

# The Role of the Amateur Radio Service in Disaster Mitigation and Relief Operations

## Introduction

In the recent ETSI/CENELEC Questionnaire relating to the Draft Product Family Emission Standard for Telecommunication Networks, Section 9 (Provisions for Protection of Safety and Emergency Services) an Annex was included proposing the list of frequencies to be afforded particular protection. Included in this list were the amateur radio bands, which have long been recognised by the ITU as being used in the event of natural and man-made disasters and relief operations.

This paper sets out the international ITU/UN regulatory and advisory background to the use of the Amateur Radio Service in emergency communication.

## Background

The Amateur Radio Service provides a decentralised communications network, operated by technically qualified people, a network which cannot be shut down by terrorist attack. National amateur licensing arrangements specifically include provisions for amateurs to provide communications at times of emergency. The Amateur Radio Service and its role in emergency communications has been well documented in the proceedings of the ITU over many years, as shown in the following paragraphs extracted from the relevant resolutions, recommendations and agreements:

“Safety Service: Any radiocommunications service used permanently or temporarily for the safeguarding of human life or property” (*ITU Radio Regulations S1.59*)

“A Convention on Disaster Communications should, at a minimum:

c) Ensure the utilization to the maximum extent of existing global, regional and national terrestrial and satellite communications networks, encourage the immediate availability at national, regional and international centres of communications equipment and encourage the development of the amateur radio services and their application to disaster communications” (*Tampere declaration on disaster communications 1991*)

“...disaster preparedness requires the existence of decentralised means of communications such as, but not limited to, those provided by mobile and portable satellite terminals and by the amateur radio services, to supplement the vulnerable element of the national, regional and global communication networks” (*World Telecommunications Development Conference, Buenos Aires, 1994*)

“The ITU Radiocommunications Assembly recommends:

- 1 that administrations encourage the development of amateur service and amateur satellite networks capable of providing communications in the event of natural disasters

- 2 that such networks be robust, flexible and independent of other telecommunications services and capable of operating from emergency power
- 3 that amateur organisations are invited to promote the design of robust systems capable of providing communications during disasters and relief operations
- 4 that amateur organisations be allowed to exercise their networks periodically during normal non-disaster periods” (*ITR-R M1042.1 – Disaster Communications in the Amateur and Amateur Satellite Services*)

“The Conference resolves to invite the ITU Radiocommunication Sector to continue to study as a matter of urgency those aspects of radio communications that are relevant to disaster mitigation and relief operations, such as decentralised means of communications that are appropriate and generally available, including amateur radio facilities and mobile and portable satellite terminals” (*World Radiocommunication Conferences 1997/200, Resolution 644*)

“The ITU Development Sector recommends:

- 1 that administrations are encouraged to include the amateur services in their national disaster plans and telecommunication assistance information inventories
- 2 that administrations are urged to reduce and, where possible, remove, barriers to the effective utilisation of the amateur services for disaster communications
- 3 that amateur and disaster relief organisations are encouraged to develop memoranda of understanding (MoU) as well as to co-operate, together with other concerned parties, in developing and making available model agreements and best practices in disaster telecommunications” (*Recommendation ITU-D13 April 2001*)

“The World Telecommunication Development Conference resolves .....to invite the ITU Telecommunication Development Sector to continue to ensure that proper consideration be given to emergency telecommunications as an element of telecommunication development, including, in close coordination and collaboration with the ITU Recommendation and telecommunication Standardisation Sectors and the relevant international organisations, by facilitating and encouraging the use of decentralised means of communications that are appropriate and generally available, including those provided by the amateur radio service and satellite and terrestrial network services.....” (*ITU World Telecommunications Development Conference, Istanbul 2002*)

“In view of the specific environment in which the response to disasters (in the sense of the definition in CPM Report 2.1.1.1 para 4) take place, the UN emphasises the need for an unhindered application of all means of telecommunications available to the providers of disaster relief.....Given the important role of the Amateur Radio Service in disaster response, and having reviewed the conclusions of extensive studies reflected in the CPM Report, in particular in 5.6.1 the users of telecommunications in the service of humanitarian assistance, participating in the WGET support a realignment [of the 7 MHz amateur band] “ (*United Nations, in a paper (Document 28E) submitted by Yoshio Utsumi, Secretary General ITU to the World Radiocommunications Conference 2003*)

“Administrations are encouraged to take the necessary steps to allow amateur stations to prepare for and meet communication need in support of disaster relief” (ITU Radio Regulations Article 25.9A as agreed at WRC 2003)

The role of the Amateur Radio Service in disaster relief is also well acknowledged in many countries. In the US, for example, Department of Homeland Security Liaison to the White House Liz DiGregorio called amateur radio operators the *first of the first responders*. "You are there. You are part of that very, very first response when it happens locally, especially in the initial stages of an emergency or disaster", DiGregorio said. She urged amateurs to explore ways to expand their role in the community beyond being the last resort when other communication systems fail. "You need to show your community that you're engaged," she said. "They need to know as a community that [amateur radio] is there."

### **The relevance to the ETSI/CENELEC Questionnaire**

Annex C to the Draft Product Family Emission Standard for Telecommunication Networks refers to “European **Harmonised** Frequency Bands for Safety Related Services and Applications”. This heading has been challenged in some quarters, as many of the frequencies are not officially “*harmonised*” in Europe. This is technically true, but in the case of the Amateur Service allocations, they are frequency bands allocated on a global basis to that Service. They are also bands that have been recognised by ITU for use in cases of disaster relief and which, in emergencies, may also be used by NGOs and international relief agencies, as well as by amateurs themselves. The use of these **bands** (as listed in Annex C of the Questionnaire), rather than **specific frequencies** in an HF environment allows selection of a frequency for traffic which avoids interference from other amateur stations or other sources of unwanted emissions.

Radio Amateurs are regularly called on to provide communication support in emergency situations, be these natural (e.g. earthquakes, fires, floods etc) or man-made disasters (e.g. major air crashes), and terrorist incidents (September 11 2001 etc). Just because the commercial communications infrastructure in much of Europe is well developed does not mean that European amateurs are not at the receiving end of emergency communications links. It is thus right and proper that amateur frequencies globally are regarded as ones which must always be available for emergency traffic and kept clear of interference, particularly interference which will be present 24 hours a day (such as emissions from PLT systems). It is for this reason that the ETSI/CENELEC Joint Working Group included amateur frequencies in Annex C of the Draft Product Family Emission Standard for Telecommunication Networks.

IARU respectfully draws the attention of WGFM to the contents of this paper, and the important role of the Amateur Radio Service in disaster relief communication. In particular it is vital to disaster relief communication that the Amateur Radio Service frequency bands remain listed in Annex C of the Draft Product Family Emission Standard for Telecommunication Networks.

**Submitted by the International Amateur Radio Union, Region 1**

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