral actors (intersectoral level)

The activities and intervention of the entities constituting the group are linked together and each entity is dependent on the other. ICT is a common thread of the link. How has ICT contributed to emergency response and other cross-sectoral actors? The response to the two major cyclones Batsirai and Emnati shows how these entities are interconnected and how ICT plays a role in activities.

INTERCONNECTION OF ENTITIES FROM DIFFERENT SECTORS AND THE ROLE OF ICT:



BNGRC uses VSAT, BLU, drones, GPS, and other devices for all its response activities. After receiving weather information or risk data, the BNGRC alerts the Civil Protection Corps (CPC) by telephone. The CPC mobilizes the community to strengthen resilience to the cyclone, through the operational centre (the latter confirm that interventions have been facilitated by access to information).' It collaborates with NGOs such as MEDAIR to strengthen support for emergency responses (MEDAIR and other humanitarian NGOs have used drones and cameras for overflights as deployed ICT tools). But these NGOs and humanitarian actors can only move with the help of carriers like UNHAS. The latter has supported humanitarian NGOs by providing air transport, such as planes and helicopters. These materials can be mobilized using ICT (various networks and technological tools). The information exchanged between all these entities is facilitated by teleoperators such as ORANGE. Thus, WHO can disseminate information to the masses to raise awareness about protecting themselves from COVID. Finally, the Institute and Observatory of Geophysics (IOGA) uses ICT equipment to collect geophysical data, send it to the BNGRC to strengthen expectations of natural hazards.

Lessons Learned:

ICT plays an important role in the response cycle, from anticipation to emergency response. However, there are LIMITATIONS TO THE USE OF ICT. **ICT cannot be self-sufficient, i.e., it cannot be used in isolation or separately from other resources.** Human and other material resources are needed to make the response effective.

Therefore, the following recommendations have been summarized:

RECOMMENDATIONS

Improving the use of ICT in emergency response

- Building the capacity of local resources, particularly ICT training at a decentralized level.

- Building ICT groups at local-level.
- Ensure the feedback of information by developing an information system or structure.

Strengthen anticipation and improve proactivity in terms of ICT

- Ensure pre-positioning of ICT and logistics equipment.
- Making a budget forecast for the ICT line.
- Establish a checklist and inventory of ICT equipment needs for preparedness and emergency activities.
- Identify in advance the places at risk and places easy to manage for the implementation of ICT equipment.
- Ensure the security of ICT equipment acquired through the development of a note or manual of procedure for the use of equipment.

  Key: USING ICT TO BE EFFICIENT AND FAST

Group 3: Theme: Capacity development – Trainings and simulation provisions

Positives	-Experiences are useful and necessary for emergencies (field) -The use of ICT resources makes it possible to provide better coordination -The merging of information in ad hoc groups facilitates the synergy of actors -The initiatives of each actor have changed the capacities of each entity
Negatives	-Coordination problem -Improved information sharing -Structure not in line with information -Difficult access during certain places (shift of information to be communicated) -Lack of network in some places -Slow reporting at the level of each entity hence the stakes at the level of needs -The level of involvement of the actors is not the same and the overall vision suffers -No synergy
Action proposed	-Technical and material support - Information channel to be streamlined to better anticipate (location for good preparation) -Find management solutions without being saturated -Satellite phone useful for off-grid locations -Sharing network -Provisions in case of power cuts -Common contingency plan of emergency, if supported -Establishment of common procedures - Identification of points or areas of intervention and definition of the actions to be carried out beforehand - Sharing of responsibilities

Group 4: Problems encountered in the field and feedback on infrastructural and technological provisions

The analysis made by the group turns on 2 axes:

- Pre-cyclonic preparation
- Post-cyclonic intervention

1- Pre-cyclonic preparation

This preparation consists of 2 components:

- TECHNOLOGICAL COMPONENT
- INFRASTRUCTURE COMPONENT

a. TECHNOLOGY

i. The upstream problem encountered by stakeholders concerns the preparation of agreements with ICT operators.

⇨ Proposal:

- The needs of all stakeholders in the ICT field should be identified
- Draw up a fixed framework agreement between the various stakeholders and ICT operators that will be activated at the beginning of each cyclone season or other disaster that occurs.

ii. Another problem encountered concerns the coordination of work between stakeholders.

⇨ Proposal:

- An online application should be set up to organize a dashboard indicating the responsibilities of each entity, with a channel facilitating exchanges, information-sharing and problems encountered on the ground

iii. Another problem encountered concerns the identification of migration flows in real time.

⇨ Proposal:

- Collaboration with ICT operators should be established to determine migration flows that would allow the responsible entities to decide in real time.

b. INFRASTRUCTURE

i. The problem concerns the shutdown of telecommunication infrastructure during cyclones

⇨ Proposal:

- ICT operators are invited to improve their infrastructure (resilient infrastructure), by setting up back-up links that would allow to have connectivity in case of interruption of the main link.
- ICT operators are also invited to reinforce intervention teams in areas likely to be impacted by cyclones as soon as the probable route of the cyclone is announced.
- Although ICT operators are working to improve their services, link cuts may still occur. Therefore, BNGRC in collaboration with the various stakeholders should provide for the delivery of emergency communication equipment (BLU) for each municipality. that would be likely to be affected by the cyclone a few days before the probable arrival of the cyclone. To this end, training on the handling of such equipment should be provided to the heads of decentralized communities or to the member of the gendarmerie outposts.

2- Post-cyclonic intervention

i. The downstream problem encountered by ICT operators concerns the delivery of the materials necessary for the restoration of the cuts as well as the personnel who will carry out the interventions in the isolated areas

⇨ Proposal:

- The shipment of such equipment and personnel by helicopter should be facilitated and strengthened.

Group 5: Drone technologies and preparedness implications – what has worked

Intervention area	Activities	Data type	Constraints	Recommendations
Vatovavy Fito vinany Atsimo Atsinanana Analamanga	- Rapid damage assessment - Reinforcement by image of the situations	- Photos and videos 70% (flood, loss of school materials, hospital, housing) - Mapping 30%	- Lack of personnel, and equipment (drone) - Lack of coordination	- Organization of the sub-group - Update of the agreement with ACM (Civil Aviation Agency) - Capacity Building of OMS (World Health Organization) Members

Recommendations:

1. Organization of the drone subgroup (DGS):
- It is a recent phenomenon, with the existence of entities that use drones during direct or indirect emergencies
- Inventory of equipment and drone available at the level of each entity according to its use.
- Establishment of a working regulation for members in the DGS.
2. Update of the agreement and regulations for the use of drones with ACM;
    a. Reinforcement of the drone user manual according to the law of ACM;
    b. Establishment of a procedure to facilitate the obtaining of authorization to operate drones in the humanitarian context, from the ACM.
3. Capacity-building of OMS members:
    a. Using a drone in an emergency response;
    b. Drone image processing;
    c. Acquisitions of hardware and software (with licenses) necessary to achieve the requested objectives.

General feedback and future needs expressed by the Working Group meeting participants:

- The participants are impressed about the organization during, and before, the cyclone.
- Coordination and collaboration between all the stakeholders was strong (DRM, Regulators, operators, NGOs, etc.).
- Inventory and mapping/cartography of human resources, capacity, equipment, preposition equipment is still required for better preparedness.
- Capacity reinforcement (strengthening) is required.
- Update of the focal points from each agenda.
- A simulation exercise would be helpful.
- The venue was well-equipped and well-chosen. The room was different on both days, which encouraged fresh thinking.
- As revealed in the post-meeting survey:
    - every participant knew about the ETC (100%).
    - about 89% of the participants know ITU.
- In next times' agenda, more items will be dedicated to other organizations/partners speaking and presenting.

Part II: Core data collection for the ETC ROI Model country case study

- Meetings were organized with WFP Country Office Procurement, Finance and IT where all the data needs were expressed. A joint team meeting between the concerned focal points was helpful in aligning and cross-checking all the reported financial data and where it logically fits. Finally, the entry of data was conducted in Rome.
- The findings revealed for every 1 USD invested, there was a 2.92 USD return in the Preparedness works undertaken by the Country Office and the ETC in support of the national government partners and the multi-stakeholder ICT Working Group.
- The high-level summary is as follows:
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WFP

MADAGASCAR CASE STUDY - RESULTS

	Average results
TOTAL INVESTMENTS	**$392,945**
Section 1 - National government and external coordination	**$70,975**
Section 2 - Capacity development and training	**$57,920**
Section 3 - Infrastructure and technology – requirements, planning and maintenance	**$264,050**
TOTAL BENEFITS	**$1,161,224**
Section 1 - Benefits of coordination efforts	**$430,799**
Section 2 - Benefits of capacity development and training efforts	**$587,723**
Section 3 - Benefits of infrastructure and technology efforts – requirements, planning and maintenance	**$142,702**
ROI	**2.96**

Annex

1.1 Agenda of the Working Group Meeting

Agenda de l'Atelier du groupe sectoriel TIC

Date : 05 – 06 juillet 2022

Jour 1: 05 Juillet 2022			
Sujet	**Date de début**	**Durée**	**Facilitateur**
Mot d'ouverture	09:00	0:15mn	DG BNGRC
Introduction, Tour de table, Agenda	09:15	0:15mn	BNGRC / MPDNT
- Présentation de notre préparation en tant que Groupe Sectoriel - Présentation du contexte d'intervention pendant cette urgence : les dégâts, les défis ayant nécessité la mobilisation du groupe sectoriel TIC - Présentation sur la réponse ICT : qu'est ce qui a été fait ? Dans quel délai ? Les chiffres clés notamment les principales réalisations du groupe sectoriel et ses impacts directs sur les opérations humanitaires en générale ?	09:30	0:30mn	BNGRC
Pause	10:00	0:30mn	
Réflexion interne sur la mobilisation des membres, les défis techniques rencontrées, la place prise dans cette opération et dans le groupe sectoriel (Template : principaux inputs apportés, etc…)	10:30	0:30mn	BNGRC
Discussions de groupes, Leçons apprises de la réponse Cyclonique : Problématique rencontré sur le terrain, retours d'expériences - Gouvernement : Rôles, responsabilités et Coordination - Coordination externe avec les autres acteurs sectoriels principaux (niveau intersectoriel) - Capacité : Préparation et Réponses - Infrastructures et technologies	11:00	1:00mn	BNGRC / PAM
La gestion des aides et des assistances internationaux (experts, matériels et équipements) : coordination, complémentarité, intégration dans le dispositif national	12:00	0:15mn	BNGRC / Douanes
Photo de groupe - Pause Déjeuner	12:15	1:45mn	
Rendu des leçons apprises, proposition de plan d'action par sous-groupe, recommandations	14:00	0:45mn	
Cas du Sous-groupe Drone : présentation, actions, …	14:45	0:30mn	BNGRC / SDOA / PAM
Présentation UIT : plan national pour les télécommunications d'urgence (NETP), Sendai Framework, …	15:15	0:45mn	ITU
Mot de fermeture	16:00	0:15mn	BNGRC / PAM

Jour 2: 06 Juillet 2022			
Sujet	**Date de début**	**Durée**	**Facilitateur**
Récapitulation jour 1 / présentation de l'agenda Jour 2	09:00	0:15mn	BNGRC / PAM
Présentation et validation du Plan de travail	09:15	0:35mn	BNGRC
Pause	09:50	0:30mn	
Coopération sud-sud (Exemple de Mozambique)	10:20	0:25mn	PAM
Présentations Emergency Telecommunication Cluster (ETC) : présentation, expériences, cas de Madagascar : actions faites, perspectives et projets d'innovation (Centre opérationnel, call-center CFM, renforcement régional, camion MOVE, …)	10:45	0:40mn	ETC/PAM
Les autres opportunités : Télédétection, SIG, drone, évaluation et gestion a temps réel des informations, …	11:25	0:15mn	BNGRC
Opportunités et perspectives	11:40	0:10mn	BNGRC
Mot d'au revoir et fermeture	11:50	0:10mn	BNGRC / PAM
Fin de l'atelier - Dejeuner 12:00			

1.2 Photos

All information related to ETC operations can be found on the website: www.etcluster.org

For more information please contact:

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