International Telecommunication Union

ITU-R activities – reducing the effects of disasters

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Outline

- Brief overview of the ITU
- Disaster phases and the radio services involved
- Studies in the ITU Radiocommunication Sector (ITU-R)
- Future work

ITU Overview

189 Member States
700 Sector Members

ITU

Helping the World Communicate

ITU-T

Telecommunication standardization
- network and service aspects

ITU-D

Assisting implementation and operation of telecommunications in developing countries

ITU-R

Radiocommunication standardization and global radio spectrum management

Disaster phases and the radio services involved

- Disaster prediction and detection – meteorological and Earth exploration satellite services
- Disaster alerting – broadcast, fixed, mobile and related satellite services
- Disaster relief – Amateur, broadcast, fixed, mobile and related satellite services

Disaster prediction and detection

Meteorological and Earth exploration satellite services

- operated in the main by government and international agencies
- play a major role in prediction and detection of disasters (such as hurricanes, earthquakes and tsunamis, floods, fires, dangerous pollution, etc.)

Disaster alerting

- Alert the central/regional/local authorities responsible for warning the public – fixed, mobile, fixed/mobile-satellite

- Issue warnings to the people likely to be affected
  - broadcast, sound and television
  - mobile (such as SMS)

Disaster relief

- Amateur – a long history of aiding with communications during disasters
- Earth exploration satellite – damage assessment
- Fixed/mobile satellite - to rapidly restore communications capabilities
- Fixed – transportable, higher capacity - point-to-point and local area
- Mobile – coordination of relief activities, both private and public systems used

ITU-R studies

WRC-03 agenda item 1.3

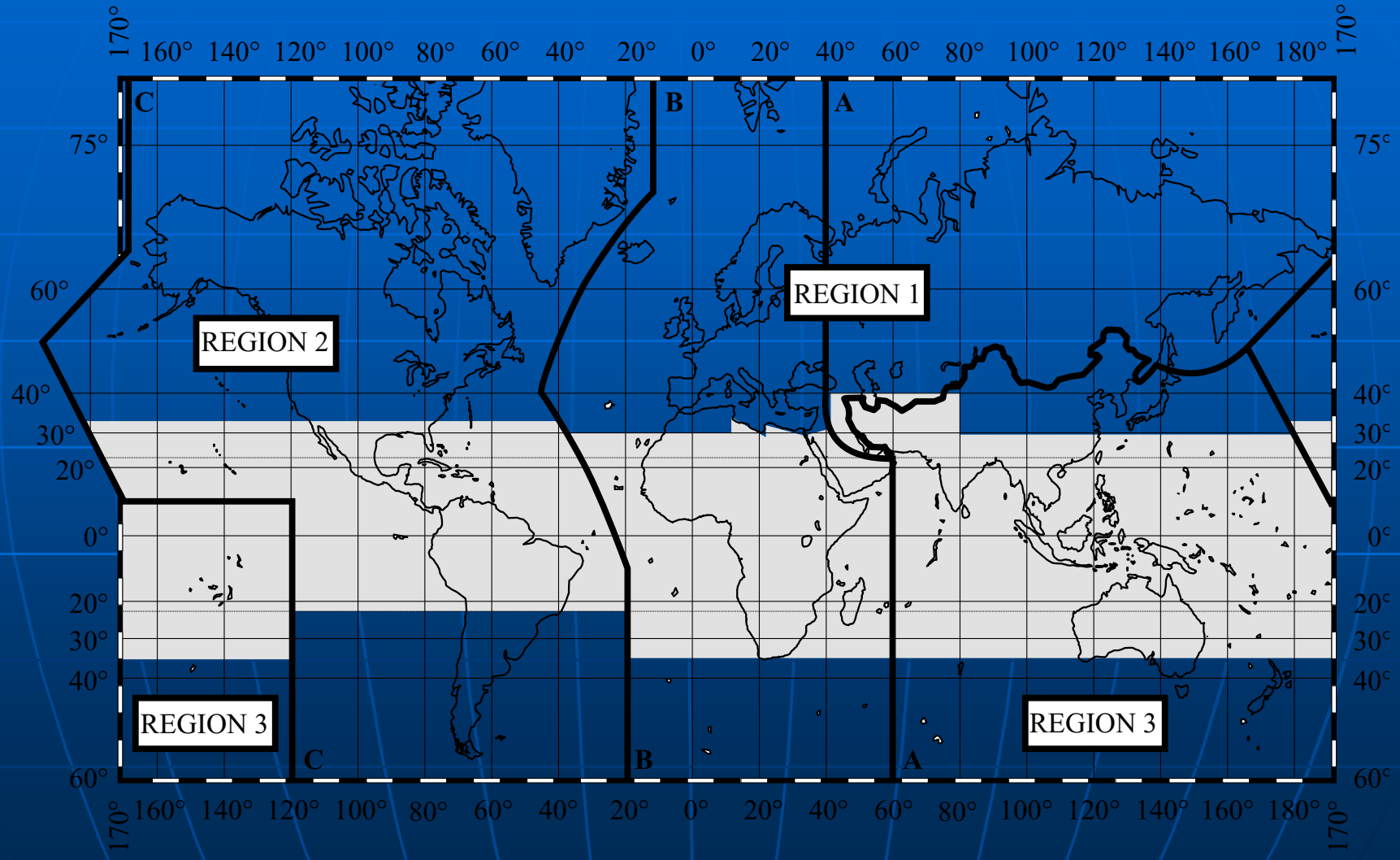
"… identification of globally/regionally harmonized bands … for the implementation of future advanced solutions …, including those dealing with emergency situations and disaster relief, …;"

Resolution 646 (WRC-03)

Strongly recommends use of regionally harmonized bands :

- Region 1: 380-470 MHz as the frequency range within which the band 380-385/390-395 MHz is a preferred core harmonized band for permanent public protection activities within certain countries of Region 1;
- Region 2: 746-806 MHz, 806-869 MHz, 4 940-4 990 MHz;
- Region 3: 406.1-430 MHz, 440-470 MHz, 806-824/851-869 MHz, 4 940-4 990 MHz and 5 850-5 925 MHz;

ITU Regions



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Resolution 646 (cont'd)

- Encourages administrations to facilitate cross-border circulation of radio equipment intended for use in disaster relief situations

- Invites ITU-R to continue its studies concerning technical and operational implementation and possible additional identification of other frequency ranges for certain countries in Region 1

Status of studies – global circulation

Recommendation ITU-R M.1637

"Global cross-border circulation of radiocommunication equipment in emergency and disaster relief situations"

Recommendation ITU-R M.1579

"Global circulation of IMT-2000 terminals"

- Recognize the importance of the needs of organizations dealing with disaster relief

Status of studies – needs of future systems

Report ITU-R M.2033

"Radiocommunication objectives and requirements for public protection and disaster relief (PPDR)"

- Defines objectives and needs for the implementation of future PPDR solutions
- Focuses on operational needs around 2010

Status of studies – Amateur involvement

Recommendation ITU-R M.1042-2

"Disaster communications in the amateur and amateur-satellite services"

- encourages the development of robust, flexible and independent amateur service and amateur-satellite service networks, capable of providing communications during disasters and relief operations

Future activities

- Study the protection and spectrum needs of advanced meteorological/Earth exploration satellite systems (WRC-07)
- Study implementation technologies for disaster alerting and disaster relief communications solutions
- Revise and update the Report on PPDR systems and characteristics in line with operational and technology developments

Summary

- Regionally harmonized frequency bands have been identified for disaster relief operations
- Studies are continuing regarding the development of meteorological and Earth exploration services
- Further studies are required on advanced technical and operational solutions for disaster alerting and disaster relief communications

Thank you

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