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Indonesia (Republic of)

**preliminary views on WRC-19 agenda items 1.13, 9.1 (9.1.8)**

**Agenda Item 1.13:**

*to consider identification of frequency bands for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution* ***238******(WRC-15).***

**1. Background**

International Mobile Telecommunications (IMT) systems have contributed to global economic and social development of both developed and developing countries. IMT systems are now being evolved to provide diverse usage scenarios and applications such as enhanced mobile broadband (eMBB), massive machine-type (mMTC) and ultra-reliable and low-latency communications (URLLC) requiring larger contiguous blocks of spectrum than currently available as described in Recommendation ITU-R M.2083.

Adequate and timely availability of spectrum with appropriate regulatory provisions, as well as improved technologies, are essential to support the future growth of IMT. Harmonized worldwide frequency bands and harmonized frequency arrangements for these systems are highly desirable in order to facilitate global roaming and the benefits of economies of scale.

Resolution **238 (WRC-15)** calls for studies to determine the spectrum needs for the terrestrial component of IMT in the frequency range between 24.25 GHz and 86 GHz, as well as sharing and compatibility studies, taking into account the protection of services to which the band is allocated on a primary basis, for the frequency bands:

– 24.25-27.5 GHz, 37-40.5 GHz, 42.5-43.5 GHz, 45.5-47 GHz, 47.2-50.2 GHz, 50.4-52.6 GHz, 66-76 GHz and 81-86 GHz, which have allocations to the mobile service on a primary basis; and

– 31.8-33.4 GHz, 40.5-42.5 GHz and 47-47.2 GHz, which may require additional allocations to the mobile service on a primary basis.

With respect to the studies on spectrum needs, the results are documented in Section 2/1.13/3.1 to Document CPM19-2/1 (Draft CPM Report). With respect to the sharing and compatibility studies, the results are documented in Section 2/1.13/3.2 to Document CPM19-2/1 (Draft CPM Report) and for the details are explained in the Annexes to [Document 5-1/478 (Revision 2)](https://www.itu.int/md/R15-TG5.1-C-0478/en).

**2. Preliminary Views**

Indonesia is of the view that the bands mentioned below can be considered as possible candidate bands for global or regional identification of IMT, including possible additional allocation to the mobile service on a primary basis:

* 24.25-27.5 GHz;
* 37-40.5 GHz;
* 40.5-42.5 GHz and
* 42.5-43.5 GHz.

In Indonesia, the frequency band 31.8-33.4 GHz is currently used for Fixed Service (FS).

**Agenda Item 9.1 (issue 9.1.8):**

*Studies on the technical and operational aspects of radio networks and systems, as well as spectrum needed, including possible harmonized use of spectrum to support the implementation of narrowband and broadband machine-type communication infrastructures, in order to develop Recommendations, Reports and/or Handbooks, as appropriate, and to take appropriate actions within the ITU Radiocommunication Sector (ITU-R) scope of work.*

**1. Background**

Machine-type communications (MTC) are penetrating our daily life and promising to deliver a more convenient, intelligent and hyper-connectivity world. MTC is expanding with a rapid speed and has tremendous market potential. There are many kinds of services and applications of MTC with diversified requirements targeting different market segments, such as asset tracking, smart home, video surveillance, etc. posing distinct challenges in terms of coverage, power consumption, cost, data rate etc.

APT Preliminary View on APG19-3 support studies on the technical and operational aspects of radio networks and systems, as well as spectrum needed, including possible harmonized use of spectrum to support the implementation of narrowband and broadband machine-type communication infrastructures, in order to develop Recommendations, Reports and/or Handbooks, as appropriate, and to take appropriate actions within the ITU Radiocommunication Sector (ITU-R) scope of work, in accordance with Resolution **958 (WRC-15)**. APT Members are of the view that the possible harmonized use of spectrum to support MTC can be achieved through ITU-R Recommendations/Reports and there is no need to make any changes to the Radio Regulations nor for any identification of spectrum to support MTC.

ITU-R studies of the current and future spectrum use for narrowband and broadband MTC, performed as expressed in Resolution 958 (WRC-15), concluded that there is no need to take any regulatory action in the Radio Regulations with respect to specific spectrum for the use of those applications in the Radio Regulations. Nonetheless, there may be other ways to address the harmonized use of spectrum to support the implementation of narrowband and broadband MTC.

Possible example(s) of the potential harmonized use of IMT-based MTC, based on IMT frequency arrangements provided by Recommendation ITU-R M.1036, can be found in PDN Report ITU-R M.[IMT.MTC] and for non-IMT technologies in PDN Report ITU-R M.[NON\_IMT.MTC\_USAGE].

**2. Preliminary Views**

Indonesia supports studies on the technical and operational aspects of radio networks and systems, as well as spectrum needed, including possible harmonized use of spectrum to support the implementation of narrowband and broadband Machine-Type Communication (MTC) infrastructures. The potential harmonized spectrum usage of MTC could be further accomplished through the course of the work in ITU-R Study Groups including the development of ITU-R Recommendations, Reports and/or Handbooks, as appropriate.

Indonesia is of the view that IMT-based MTC could use the frequency bands that are already identified to IMT. For non-IMT technologies, it can be considered to use Radio Local Area Network (RLAN) technologies to support MTC applications. The harmonized use of existing spectrum used by RLAN systems at suitable power levels provides economies of scale to facilitate the deployment of non-IMT MTC ecosystems in a timely and cost-effective manner.

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