



## Typhoon Haiyan/Yolanda After Action Report

**Date(s):** November 8<sup>th</sup> 2013 – April 14<sup>th</sup> 2014

**Event type:** Extreme weather

**Event summary:**

Typhoon Haiyan, known as Typhoon Yolanda in the Philippines, was one of the strongest tropical cyclones ever recorded, which devastated portions of Southeast Asia, particularly the Philippines, on November 8, 2013. It is the deadliest Philippine typhoon on record, killing at least 6,268 people in that country alone. Haiyan is also the strongest storm recorded at landfall, and unofficially the strongest typhoon ever recorded in terms of wind speed. As of January 2014, bodies were still being found. The thirtieth named storm of the 2013 Pacific typhoon season, Haiyan originated from an area of low pressure several hundred kilometers east-southeast of Pohnpei in the Federated States of Micronesia on November 2, 2013. Tracking generally westward, environmental conditions favored tropical cyclogenesis and the system developed into a tropical depression the following day. After becoming a tropical storm and attaining the name Haiyan at 0000 UTC on November 4, the system began a period of rapid intensification that brought it to typhoon intensity by 1800 UTC on November 5. By November 6, the Joint Typhoon Warning Centre (JTWC) assessed the system as a Category 5-equivalent super typhoon on the Saffir-Simpson hurricane wind scale; the storm passed over the island of Kayangel in Palau shortly after attaining this strength.

Thereafter, it continued to intensify; at 1200 UTC on November 7, the Japan Meteorological Agency (JMA) upgraded the storm's maximum ten-minute sustained winds to 230 km/h (145 mph), the highest in relation to the cyclone. The Hong Kong Observatory put the storm's maximum ten-minute sustained winds at 275 km/h (170 mph) prior to landfall in the central Philippines, while the China Meteorological Administration estimated the maximum two-minute sustained winds at the time to be around 78 m/s (280 km/h or 175 mph). At 1800 UTC, the JTWC estimated the system's one-minute sustained winds to 315 km/h (195 mph), unofficially making Haiyan the strongest tropical cyclone ever observed based on wind speed; several others have recorded lower central pressure readings. Several hours later, the eye of the cyclone made its first landfall in the Philippines at Guiuan, Eastern Samar. Gradually weakening, the storm made five additional landfalls in the country before emerging over the South China Sea.

Turning northwestward, the typhoon eventually struck northern Vietnam as a severe tropical storm on November 10. Haiyan was last noted as a tropical depression by the JMA the following day.

The cyclone caused catastrophic destruction in the Visayas, particularly on Samar and Leyte. According to UN officials, about 11 million people have been affected – many have been left homeless

**Response summary:**

- November 11<sup>th</sup> – December 3<sup>rd</sup>: coordination with other relief organisations (UN-OCHA, Nethope, Red Cross, GSMA, Philippine Telecoms providers and others), gathering of data on damage to communications infra-structure. Dissemination of data on restoration and availability of communication services via social media channels. Logistical preparation of advance team deployment to Cebu Island.
- December 3<sup>rd</sup>: Arrival advance team. Preparation basecamp in Ascension north of Cebu city. Assessment visit to Camp Arapal in North Cebu. Initial wireless services surveys across rural areas of Cebu Island.
- December 14<sup>th</sup>: Arrival combined tech & medical team. Installation of 3 WiFi access points and controller at Arapal camp providing internet access to the camp which serves as a regional disaster response and rebuilding hub. Continuing wireless service surveys and mapping across Northern end of Cebu Island.
- December 16<sup>th</sup>: Combined tech & medical team travelled to Bantayan island (136,960 inhabitants) North of Cebu. Start of communications and medical needs assessments for the island. Provided much needed medical supplies to only ambulance service in Santa Fe. Started training of local EMT's. Responded to traffic accident resulting in two Oxfam volunteers sustaining serious (life-threatening) head injuries. Initiated and executed evacuation of casualties to Cebu City main hospital.
- December 19<sup>th</sup>: Arrival of additional medical volunteers and translator/interpreter in Cebu. Start of 3 weeks of EMT level training for 25 BVERT (Bantayan Volunteer Emergency Rescue) members in first aid, CPR & water rescue. Donation on 4 bags of medical equipment to BVERT team and Santa Fe ambulance. Medical team also carried out medical assessment mission in rural areas of Bantayan and ran medical clinics on rural villages and on small offshore island communities. On January 10<sup>th</sup> combined tech & medical team responded to an emergency call from a passenger ferry. Working together with other relief organisations (BVERT & SAMU) our volunteers coordinated and executed the evacuation of all 300 passengers. The only injured passenger was treated and evacuated to Santa Fe hospital.
- January 25: Arrival additional wireless engineer in Santa Fe. Installation of WiFi equipment and Internet access at gymnasium in Santa Fe (serving as disaster response hub), Mayor's office, YPDR (local NGO) & in local shop (including laptop) for use by general public.
- February 5<sup>th</sup>: Arrival of wireless engineer in Camp Arapal to install Satellite Broadband dish supplied by DTL. Satellite dish will be used to provide local community with a resilient means of communication. Dish installed by February 15<sup>th</sup>.

- March 3<sup>rd</sup> – 10<sup>th</sup>: Deployment of 2 tech & medical volunteers to Camp Arapal in northern Cebu Island. Carried out medical assessments, ran daily medical clinics for local residents and initiated EMT training program for local volunteers. Also continued work on expanding and improving broadband satellite & WiFi service.
- March 30<sup>rd</sup> – April 13<sup>th</sup>: Deployment of 4 medical volunteers to Camp Arapal. Initiation of medical training (first aid, CPR & Wilderness Rescue) for emergency response team formed by DTL using local volunteers. Operated daily medical clinics in surrounding hamlets and small island communities. Treated in excess of 500 patients during the clinics with a variety of illnesses and injuries. Diagnosed an outbreak of a highly contagious infection and coordinated response with UN-OCHA and regional Health Authority executives. Also donated large amount of medical supply to Camp Arapal emergency response team.
- December 4 – April 10: Gathered wireless signal (WiFi & Cellular) survey data in area between Cebu City and Northern end of Bantayan Island. Data shared with other agencies via the Digital Humanitarian Network and published online: <http://bit.ly/1jdKxT4>

### **Statistics:**

Number of people provided with internet access in Bantayan and Camp Arapal: estimated 2100 people (mix of local population and emergency responders).

Number of people who received EMT level medical training: 155 volunteers between Santa Fe, offshore islands and Camp Arapal.

Value of networking & communications equipment donated to Camp Arapal and Santa Fe communities: €35,000.

Value of medical supplies donated to Camp Arapal and Santa Fe communities: €15,000

Number of patients treated during clinics in rural hamlets in the Camp Arapal and Bantayan Island regions: in excess of 1500 patients.

Number of volunteers deployed: 17

Value of financial donations received: €8998.76

In-kind donations received from: Airlink, Aruba Networks (US & Australia), Goal Zero, Cascade Designs, ProSys, Pelican Cases, Ubiquiti & Direct Relief.

Cost of deployment: €9470.30

NOTES:

- A follow up deployment is being planned for fall 2014 in order to improve & expand the wireless network in Camp Arapal as well as provide refresher/follow-up training for the medical emergency response volunteers in Camp Arapal.
- The medical activities started during this deployment will be put under the control of a separate organisation called “Disaster Medics”. The organizational structure for this is currently under development.