Strengthening Disaster Resilience Through Digital Transformation: ITU and Japan's Collaboration in Sub-Saharan Africa

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In the past decade, Africa has experienced a significant increase in the frequency and intensity of natural and climate-related hazards that lead to disasters. These events, including droughts, floods, cyclones, and epidemics, have devastating impacts on communities, livelihoods, and infrastructure across the continent*1. Recognizing the urgent need to mitigate these risks, it is evident that early warning systems (EWS) and National Emergency Telecommunication Plans (NETP) are vital for disaster management and emergency response*2, particularly in the face of climate change and increasing extreme weather events. African countries are increasingly adopting NETP and EW4All as a proactive approach to disaster management.

Launched in 2022 by United Nations (UN) Secretary-General, António Guterres, Early Warnings for All (EW4All) is a groundbreaking initiative to ensure that everyone on earth is protected from hazardous weather, water, or climate events through life-saving early warning systems by the end of 2027. Indeed, early warning systems (EWS) play a crucial role in reducing vulnerability and increasing the resilience of communities to potential hazards*3.

For an EWS to be truly effective, it must be accessible and inclusive for all segments of society, leaving no one behind. Certainly, universal access to EWS is critical for inclusive disaster management and emergency response*4. However, financing is needed for universal access to EWS, and such investment is critical to the achievements of the 2027 target of ensuring that every person on Earth to be protected by EWS. Similarly, in Africa, the need to raise awareness through workshops and trainings cannot be overstated.

Partnerships with international organizations, donors, and the private sector have proven to be an effective and valuable approach in terms of funding, expertise, and technological innovations. By leveraging these partnerships, Africa has managed to tap into global knowledge and good practices while tailoring EWS and NETP solutions to its unique needs and challenges.

Through initiatives like Connect2Recover, the Telecommunication Development Bureau (BDT) of the International Telecommunication Union (ITU) has been working with Japan's Ministry of Internal Affairs and Communications (MIC) to enhance among others, digital infrastructure resilience in Africa. Connect2Recover has received three financial contributions from MIC Japan in 2020 (Phase 1), 2022 (Phase 2) and 2023 (Phase 3).

Making sure alerts reach the last mile

In subsequent engagements, MIC Japan reiterated that the focus of Phase 3 contribution to ITU is to support early warning systems and implementation of NETPs, which is in alignment with the purpose and scope of Connect2Recover. The statement underscores a shared commitment between MIC Japan and the ITU to advance warning dissemination and communication across Africa. Through MIC Japan's contribution, ITU has assisted various countries in the implementation of NETPs and strengthening EW4All by supporting among others, an assessment of the country's warning dissemination and communication, providing technical assistance, and capacity building.

Africa is not a 'one size fits all continent' as country contexts differ, and every country's digital transformation journey is unique. Some countries are already deploying digital infrastructure (4G and 5G) at incredible speed and scale, while others are dominated by 2G and 3G coverage, with 4G network coverage reaching less than 50% of the population. Regardless of what stage they are in their journey, the necessary mechanisms ought to be in place to ensure that **alerts reach the last mile**.

Moreover, collaboration plays a critical role in building and strengthening capacity at national level considering the diverse political, economic, social, legal, cultural, and environmental factors. Collaborations like the one of ITU and MIC Japan, has been a significant step forward in the implementation of NETPs and accelerating the EW4All initiative and is contributing to its success in Africa. Albeit, considering the growing demand for support from the Member States, there is a need to bring on board more partners and identify various financing opportunities, including domestic resource mobilization (DRM) to meet the EW4All ambition.

Key Achievements of the Collaboration between ITU and Japan on NETPs and EW4All

ITU developed the Southern African Development

*1 Union, African. "Multi-hazard Early Warning for All Action Plan for Africa (2023-2027)." (2023).
*2 ITU, Digital transformation and early warning systems for saving lives – Background paper
*3 United Nations Office for Disaster Risk Reduction and World Meteorological Organization. "Global Status of Multi-Hazard Early Warning Systems." (2023).
*4 ITU, Digital transformation and early warning systems for saving lives – Background paper

Figure 1: SADC Model National Emergency Telecommunication Plan (NETP) Implementation and Early Warning for All (EW4All) Awareness Workshop in Bingu International Conference Centre (BICC), Lilongwe, Malawi

Figure 2: NETP workshop in the Gambia: The event, held from November 20 to 21, 2024, marks a significant step forward in enhancing the country's disaster preparedness and response framework. The workshop in the Gambia drew participants from diverse sectors, including the Public Utilities Regulatory Authority (PURA), the National Disaster Management Agency (NDMA), the Gambia Cybersecurity Alliance (GCSA), and the National Early Warning and Response Mechanism Coordinating Centre (NCCRM)

Figure 3: NETP workshop in Guinea Bissau

Community (SADC) NETP Model to assist 16 members of the Southern African Development Community (SADC) region in identifying their priorities and actions for the use of ICTs for disaster risk management and coordination mechanisms. Subsequently, Connect2Recover provided fellowships to Member States to participate in the ITU-SADC Workshop on the SADC NETP Model Implementation and EW4ALL Awareness which was held in Lilongwe, Malawi from 9 - 11 October 2024. This workshop was attended by more than 40 participants from 12 SADC member states. The workshop aimed to raise awareness and build the capacity of Member States as they transpose and operationalize the SADC Model NETP. It also provided Member States with a regional platform to assess their readiness in operationalizing and implementing the SADC Model NETP and preparing for a harmonized Early Warning System (EWS) approach in line with Common Alerting Protocol (CAP).

Moreover, through Connect2Recover, ITU supported Rwanda, the Gambia, Cabo Verde and Guinea Bissau in their efforts to strengthen capacity to use ICTs for disaster management through the development of their NETPs based on their own needs and priorities. The initiative also supported the development of NETP implementation plans for Zambia and Malawi to strengthen emergency telecommunication preparedness. Furthermore, preliminary assessments on early warning systems based on Cell Broadcast (CB) have been developed in Rwanda, Malawi, Zambia, Botswana and Seychelles in line with the EW4All initiative.

Furthermore, ITU assessed Zimbabwe's digital infrastructure resilience, focusing on fixed and mobile broadband connectivity, network resilience, policy, regulation, and digital strategies. The recommendations from the assessment would be useful to shape Zimbabwe's digital future, include effectively implementing a national broadband strategy, bridging the urban-rural connectivity gap, setting affordability targets, and expanding fiber infrastructure to ensure widespread high-speed broadband access across Zimbabwe, particularly in underserved areas as well as strengthening emergency preparedness.

Scaling up Early Warning in Africa

While Africa is making significant strides in enhancing the quality and coverage of its early warning systems, the continent still lags behind the global average. The implementation of the EW4All and NETP initiatives hinges on the ability to mobilize sufficient and timely financial resources. Addressing the financial needs to scale up EWS remains an intricate challenge, underscoring the need for attracting more partners to effectively tackle the pressing need for disaster preparedness and response. This calls for fostering innovative partnerships among stakeholders to achieve better outcomes. In addition to international partnerships, scaling up domestic resource mobilization (DRM) will be key to achieving that objective.

On 12th September 2024, ITU in collaboration with the Africa Telecommunication Union (ATU) held an online workshop on the Early Warnings for All Initiative(EW4ALL); the workshop provided an in-depth understanding of Pillar 3 of the EW4All initiative, and equipped participants from more than 30 Member States, with the knowledge and necessary tools to implement effective early warning systems and provided them with a detailed understanding of the role of telecommunication/ ICT players in this initiative. The workshop has been a catalyst for more requests for assistance from Member States in developing their national EWS.

In addition, within the framework of the EW4All initiative, ITU in collaboration with national focal points for Pillar 3 of the initiative supported the gap analysis and development of national roadmaps during the national workshops conducted in Liberia, Seychelles, Mozambique and South Africa, among others.

Conclusion

Through sustained efforts, collaboration, and a shared commitment, Africa can build a resilient future where early warning truly becomes a reality for all. The Japan and the ITU strategic partnership have demonstrated a shared commitment to creating a more sustainable and prosperous future for Africa. By combining resources and expertise, this partnership is delivering impactful solutions that promote inclusive early warning coverage on the continent, to ensure everyone is protected by early warning systems by 2027.