



THE BETTER UTILIZATION OF THE AMATEUR RADIO SERVICE AS A RESOURCE FOR DISASTER COMMUNICATIONS

by

International Amateur Radio Union (IARU) Region 3

Introduction

The Tsunami on 26 December 2004 created much tragedy and devastation in our Region. It highlights the need to review steps that can be taken to ensure better preparedness and better warning should similar disaster strike in the future.

This paper notes the contribution of the amateur service to the relief effort, identifies changes to Article 25 of the Radio Regulations governing the amateur services that enhance the opportunity to use that resource in such situations, perhaps necessitating a review of national regulation.

Background

Today, advanced technologies provide real time connectivity but these networks are increasingly vulnerable. In contrast, communications and the equipment used by radio amateurs are under the direct control of the operator and do not depend on infrastructure. So the amateur service often provides the first, and for a time the only link, between an area affected by a disaster and the rest of the world.

In January 2005 the ITU Telecommunication Development Bureau (BDT) published the "Handbook on Emergency Telecommunications for Developing Countries" (2nd Edition), as adopted by ITU-D Study Group 2. That publication is particularly relevant, and chapter 5 deals with the amateur radio service, identifying the frequencies and modes that can be used, and practical aspects of amateur radio service participation including procedures and practice.

Amateur radio and Tsunami relief

The amateur service provided a service in the recent tragedy.

There are many news reports of amateur radio activities as a part of the Tsunami disaster relief.

One example lines in Sri Lanka's Lanka Business Online news, 29 December 2004 reported;

“Sri Lanka’s amateur radio operators are offering their services to any area that needs communications services.

Until yesterday The Radio Society of Sri Lanka operated a short wave radio link between Hambantota and the Peime Minster’s disaster management office at Temple Trees, and government offices in the stricken area.”

“Often Hams (radio amateurs) residing in disaster struck areas are the only link to the outside world.”

“A small desktop transceiver with an output of a few hundred watts can even establish communication between two countries, thousands of miles apart.”

Another example in India’s National Newspaper, The Hindu, reported on 30 December 2004; (this was also reported in Washington Post on 3 January 2005).

“When four amateur radio operators headed to the Andaman and Nicobar islands a few week ago, ..., they had no idea that their fun hobby would soon become the islands’ only lifeline.”

“They were actually in operation when the tremors began. Bharthi, the team leader, was talking to an Australian on the radio. He says her voice suddenly rose by a few octaves and she yelled ‘tremor’. Then her radio went dead.”

“The islands were devastated by the quake and crashing waves. Phones died, the electricity went out and life in Andaman and Nicobar came to a stunned halt. On the airwaves too, there was a loud silence, as hams across the world held their breath, wondering whether the team had survived. However, about two hours later, unbelievably, they were back on the air.”

“Every other form of communication was down. They were the only link from the Andaman to the mainland for several hours after the disaster.....”

The Indian national amateur radio society, the Amateur Radio Society of India reports:

“The first tremors of the Sumatra earthquake were felt in Chennai around 0630 hrs on the 26th December 2005. At that time there was apprehension on anything much more to fear. By 0900 the Tsunami had hit our shores and reports started trickling in.

The VU4 DXpedition in Port Blair also felt the tremors and shortly after that their station blacked out, to return on the air on battery power. From then on the team maintained the only means of communications with the mainland. Stations were later set up on Car Nicobar and other smaller islands where there were no other communications and the station on Port Blair relayed information to the authorities.

Meanwhile groups of hams established stations at Velanganni, Nagapattinam, Cuddalore and other places for health and welfare traffic. They also became very useful as land lines and cell phones had got jammed due to the volume of traffic.

The traffic was mainly on HF both 7 MHz and 14 MHz due to distances involved, but VHF was also used locally between different stations.”

The changes made at WRC-03

The extent of the December 2004 tragedy shows that emergency and disaster relief operations may require international communications.

Prior to WRC-03 Article 25 explicitly prohibited international communications by amateur stations on behalf of third parties, unless there was a special arrangement in place between the administrations of the countries concerned.

That prohibition was and probably still is reflected in many national regulations governing the amateur service.

That prohibition was replaced by a new provision at WRC-03, which again recognized that the amateur service is a resource for emergency communication. That Conference adopted the following new provision:

25.3 2) *Amateur stations may be used for transmitting international communications on behalf of third parties only in case of emergencies or disaster relief. An administration may determine the applicability of this provision to amateur stations under its jurisdiction.*

This recognizes that amateur stations may be used for transmitting international communications on behalf of third parties connected with “emergencies or disaster relief” and its effect is that administrations may now unilaterally determine the extent of this provision for its amateur stations.

Since WRC-03 it is neither necessary nor appropriate for an administration to even consult with another administration in respect of the international communications on behalf of third parties that are permitted for its amateur stations.

A position is thus created: a communication that may be prohibited by the national regulation governing an amateur station in one country may be permitted by the national regulation governing another amateur station in another country with which emergency or disaster relief communications could be desirably exchanged.

National regulation

WRC-03 also adopted another new provision:

25.9A *Administrations are encouraged to take the necessary steps to allow amateur stations to prepare for and meet communication needs in support of disaster relief.*

It should be noted that this provision goes beyond amateur stations meeting communication needs in support of disaster relief. Administrations are encouraged to “take the necessary steps” to allow amateur stations to “prepare for” meeting such communication needs.

Administrations addressing this provision will undoubtedly consider the most appropriate methods for preparation. Does it just involve exercises by amateurs sending practice messages in the governmental emergency network, or working with a recognized organization such as the Red Cross, or perhaps providing real life support communications for something such as a special-event charity run or boat race or similar event?

Administrations are urged to identify the most appropriate means of providing meaningful preparation for radio amateurs in their country.

Conclusion

National regulations that prohibit communications on behalf of third parties that have not been amended to reflect the changes made to the international Radio Regulations by WRC-03 could inhibit international disaster and emergency relief communications specifically encouraged by the ITU-R WRC-03 and recognized by the ITU-D.

New national regulations may be needed, in particular to address the means by which amateurs may adequately prepare for disaster relief tasks and to clarify the applicability of Article 25.3 in the case of emergencies or disaster relief.

The WRC-03 changes to Article 25, particularly in the light of recent events, raise issues for the consideration of administrations.
