

“Zulu Stations” a Mainstay in Hard-Hit Indonesia

Wyn Purwinto, AB2QV

A post-tsunami aerial view of Calang in Aceh Province.



Under the guidance of their International Amateur Radio Union member-society, radio amateurs in Indonesia worked together to provide communication support in the wake of the devastating tsunami.

Within hours of the magnitude 9.0 “megathrust” earthquake and the massive tsunami it generated December 26, 2004, the first Amateur Radio emergency communication teams responded in northern Sumatra. Most severely affected were the Indonesian provinces of Aceh and North Sumatra. Throughout northern Sumatra, the tsunami had damaged the telecommunication, power and transportation infrastructure or taken them out altogether.

ORARI Steps In

Although the initial Amateur Radio response was done on the fly, within a day of the disaster, Indonesia’s International Ama-

teur Radio Union (IARU) member-society, the Organization of Amateur Radio for Indonesia (ORARI), began coordinating a more organized system of emergency stations and command posts.

As is the practice, ORARI assigned “zulu” suffix call signs to many official ORARI stations taking part in the disaster relief and response as part of the Indonesian Amateur Radio Emergency Service (IARES).

ORARI President Harsono, YBØPHM, messaged all provincial and local ORARI offices December 27 urging radio amateurs to be ready to assist in northern Sumatra. The North Sumatra ORARI office was designated the regional emergency coordina-

tor for tsunami-affected areas in Sumatra. In addition, ORARI activated many local zulu stations and deployed its IARES members and other amateur volunteers to help in restoring communication in the disaster-affected areas.

“Zulu Stations” Go on the Air

Two IARES zulu stations were set up in Medan—YB6ZES at the University of North Sumatra and YB6ZZ at the provincial ORARI office. ORARI headquarters also set up several emergency stations in the capital city of Jakarta, and these stations handled emergency traffic virtually nonstop through the early days of the disaster relief effort.

The first emergency command post was set up in the emergency room of Adam Malik Hospital in Medan, the capital of North Sumatra. A second was established in Melati Hospital in Perbaungan—with Hertanto, YB6HB, a physician, coordinating—to handle the initial evacuation of victims from Kuala Putri Beach on North Sumatra's east coast. Some of the injured subsequently were transferred to the hospital in Medan.

Several northern Sumatra hospitals or medical centers, ambulance companies and other emergency mobile units were equipped with emergency radio gear. Zulkarman Syafrin, YC6PLG, and Ady, YB6VK, in Medan relayed traffic between Amateur Radio and the Internet from northern Sumatra to many operators in Indonesia and elsewhere in the world.

Ban Impedes Aceh Response

In Aceh, a bewildering situation existed. Because of security concerns in reaction to a separatist movement there, authorities for several years now have banned Amateur Radio activity in the province. Many hams in Aceh had to surrender their radio gear to the government. As a result, they were not able to respond immediately to support the disaster relief, even though many of the hams there were well trained in emergency communication.

Despite the ban, Anto, YD6AT, set up an HF station two miles east of the capital city, Banda Aceh. Another operator, Nurbahagia—a nonham member of the military police in Lhokseumawe on Aceh's east coast—took to the airwaves on VHF. Both operators were able to establish contact with stations in North Sumatra, including net control station YB6ZES in Medan, to report on devastation in their locales. ORARI soon granted Nurbahagia the call sign YC5ZAV. Another station in Eastern Aceh County joined the VHF repeater net, and ORARI granted it YB6ZAU.

Since almost all governmental offices in Aceh were out of commission, Medan became the center of the emergency relief

effort. YB6ZES subsequently moved into the building occupied by the national Search and Rescue Bureau command post and by other emergency agencies at Polonia Air Base in Medan. Zulu stations in northern Sumatra operated through two VHF repeaters and on four HF bands—80, 40, 20 and 15 meters. While VHF systems proved useful, in northern Sumatra, HF was able to overcome the region's hilly and mountainous terrain, where VHF and UHF radios simply did not get through.

Deployment in Outlying Areas

ORARI of North Sumatra also assisted the relief effort by gathering up radio equipment, antennas, power supplies and generators to set up zulu stations in additional tsunami disaster areas. The organization coordinated emergency activities in other districts of the country as well as those of Amateur Radio volunteers who had come from outside Indonesia to help.

Along with the local ORARI stations, IARES zulu stations on various Indonesian island and even some amateur stations from neighboring Malaysia were on duty nearly round the clock monitoring HF frequencies for emergency traffic.

A Visit to Aceh

At one point, Budi Rianto Halim, YB0HD, deployed his IARES team from Jakarta to Aceh. Officials from ORARI Headquarters in Jakarta, including Harsono, Faisal Anwar, YB1PR, and Ruddy, YB0NM, flew to northern Sumatra to observe the dedicated Amateur Radio volunteers firsthand. Their trip included a stop at the Medan net control station YB6ZES.

During the tour of northern Sumatra, Ruddy said he was pleasantly surprised to learn that several Malaysian amateurs who were also doctors had joined the ORARI-ARES members in Banda Aceh. ORARI granted the Malaysian amateurs the call sign YB6ZBE for their northern Sumatra operation. The visitors had brought in a full complement of radio gear suitable for emergency service.

Ham is Tsunami Victim

In January a tsunami survivor in Meulaboh, Aceh, found an Amateur Radio station permit floating on the wet ground in woods away from the city. The survivor turned the document over to YB6ZAK, the zulu station at Chut Nya Dien Hospital, Meulaboh. It was later determined that the permit had belonged to local engineer Syaiful Hadi, YD6EMF. The Amateur Radio search-and-rescue team located his family, only to learn that Syaiful was among the tsunami victims.

Offroaders Assist

In Metro Jakarta, Triadi, YB0KVN, and his team of radio amateurs helped the Indonesian Offroader Club to install zulu station YB0ZRN at the club's command post in Jakarta. This station was used to monitor and communicate with the other zulu stations in the country—and especially with those in northern Sumatra.

The club itself went into emergency mode, using heavy-duty all-wheel drive vehicles—many equipped with GPS—to assist with local emergency transportation in Aceh. Club field volunteers often coordinated with the local zulu and mobile stations in Aceh to communicate among themselves and with the club's central command post.

More Zulu Stations

Among other zulu stations set up within days of the tsunami was YB6ZAJ, a mobile station using the clinic van from Adam Malik Hospital, operated by Zulkarman, YC6PLG, and Suryatno, YC6HSS. Equipped with HF, VHF and UHF gear and a couple of handheld transceivers, the mobile medical unit carried six doctors, medical supplies and equipment from Doctor Sutomo Hospital in Surabaya, Java Island.

The mobile unit traveled from Medan to Banda Aceh along the eastern coast of northern Sumatra, stopping at every community medical center and hospital to gather the medical data and tend to local needs until it reached Chut Meutia Hospital in Lhokseumawe, on the eastern coast



Boyke, YC1DLV, from West Java, operated zulu station YB6ZAT at Blang Bintang Airbase, Banda Aceh.



The ORARI-ARES station YB6ZBJ at the Search and Rescue command post in Banda Aceh. (L-R) unidentified operator; Ruddy Aryanto, YB0NM; M. Rasidi, YC0FIM; Max Laihan, YC8TMX; two unidentified operators; Faisal Anwar, YB1PR; Jerry Mambu, YC8TZZ, and Hudi Indarto, YD0BIK.

of Aceh. The mobile unit regularly reported into the IARES net control station YB6ZES in Medan to request medical support for local relief centers.

Because of the overwhelming number of refugees and the hundreds of dead at Chut Meutia Hospital, the YB6ZAJ team converted the mobile unit into an emergency base station, changing the call sign to YB6ZAV—an IARES medical base station at Chut Meutia Hospital.

Other zulu stations were set up in Aceh province, including YB6ZAT at Blang Bintang Air Base and YB6ZBJ at the Pendopo Gubernur (provincial government building), YB6ZBG at Syahkuala University—all in Banda Aceh—plus YB6ZAM at Lhoknga. Hudi, YDØBIK from Jakarta—one of the operators at YB6ZAM—contacted US amateur Earl Campbell, N8TV, of New Mexico, who was set up at the International Red Cross office in Banda Aceh. Campbell assisted with a CB club station in the area as well as with the ORARI operation in Banda Aceh. Campbell plans to remain in Aceh until July 2005.

Elsewhere in Aceh, YB6ZAP was on the air from Lamno's emergency hospital, while YB6ZBB was set up at Teunom's emergency hospital, and YB6ZAW was operating from the hospital in Calang, YB6ZAB was on the air from the hospital in Sigli, and YB6ZBC was set up at Doc- tor Fauziah Hospital in Bireuen.

Destruction in Meulaboh

In Meulaboh, 90 miles from the earthquake's epicenter and badly damaged, several zulu stations were put on the air, including YB6ZAK from Chut Nyak Dien Hospital, YB6ZAO from the 100th Infantry Battalion's command post, YB6ZAS from C Arsenal Company of 112th Infantry Battalion, YB6ZBF from the damaged harbor and YB6ZAL in a mobile medical unit. One of the YB6ZAK operators—Unggul, YHØSES, a former member of the Australian radio amateur emergency ser-

vice—took on the role of interpreter for the hospital in dealing with the many volunteers from outside the country, including US marines and their medical unit, and physicians from other countries.

"Meulaboh was destroyed completely, like being hit by an atomic bomb," Unggul said. "The smell of death surrounds us."

Unggul said his group erected an antenna at the hospital in Meulaboh using bamboo poles some 40 feet tall to support it. "After some matching and radio checking, we were on the air . . . with the allocation call sign YBØZRA/6 (later YB6ZAK, as assigned by YBØZZ)."

VIPs Visit

In late January, doctors from Japan, including Sato, JR2TDE; Ando, JM2NDG, and Yahinuma, JH1P1P, joined YB6ZAK for three weeks. The Amateur Radio emergency activity in Indonesia attracted media attention, with TV reporters from Chile and Switzerland visiting YB6ZES in Medan.

On January 20, Indonesian President Susilo Bambang Yudhoyono and North Sumatra Gov T. Rizal Nurdin honored YB6ZES with a personal visit. The president asked how IARES could help disaster relief. Rangkuti, YC6IQ—one of the YB6ZES operators—explained that Amateur Radio was able to establish emergency radio stations and provide local and long-distance communication after the collapse of the telecommunication infrastructure. Radio communication was crucial to all disaster relief participants and to supply timely aid to tsunami victims, he said.

President Yudhoyono also was curious about the kinds of problems operators faced in disaster areas in establishing radiocommunication. Some common problems, Rangkuti noted, included a shortage of batteries and generator fuel as well as a lack of skilled operators. But, he pointed out, such problems typically are solved sooner or later since Amateur Radio is an indepen-

dent operation.

In late January, ORARI's North Sumatra Secretary Baharuddin, YC6MWI, accompanied Zulkiffley Darus, an Amateur Radio aid relief project leader from Malaysia, on a visit to the disaster areas. Zulkiffley told reporters in Medan that the first that some Malaysian amateurs had heard about the tsunami was by monitoring the HF and VHF frequencies in use by ORARI-ARES for exchanging emergency traffic. The Malaysian amateurs established a tsunami relief project that collected towels, soap, toothpaste, toothbrushes, shampoo and other basic needs, and members of ASTRA, their Amateur Radio organization and other donors pledged some \$56,000 to help the families of disaster victims as well as survivors. The project had the support of the Malaysian government.

In addition, the project also deployed 21 Malaysian medical relief volunteers who were ready to serve the tsunami victims and distribute some medicine in Banda Aceh and Meulaboh. They planned to extend their support to tsunami victims on Nias Island off the west coast of North Sumatra.

Some Gave All

More than one radio operator may have become an indirect victim of the tsunami. After operating at IARES station YBØZZ in Jakarta for the better part of 15 days straight, Maliki, YCØXSM, from Jakarta died January 11. Achadi Isnaryanto, YC1IHD, from West Java, died in Banda Aceh March 3, following several weeks of nonstop volunteering. YCØXSM and YC1IHD were among many heroic Amateur Radio volunteers in Indonesia who never gave up in their efforts to help others during the tsunami disaster relief effort.

Acknowledgements

Harsono, YBØPHM and Faisal Anwar, YB1PR, of ORARI Headquarters; Ruddy Aryanto, YBØNM, and Budi Halim, YBØHD, from ORARI-ARES in Jakarta, and Zulkarman Syafrin, YC6PLG, from ORARI-ARES in Medan for sharing the information used in this account.

Wyn W. Purwinto, AB2QV, of Syracuse, New York, is a native of Java Island, Indonesia. As an educational researcher, he's visited several Southeast Asian islands, and in 1983 through 1985 he conducted research in northern Sumatra and several other islands in the region under sponsorship of the World Bank and the UNDP-UNESCO. Several of the coastal towns in Aceh he'd visited in 1985 were among those hit by the tsunami. An ARRL member, he belongs to three ham radio clubs. An Amateur Extra class licensee, he has been an authorized volunteer examiner with the ARRL-VEC and W5YI-VEC since 2003.



The YB6ZAM zulu station in Lhoknga, a coastal village near Banda Aceh.

FAISAL ANWAR, YB1PR