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| **World Radiocommunication Conference (WRC-15) Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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| PLENARY MEETING | **Addendum 3 to Document 88-E** |
|  | **19 October 2015** |
|  | **Original: English** |
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| Israel (State of) | |
| Proposals for the work of the conference | |
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| Agenda item 1.3 | |

1.3 to review and revise Resolution **646** **(Rev.WRC‑12)** for broadband public protection and disaster relief (PPDR), in accordance with Resolution **648 (WRC‑12)**;

Introduction

WRC-15 Agenda Item 1.3 invites ITU-R to continue its technical studies and to make recommendations concerning technical and operational implementation, as necessary, for advanced solutions to meet the needs of public protection and disaster relief radiocommunication applications, taking into account the capabilities, evolution and any resulting transition requirements of the existing systems.

Israel supported these studies on the revision of Resolution 646 (Rev.WRC‑12) in accordance with Resolution 648 (WRC‑12) covered by related work of ITU-R Working Party 5A establishing Report ITU-R M.2377.

In order to provide this flexibility on the future handling of ranges and frequencies identified regionally for harmonized PPDR use, Israel proposes that Resolution 646 (Rev. WRC‑12) should consist of general frequency ranges covering the bands and frequencies currently contained in Resolution 646 (Rev. WRC‑12) and those as indicated by regional harmonization measures of PPDR at WRC-15, in addition.

Therefore Israel nominates the frequency range 694-894 MHz as part of the globally harmonized tuning range 700/800 MHz (694-894 MHz) and the frequency tuning range 380-470 and 694-862 MHz to be considered as a regional organization harmonization measure in region 1, to be taken into account by administrations for their PPDR operations.

Proposal

Israel proposes that Resolution 646 (Rev.WRC-12) be revised as follows:

MOD ISR/88A3/1

RESOLUTION 646 (Rev.WRC‑15)

Public protection and disaster relief

The World Radiocommunication Conference (Geneva, 2015),

considering

*a)* that the term “public protection radiocommunication” refers to radiocommunications used by responsible agencies and organizations dealing with maintenance of law and order, protection of life and property and emergency situations;

*b)* that the term “disaster relief radiocommunication” refers to radiocommunications used by agencies and organizations dealing with a serious disruption of the functioning of society, posing a significant widespread threat to human life, health, property or the environment, whether caused by accident, natural phenomena or human activity;

*c)* the growing telecommunication and radiocommunication needs of public protection agencies and organizations, including those dealing with emergency situations and disaster relief, that are vital to the maintenance of law and order, protection of life and property, disaster relief and emergency response;

*d)* that many administrations wish to promote interoperability and interworking between systems used for public protection and disaster relief (PPDR), both nationally and for cross-border operations in emergency situations and for disaster relief;

*e)* that legacy public protection and disaster relief systems are mostly narrow-band supporting voice and low data-rate applications or wideband with data rates below 1 Mbit/s, typically for systems with a channel bandwidths of 12.5 kHz to 150 kHz or less;

*f)* that, although narrow-band and wideband systems continue to be used for meeting PPDR requirements, many PPDR agencies have stated a need for broadband applications (with data rates in the order of 1-100 Mbit/s) for systems requiring larger channel bandwidths of 5 MHz and above based on International Mobile Telecommunications (IMT) technologies;

*g)* that some administrations have started using IMT technologies such as LTE and LTE-Advanced to meet the needs of their PPDR agencies for data and multimedia capabilities; and considering that Report ITU‑R M.2291 provides details of the capabilities of IMT technologies for meeting broadband PPDR requirements;

*h)* that continuing development of new technologies and systems such as International Mobile Telecommunications (IMT) and Intelligent Transportation Systems (ITS) may be able to support or supplement advanced public protection and disaster relief applications;

*i)* that disasters and emergency events require response not only from PPDR agencies but also from humanitarian agencies;

*j)* that some commercial terrestrial and satellite systems are complementing the dedicated systems in support of public protection and disaster relief;

*k)* that Resolution 36 (Rev. Guadalajara, 2010) of the Plenipotentiary Conference urges Member States Parties to the Tampere Convention to take all practical steps for the application of the Tampere Convention and to work closely with the operational coordinator as provided for therein;

*l)* that Recommendation ITU‑R M.1637 offers guidance to facilitate the global circulation of radiocommunication equipment in emergency and disaster relief situations;

*m)* that some administrations may have different operational needs and spectrum requirements for public protection and disaster relief applications depending on the circumstances;

*n)* that some administrations are of the view that additional spectrum needs to be identified to meet the growing needs of mobile broadband PPDR, including mobile multimedia applications;

*o)* that some administrations are of the view that common RF spectrum will enable efficient deployment and will ease coordination and harmonization between different PPDR agencies and will advance international aid during disasters and major events; and considering that, in addition to the benefits of scale production, regional harmonization will improve interoperability among first responders and will drive suitable devices and standards dedicated to broadband PPDR;

*p)* that the Tampere Convention on the Provision of Telecommunications Resources for Disaster Mitigation and Relief Operations (Tampere, 1998), an international treaty deposited with the United Nations Secretary-General and related United Nations General Assembly Resolutions and Reports are also relevant in this regard[[1]](#footnote-2)1,

recognizing

*a)* the benefits of spectrum harmonization such as:

– increased potential for interoperability;

– a broader manufacturing base and increased volume of equipment resulting in economies of scale and expanded equipment availability;

– improved spectrum management and planning; and

– enhanced cross-border coordination and circulation of equipment;

*b)* that the organizational distinction between public protection activities and disaster relief activities are matters for administrations to determine at the national level;

*c)* that national spectrum planning for public protection and disaster relief needs to have regard to cooperation and bilateral consultation with other concerned administrations, which should be facilitated by greater levels of spectrum harmonization;

*d)* the benefits of cooperation between countries for the provision of effective and appropriate humanitarian assistance in case of disasters, particularly in view of the special operational requirements of such activities involving multinational response;

*e)* the needs of countries, particularly the developing countries[[2]](#footnote-3)2, for low-cost communication equipment;

*f)* that the adoption of IMT should be encouraged for broadband PPDR because of the spectral and other operating efficiencies that these technologies offer;

*g)* that currently some bands or parts thereof have been designated for existing public protection and disaster relief operations[[3]](#footnote-4)3;

*h)* that in times of disasters, if most terrestrial-based networks are destroyed or impaired, amateur, satellite and other non‑ground-based networks may be available to provide communication services to assist in public protection and disaster relief efforts;

*i)* that the amount of spectrum needed for public protection on a daily basis can differ significantly between countries, that certain amounts of spectrum are already in use in various countries for narrow-band applications, and that in response to a disaster, access to additional spectrum on a temporary basis may be required;

*j)* that studies carried out indicate broadband PPDR spectrum bandwidth requirements vary to a significant extent between countries, regardless of whether the PPDR network is owned/operated by a government PPDR agency, commercial entity or a hybrid commercial/government solution;

*k)* that certain amounts of spectrum are already in use in various countries for narrowband applications, and that in response to a disaster, access to additional spectrum on a temporary basis may be required for narrowband PPDR operations;

*l)* that in order to achieve spectrum harmonization, a solution based on regional frequency ranges[[4]](#footnote-5)4 may enable administrations to benefit from harmonization while continuing to meet national planning requirements;

*m)* that not all frequencies within an identified common frequency range will be available within each country;

*n)* that the identification of a common frequency range within which equipment couldoperate may ease the interoperability and/or inter-working, with mutual cooperation and consultation, especially in national, regional and cross-border emergency situations and disaster relief activities;

*o)* that when a disaster occurs, the public protection and disaster relief agencies are usually the first on the scene using their day-to-day communication systems, but that in most cases other agencies and organizations may also be involved in disaster relief operations;

*p)* that some countries in Region 1 have identified certain parts of the frequency range 694 to 790 MHz for broadband PPDR deployments,

noting

*a)* that many administrations currently use certain frequency bands below 1 GHz for narrow-band and some for broadband public protection and disaster relief applications and some administrations also use certain frequency bands above 1 GHz for broadband PPDR applications;

*b)* that applications requiring large coverage areas and providing good signal availability would generally be accommodated in lower frequency bands and that applications requiring wider bandwidths would generally be accommodated in progressively higher bands;

*c)* that public protection and disaster relief agencies and organizations have an initial set of requirements, including but not limited to interoperability, secure and reliable communications, sufficient capacity to respond to emergencies, priority access in the use of non-dedicated systems, fast response times, ability to handle multiple group calls and the ability to cover large areas as described in Report ITU‑R M.2033, Report ITU‑R M.2291 and Report ITU‑R M.[2377];

*d)* that many administrations have made significant investments in public protection and disaster relief systems;

*e)* that flexibility must be afforded to disaster relief agencies and organizations to use current and future radiocommunications, so as to facilitate their humanitarian operations;

*f)* that broadband PPDR services can be realized and deployed in the frequency bands identified for IMT,

emphasizing

*a)* that the frequency bands identified in this Resolution are allocated to a variety of services in accordance with the relevant provisions of the Radio Regulations and are currently used intensively by the fixed, mobile, mobile satellite and broadcasting services;

*b)* that some administrations are of theviewthat only some of the frequency bands/ranges identified in *resolves* 2 and 3 of this Resolution are suitable for supporting broadband PPDR applications;

*c)* that flexibility must be afforded to administrations:

– to determine, at national level, how much spectrum to make available for public protection and disaster relief from the bands identified in this Resolution in order to meet their particular national requirements;

– to have the ability for bands identified in this Resolution to be used by all services having allocations within those bands according to the provisions of the Radio Regulations, taking into account the existing applications and their evolution;

– to determine the need and timing of availability as well as the conditions of usage of the bands identified in this Resolution for public protection and disaster relief in order to meet specific national situations,

resolves

1 to strongly recommend administrations to use globally and/or regionally harmonized bands for public protection and disaster relief to the maximum extent possible, taking into account the national and regional requirements and also having regard to any needed consultation and cooperation with other concerned countries;

2 to encourage administrations, in all regions to consider the 694-894 MHz frequency tuning ranges[[5]](#footnote-6)3 as described in the most recent version of ITU‑R M.2015, or parts thereof, for the provision of PPDR solutions in order to achieve global harmonization;

3 to encourage administrations to consider the following regionally harmonized frequency tuning ranges, or parts thereof, for their planned and future PPDR operations:

– in Region 1: 380-470 MHz 694-862 MHz;

– in Region 2: 4 940-4 990 MHz;

– in Region 3: 406.1-430 MHz, 440-470 MHz, 4 940‑4 990 MHz;

4 that specific information on the frequency arrangements for public protection and disaster relief in these ranges, as well as the specific details of the Regions and/or administrations be described in Recommendation ITU‑R M.2015;

5 that the inclusion of frequency ranges for public protection and disaster relief in this Resolution, as well as the inclusion of frequency arrangements for PPDR operations in these frequency ranges, as described in the most recent version of Recommendation ITU‑R M.2015, does not preclude the use of these bands/frequencies by any application within the services to which bands/frequencies are allocated and does not preclude the use of nor establish priority over any other frequencies for public protection and disaster relief in accordance with the Radio Regulations;

6 to encourage administrations, in emergency and disaster relief situations, to satisfy temporary needs for frequencies in addition to what may be normally provided for in agreements with the concerned administrations;

7 that administrations encourage PPDR agencies and organizations to utilize both existing and new technologies and solutions, to the extent practicable, to satisfy interoperability requirements and to further the goals of public protection and disaster relief;

8 to encourage administrations to facilitate cross-border circulation of radiocommunication equipment intended for use in emergency and disaster relief situations through mutual cooperation and consultation without hindering national legislation;

9 that administrations encourage public protection and disaster relief agencies and organizations to utilize relevant ITU‑R Recommendations and Reports in planning spectrum use and implementing technology and systems supporting public protection and disaster relief;

10 to encourage administrations to continue to work closely with their public protection and disaster relief community to further refine the operational requirements for public protection and disaster relief activities;

11 that manufacturers should be encouraged to take this Resolution into account in future equipment designs, including the need for administrations to operate within different parts of the identified bands,

invites ITU‑R

1 to continue its technical studies and to make recommendations concerning technical and operational implementation, as necessary, for advanced solutions to meet the needs of public protection and disaster relief radiocommunication applications, taking into account the capabilities, evolution and any resulting transition requirements of the existing systems, particularly those of many developing countries, for national and international operations;

2 to review and, as appropriate, revise Recommendation ITU‑R M.2015 and other relevant ITU‑R Recommendations and Reports.

**Reasons:** The aim of the revision of Resolution 646 is to identify in the preferred frequency bands/ranges for legacy and broadband PPDR systems taking into account the rapid increase in demand to broadband PPDR systems and applications.

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1. 1 The Working Group on Emergency Telecommunications (WGET), convened by the United Nations Office for Humanitarian Affairs (OCHA), is an open forum to facilitate the use of telecommunications in the service of humanitarian assistance comprising United Nations entities, major non-governmental organizations, the International Committee of the Red Cross (ICRC), ITU and experts from the private sector and Academia. [↑](#footnote-ref-2)
2. 2 Taking into account, for example, the ITU‑D Handbook on disaster relief. [↑](#footnote-ref-3)
3. 3 3-30, 68-88, 138-144, 148-174, 380-400 MHz (including CEPT designation of 380-385/390-395 MHz), 400-430, 440-470, 764-776, 794-806 and 806-869 MHz (including 806-811, 821-824, 851-856, 866-869 MHz and CITEL designation of 821-824/866-869 MHz). [↑](#footnote-ref-4)
4. 4 In the context of this Resolution, the term “frequency range” means a range of frequencies over which a radio equipment is envisaged to be capable of operating but limited to specific frequency band(s) according to national conditions and requirements. [↑](#footnote-ref-5)
5. 3 In the context of this Resolution, the term “frequency tuning range” means a range of frequencies over which radio equipment is envisaged to be capable of operating but limited to specific frequency band(s) according to national conditions and requirements. [↑](#footnote-ref-6)