



PHILIPPINES

Global Innovation in Emergency Telecommunications:

Strengthening Disaster Response in the Philippines



World Food Programme

SAVING LIVES
CHANGING LIVES

A strong foundation for emergency telecommunications response saves lives. In the wake of a natural disaster, the quick and efficient restoration of telecommunications re-establishes vital coordination links between government agencies and affected areas – allowing emergency responders to know where and how to focus their assistance.

The Philippines has been ranked as the most disaster-prone country in the world by the [WorldRiskReport 2022](#). In a typical year, 20 tropical cyclones and typhoons enter the Philippine Area of Responsibility, with about half making landfall. To reduce the impact of disaster-related shocks, in 2018 the Department of Information and Communications Technology (DICT) invited the World Food Programme (WFP) to provide technical

telecommunications support to the country's disaster preparedness and response. This project arose out of lessons learned from 2013 Super Typhoon Yolanda (Haiyan), in which more than 6,000 lives were lost. The devastation moved the Government to further strengthen the efficiency of its emergency response, with a focus on addressing communication gaps through emergency telecommunications among the response community.

This case study highlights insights from the 2022 decentralized evaluation of this partnership. It aims to contribute to the global evidence base on the importance of information and communications technology during emergencies, and possibly inform existing emergency telecommunications strategies and infrastructure in other countries.

2023



1 A life-saving move: the MOVE Units

The first phase of collaboration between DICT and WFP was formalized in a four-year partnership agreement signed in December 2018. This partnership, unique to the Philippines, established the [Government Emergency Communications Systems - Mobile Operations Vehicle for Emergencies](#) (GECS-MOVE) project. Phase 1 of the project was funded primarily by the Philippine Government, which provided approximately PHP 200 million (USD 4 million). An additional USD 500,000 was provided by both the United States Agency for International Development (USAID) and WFP.

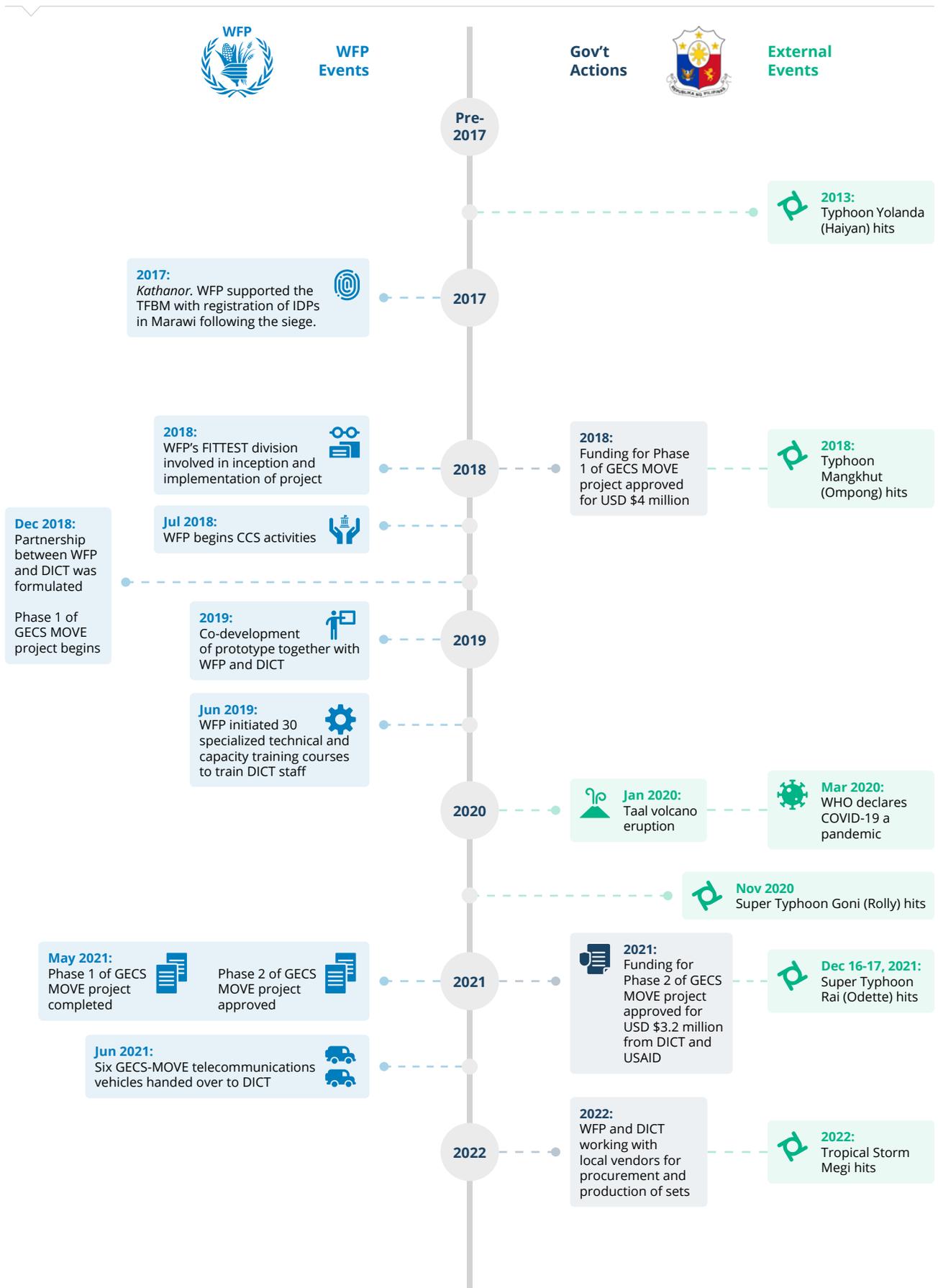
The GECS-MOVE partnership resulted in the co-design and manufacture of six cutting-edge mobile emergency telecommunications units, called MOVE units, for disaster-prone provinces of the Philippines. Each unit includes a self-contained mobile operations and coordination centre capable of housing an emergency telecommunications team; a heavy-duty off-road vehicle containing a self-sustaining connectivity hub; an off-road motorcycle fitted with communications equipment; and two heavy-duty drones to transport communications equipment and

extend connectivity into inaccessible areas. Each unit can quickly provide critical communication to emergency responders, disaster coordinators and health and welfare workers. These systems cut response times and save lives.

WFP worked with the Government and its own Dubai-based [Fast Information Technology and Telecommunications Emergency and Support Team](#) (FITTEST) to design, construct and field-test a prototype emergency communication unit in 2019. Findings from field tests informed the revised design of the final units, which were then built in Dubai and shipped to the Philippines in 2021 – just six months before Super Typhoon Rai (Odette), the most destructive storm since Typhoon Yolanda, hit the country.

The six MOVE units are currently positioned throughout the Philippines, in the National Capital Region, Central Luzon, Northern Luzon, Eastern Visayas, Caraga and Davao.

Figure 1: Timeline of disaster preparedness and response in the Philippines (2017–2022).



2 GECS-MOVE in action

The arrival of Super Typhoon Odette on 16 December 2021 provided the first real test of the MOVE units' capabilities. Informed by Standard Operating Procedures which would trigger their deployment activation, and in accordance with the Government's Emergency Telecommunications Cluster system, DICT deployed the MOVE units and requested WFP support 24 hours before the storm made first landfall. Over the following days, the units successfully re-established telecommunications in Maasin City and Surigao City – two of the worst-affected regions of the country – where they provided vital communications links between government agencies. In Surigao City, the two MOVE units deployed provided the Government with the first means of communication and response coordination following the typhoon. The connectivity established by the MOVE units proved especially useful for clearing roads, allowing first responders to enter the worst-affected areas and begin crucial operations. The units were supported in their response to Odette by FITTEST, which deployed information and communications technology specialists to the Philippines to help manage and maintain the unit vehicles.

In total, the MOVE units were able to provide connectivity to 24 sites across the region impacted by Odette, aiding the operations of government agencies, the police, humanitarian workers and NGOs. The connectivity provided was used by over 600 individuals daily, allowed members of the community to connect with loved ones, and indirectly helped over 600,000 people receive relief from the numerous United Nations and government agencies operating that time. WFP continued to conduct maintenance checks and upgrade the MOVE units during the Odette response in 2022. A dedicated team from the WFP Philippines Emergency Telecommunications Cluster met up with DICT personnel to fix and upgrade some of the units.



Figure 2: GECS-MOVE by the numbers during Typhoon Odette response.





3 Moving in the right direction: strengthening national capacity

A central aim of the GECS-MOVE partnership is to strengthen the capabilities of government first responders. WFP conducted more than 30 specialized technical and capacity training courses to DICT staff and disaster responders, both online and offline. This training, which included a visit to FITTEST headquarters in Dubai, focused on deploying and using the MOVE units as well as humanitarian best practices. WFP also held technical on-site training sessions, including the [installation and maintenance of communication satellites](#) to provide connectivity for vulnerable communities. In November 2022, a drone-flying workshop provided WFP and a partner, Clogworks Technologies Limited, an opportunity

to share best practices and training on basic manoeuvring skills for the [MOVE units' heavy-duty drones](#).

Additional training and capacity-strengthening came via a national information dissemination campaign that trained first responders and partners at the local government level. Overall, WFP was able to train more than 500 technical personnel in GECS-MOVE management and humanitarian response. In 2023, as part of the GECS-MOVE partnership, WFP will continue to build government capacity to respond to emergencies by holding technical workshops and leadership training, sharing humanitarian best practices and maintaining the MOVE units.



4 Innovation and training to support next phase of disaster response strengthening

The GECS-MOVE units are the first of their kind globally to be produced by WFP and represent a significant milestone in the organization's ability to strengthen in-country disaster preparedness and response. In the Philippines, the GECS-MOVE project has proved integral to WFP's commitment to enhance national and local government capacity to reduce vulnerabilities and shocks faced by the country – a core objective of the [WFP Country Strategic Plan \(2018–2023\)](#).

Looking to the future, in 2021 the Government and USAID's Bureau for Humanitarian Assistance committed USD 3.2 million to fund Phase 2 of GECS-MOVE, with WFP agreeing to provide an additional USD 1 million for the project. This second phase of the project, to be completed in 2023, centres on the local production of four new MOVE units with improved design and enhanced specifications. The decision to produce the units in the Philippines will reduce the dependence on foreign assembly and lower the overall cost of production. This phase will also include soft skills training for new and existing staff to support DICT's mandate to lead the national Emergency Telecommunications Cluster.

WFP Philippines is also developing mini-MOVE, a ready-to-deploy trailer equipped with basic connectivity equipment that can be used to support humanitarian and government operations. Other innovations include the MOVE communications buoy, used to bring connectivity to low-lying areas and municipalities. WFP is also seeking to leverage its expertise and connections to establish the first even drone hub in Asia. This hub will advocate for the use of drones in mapping, surveying and connectivity activities during emergencies for faster, more efficient decision-making.

GECS-MOVE success factors in brief:

- Creating a model that can be replicated in other countries
- Providing a platform to connect the operations of the Government and humanitarian actors during emergencies
- Gathering evidence of local capacity to improve government emergency response through telecommunications
- Providing an example of a strong partnership between the Government, United Nations and the private sector
- Uniting WFP's global emergency telecommunications teams
- Providing an opportunity to form relationships with the best telecommunications manufacturers
- Providing proof that innovation and technology strengthens community resilience and government capacity
- Strengthening participation of WFP Philippines in the Emergency Telecommunications Cluster

This case study was developed under the 2022 Decentralised Evaluation on Country Capacity Strengthening (CCS) Activities in the Philippines. To access the full report [click here](#) or contact wfp.philippines@wfp.org