

## HARP Rescue connects Hurricane Dorian recovery team using goTenna Pro after island-wide destruction and loss of terrestrial connectivity

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### Challenge

Humanitarian Aid and Rescue Project, also known as [HARP](#), deploys rapid disaster response teams. Arriving at the scene of a natural disaster like Hurricane Dorian, HARP is often faced with one major issue: The first 72 hours of any disaster or conflict, communications are usually down and power is not available. According to [NOAA](#), a Category 5 hurricane like Hurricane Dorian is typically 157 mph or higher and can result in catastrophic damage with roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months. There's typically no cell phone service and satellite phones may be out of reach, have unreliable service or present significant lag time. LTE connectivity typically takes 2-3 weeks to be fully restored.

The HARP team explored a number of options when it came to off-grid communications gear for their next deployment. The organization discovered that setting up ham radio repeaters became a very expensive and unaffordable venture. Even when the ham systems were up and running, the HARP team couldn't keep track of each other on the ground at any given moment. The team still needed to find an inexpensive way to send private, encrypted messages without voice radio channel conflicted issues as well as a way to stay situationally aware of where each team member was at all times. For the rescue workers on the HARP team, LTE was unavailable for a total of 6-8 weeks upon their arrival at the disaster recovery scene. All voice radio towers were down within their vicinity.

## Solution

The HARP team decided to test goTenna Pro as an alternative to traditional land-based radio communications during their next deployment during Hurricane Dorian in hopes that it would meet their needs for a long-term and sustainable means of communications.

The test took place in CoopersTown, a village in Abaco, which is the second largest island of the Bahamas. When it touched down in Abaco on August 28, 2019, it was a Category 1 storm and caused blackouts on St. Thomas, St. John and some outages in St. Croix according to The Associated Press. By September 3rd, storm suggestions were 12 to 18 feet (4-5 meters) above normal and up to 12,000 homes were destroyed or severely damaged on the Grand Bahama Island. According to USA Today, Hurricane Dorian was the strongest hurricane on record with sustained winds of 185 mph.



Five devices were distributed to the HARP volunteer team. The team used manuals as well as their goTenna Pro portal account to get the frequencies set up and train the new goTenna Pro users in just a few minutes. There was no onboarding assistance necessary.

The main objective on the island was to perform body recovery, medical and triage. An assistant using a goTenna Pro device was placed with each doctor. Each assistant would act as the messenger and relay the supplies the doctor required. Other goTenna Pro users on the HARP team were placed with search and rescue teams or supply chain volunteers. Each user had the only sustainable means of communication on the island during the recovery effort.



## Results

During the three-week goTenna Pro deployment in the Bahamas, medical teams, search and rescue teams as well as supply chain volunteers all had a chance to use goTenna Pro devices while they operated in disparate locations on the island. Doctors were tending to patients with cardiac arrest, diabetic comas, traffic accidents, drowning victims, and other types of urgent medical conditions. Using the goTenna Pro app texting feature, the doctors' assistants were able to request medical supply delivery, consult other doctors across the network as well as direct search and rescue teams on what to do upon the discovery of a survivor who was experiencing medical issues.

Land and water-based rescue teams would also put in requests to the supply team using goTenna Pro. Supply distribution team members were getting goods from the tarmacs and distributing them to those who needed it the most. Everyone on the goTenna Pro mesh network was in constant communication with each other.



Each goTenna Pro user experienced no drop in communications and no channel conflict issues the goTenna Pro app for the duration of at least three weeks upon arrival. The mapping feature allowed all team members to keep track of their medical volunteers, search and rescue teams, as well as supply distribution teams. Unlike ham radios, goTenna Pro allowed volunteers to set automatic location updates that were sent to volunteers on an interval basis, freeing up time and voice channel traffic which would have been required using voice radios.

"The last thing you want to do is lose track of people in the field and ham radios did not solve that problem," said Burke Bryant, President and Founder of HARP. "goTenna Pro does really well in the aid and disaster relief field. A lot of people have looked into these types of comms challenges and haven't found a solution until goTenna Pro," said Bryant. "It was a lifesaver. We wouldn't have been able to communicate in the field otherwise. It was the crux of everything we were doing."

The team was able to see about a 500% increase in the number of lives they saved during the time they were utilizing goTenna Pro compared to other post-hurricane missions when they operated without it.

"If we were to save 10 lives normally... given goTenna Pro, we were able to save 60 lives," Bryant said. "It doesn't just serve doctors, but serves the person where they were set up, based on their medical condition. It was a constant communication system with SAR teams as well."