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| **World Radiocommunication Conference (WRC-15) Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
|  |  |
| PLENARY MEETING | **Addendum 1 to Document 107-E** |
|  | **19 October 2015** |
|  | **Original: English** |
|  | |
| India (Republic of) | |
| Proposals for the work of the conference | |
|  | |
| Agenda item 1.1 | |

1.1 to consider additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) and related regulatory provisions, to facilitate the development of terrestrial mobile broadband applications, in accordance with Resolution **233 (WRC‑12)**;

Introduction

Administration of India considers that while identifying additional frequency bands for IMT, it is important to ensure protection to the existing services and to the services for which allocations exist in accordance with the Radio regulations. Taking this into account, India supports Method A (NOC to the Radio regulations) for the following frequency bands under this agenda item:

• 1 350-1 400 MHz, 1 518-1 525 MHz, 1 695-1 710 MHz, 2 700-2 900 MHz, 3 600‑3 700 MHz, 3 700-3 800 MHz, 3 800-4 200 MHz, 4 500‑4 800 MHz, 5 350-5 470 MHz, 5 725‑5 850 MHz, and 5 925‑6 425 MHz.

India supports additional identification of IMT for the following frequency bands under this agenda item:

• 1 427-1 452 MHz, 1452-1492 MHz, 1 492-1 518 MHz and 3 300 -3 400 MHz; 3 400 – 3 600 MHz

Proposals

IND/107A1/1

3 300-3 400 MHz

In accordance with provision No.5.429 the frequency band 3300-3400 MHz is allocated for fixed and mobile services to some countries including India on primary basis.

Indian Administration supports allocation to mobile service on primary basis and identification for IMT in the band 3 300-3 400 MHz, in response to agenda item 1.1 to enable use of this band for IMT.

**Reasons:** The identification of 3 300-3 400 MHz band for IMT would achieve the objective of development of eco-system for implementation of IMT.

IND/107A1/2

3 400-3 600 MHz

In accordance with RR 5.432B (WRC-07), in seven countries of the Region 3 including India, the frequency band 3 400-3 500 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis, subject to agreement obtained under No. 9.21 with other administrations and is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations.

Further, in accordance with provision 5.433A(WRC-07) of Radio Regulations, the frequency band 3 500-3 600 MHz is identified for International Mobile Telecommunications (IMT) to these seven countries of Region 3 and at the stage of coordination the provisions of Nos. 9.17 and 9.18 also apply.

Indian Administration supports allocation to mobile service on primary basis and identification for IMT in the band 3 400-3 600 MHz in Region 3, in response to agenda item 1.1 to enable use of this band for IMT as regionally harmonized band.

**Reasons:** The regional harmonization of 3400-3600 MHz band would achieve the objective of development of eco-system for implementation of IMT.

Proposals in the other frequency bands are given below.

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations  
(See No. 2.1)

NOC IND/107A1/3

1 300-1 525 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 1 350-1 400  FIXED  MOBILE  RADIOLOCATION  5.149 5.338 5.338A 5.339 | 1 350-1 400  RADIOLOCATION 5.338A  5.149 5.334 5.339 | |

**Reasons:** NOC is proposed for the frequency band 1 350-1 400 MHz. As indicated in section 1/1.1/4.1.2.4 of the CPM Report, all studies carried out were based on the parameters provided by ITU-R and show that within the same geographical area co-frequency operation of mobile broadband systems and radar is not feasible. Furthermore, there is widespread usage of this frequency range in some countries for radar. In addition, harmonized usage of all or a portion of this frequency range by the MS for the implementation of IMT may not be feasible, in particular on a global basis.

MOD IND/107A1/4

1 300-1 525 MHz

|  |  |  |  |
| --- | --- | --- | --- |
| Allocation to services | | | |
| Region 1 | Region 2 | | Region 3 |
| 1 427-1 429 SPACE OPERATION (Earth-to-space)  FIXED  MOBILE except aeronautical mobile ADD 5.A11  MOD 5.338A 5.341 | | | |
| 1 429-1 452  FIXED  MOBILE except aeronautical mobile ADD 5.A11  MOD 5.338A 5.341 5.342 | | 1 429-1 452  FIXED  MOBILE 5.343 ADD 5.A11  MOD 5.338A 5.341 | |

**Reasons:** To identify the frequency band 1 427-1 452 MHz for IMT. This band is already allocated to the mobile service on a primary basis in three ITU Regions and is expected to provide globally harmonized spectrum for IMT.

ADD IND/107A1/5

5.A11 The band 1 427-1 452 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations.     (WRC‑15)

**Reasons:** To identify the frequency band 1 427-1 452 MHz for IMT in three ITU Regions.

MOD IND/107A1/6

5.338A In the bands 1 350-1 400 MHz, 1 427-1 452 MHz, 22.55-23.55 GHz, 30-31.3 GHz, 49.7-50.2 GHz, 50.4-50.9 GHz, 51.4-52.6 GHz, 81-86 GHz and 92-94 GHz, Resolution **750 (Rev.WRC‑15)** applies.    (WRC‑15)

**Reasons:** To update Resolution 750 (Rev.WRC-12) with unwanted emission requirements for stations of IMT.

MOD IND/107A1/7

RESOLUTION 750 (Rev.WRC‑15)

Compatibility between the Earth exploration-satellite service (passive) and relevant active services

The World Radiocommunication Conference (Geneva, 2015),

considering

*a)* that primary allocations have been made to various space services such as the fixed-satellite service (Earth-to-space), the space operation service (Earth-to-space) and the inter-satellite service and/or to terrestrial services such as the fixed service, the mobile service and the radiolocation service, hereinafter referred to as “active services”, in bands adjacent or nearby to bands allocated to the Earth exploration-satellite service (EESS) (passive) subject to No. **5.340**;

*b)* that unwanted emissions from active services have the potential to cause unacceptable interference to EESS (passive) sensors;

*c)* that, for technical or operational reasons, the general limits in Appendix **3** may be insufficient in protecting the EESS (passive) in specific bands;

*d)* that, in many cases, the frequencies used by EESS (passive) sensors are chosen to study natural phenomena producing radio emissions at frequencies fixed by the laws of nature, and therefore shifting frequency to avoid or mitigate interference problems is not possible;

*e)* that the band 1 400-1 427 MHz is used for measuring soil moisture, and also for measuring sea-surface salinity and vegetation biomass;

*f)* that long-term protection of the EESS in the bands 23.6-24 GHz, 31.3-31.5 GHz, 50.2-50.4 GHz, 52.6-54.25 GHz and 86-92 GHz is vital to weather prediction and disaster management, and measurements at several frequencies must be made simultaneously in order to isolate and retrieve each individual contribution;

*g)* that, in many cases, the bands adjacent or nearby to passive service bands are used and will continue to be used for various active service applications;

*h)* that it is necessary to ensure equitable burden sharing for achieving compatibility between active and passive services operating in adjacent or nearby bands,

noting

*a)* that the compatibility studies between relevant active and passive services operating in adjacent and nearby bands are documented in Report ITU‑R SM.2092;

*b)* that the compatibility studies between IMT systems in the frequency bands 1 375- 1 400 MHz and 1 427-1 452 MHz and EESS (passive) systems in the 1 400-1 427 MHz frequency band are documented in Report ITU‑R RS.2336;

*c)* that Report ITU‑R F.2239 provides the results of studies covering various scenarios between the fixed service, operating in the frequency band 81-86 GHz and/or 92-94 GHz, and the Earth exploration-satellite service (passive), operating in the band 86-92 GHz;

*d)* that Recommendation ITU‑R RS.1029 provides the interference criteria for satellite passive remote sensing,

noting further

that, for the purpose of this Resolution:

− point-to-point communication is defined as radiocommunication provided by a link, for example a radio-relay link, between two stations located at specified fixed points;

− point-to-multipoint communication is defined as radiocommunication provided by links between a single station located at a specified fixed point (also called “hub station”) and a number of stations located at specified fixed points (also called “customer stations”),

recognizing

that studies documented in Report ITU-R SM.2092 do not consider point-to-multipoint communication links in the fixed service in the bands 1 350-1 400 MHz and 1 427-1 452 MHz,

resolves

1 that unwanted emissions of stations brought into use in the bands and services listed in Table 1‑1 below shall not exceed the corresponding limits in that table, subject to the specified conditions;

2 to urge administrations to take all reasonable steps to ensure that unwanted emissions of active service stations in the bands and services listed in Table 1‑2 below do not exceed the recommended maximum levels contained in that table, noting that EESS (passive) sensors provide worldwide measurements that benefit all countries, even if these sensors are not operated by their country;

3 that the Radiocommunication Bureau shall not make any examination or finding with respect to compliance with this Resolution under either Article **9** or **11**.

TABLE 1-1

|  |  |  |  |
| --- | --- | --- | --- |
| EESS (passive) band | Active service band | Active service | Limits of unwanted emission power from active service stations in a specified bandwidth within the EESS (passive) band1 |
| 23.6-24.0 GHz | 22.55-23.55 GHz | Inter-satellite | −36 dBW in any 200 MHz of the EESS (passive) band for non-geostationary (non-GSO) inter-satellite service (ISS) systems for which complete advance publication information is received by the Bureau before 1 January 2020, and −46 dBW in any 200 MHz of the EESS (passive) band for non-GSO ISS systems for which complete advance publication information is received by the Bureau on or after 1 January 2020 |
| 31.3-31.5 GHz | 31-31.3 GHz | Fixed (excluding HAPS) | For stations brought into use after 1 January 2012: −38 dBW in any 100 MHz of the EESS (passive) band. This limit does not apply to stations that have been authorized prior to 1 January 2012 |
| 50.2-50.4 GHz | 49.7-50.2 GHz | Fixed-satellite (E‑to‑s)2 | For stations brought into use after the date of entry into force of the Final Acts of WRC‑07:  −10 dBW into the 200 MHz of the EESS (passive) band for earth stations having an antenna gain greater than or equal to 57 dBi  −20 dBW into the 200 MHz of the EESS (passive) band for earth stations having an antenna gain less than 57 dBi |
| 50.2-50.4 GHz | 50.4-50.9 GHz | Fixed-satellite (E‑to‑s)2 | For stations brought into use after the date of entry into force of the Final Acts of WRC‑07:  −10 dBW into the 200 MHz of the EESS (passive) band for earth stations having an antenna gain greater than or equal to 57 dBi  −20 dBW into the 200 MHz of the EESS (passive) band for earth stations having an antenna gain less than 57 dBi |
| 52.6-54.25 GHz | 51.4-52.6 GHz | Fixed | For stations brought into use after the date of entry into force of the Final Acts of WRC‑07:  −33 dBW in any 100 MHz of the EESS (passive) band |
| 1 The unwanted emission power level is to be understood here as the level measured at the antenna port.  2 The limits apply under clear-sky conditions. During fading conditions, the limits may be exceeded by earth stations when using uplink power control. | | | |

TABLE 1-2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| EESS (passive) band | Active service band | | Active service | | | Recommended maximum level of unwanted emission power from active service stations in a specified bandwidth within the EESS (passive) band1 | |
| 1 400-1 427 MHz | 1 350-1 400 MHz | | Radiolocation2 | | | −29 dBW in the 27 MHz of the EESS (passive) band | |
| Fixed | | | −45 dBW in the 27 MHz of the EESS (passive) band for point-to-point | |
| Mobile | | | −60 dBW in the 27 MHz of the EESS (passive) band for mobile service stations except transportable radio-relay stations  −45 dBW in the 27 MHz of the EESS (passive) band for transportable radio-relay stations | |
| 1 427-1 429 MHz | | Space operation (E-to-s) | | | −36 dBW in the 27 MHz of the EESS (passive) band | |
| 1 427-1 429 MHz | | Mobile except aeronautical mobile | | | −60 dBW in the 27 MHz of the EESS (passive) band for mobile service stations except transportable radio-relay stations and IMT stations  −45 dBW in the 27 MHz of the EESS (passive) band for transportable radio-relay stations  −65 dBW in the 27 MHz of the EESS (passive) band for IMT mobile stations  −75 dBW in the 27 MHz of the EESS (passive) band for IMT base stations | |
| Fixed | | | −45 dBW in the 27 MHz of the EESS (passive) band for point-to-point | |
| 1 429-1 452 MHz | | Mobile | | | −60 dBW in the 27 MHz of the EESS (passive) band for mobile service stations except transportable radio-relay stations, aeronautical telemetry stations and IMT stations  −45 dBW in the 27 MHz of the EESS (passive) band for transportable radio-relay stations  −28 dBW in the 27 MHz of the EESS (passive) band for aeronautical telemetry stations4  −65 dBW in the 27 MHz of the EESS (passive) band for IMT mobile stations  −75 dBW in the 27 MHz of the EESS (passive) band for IMT base stations | |
| Fixed | | | −45 dBW in the 27 MHz of the EESS (passive) band for point-to-point | |
| 31.3-31.5 GHz | 30.0-31.0 GHz | | Fixed-satellite (E‑to‑s)5 | | | −9 dBW into the 200 MHz of the EESS (passive) band for earth stations having an antenna gain greater than or equal to 56 dBi  −20 dBW into the 200 MHz of the EESS (passive) band for earth stations having an antenna gain less than 56 dBi | |
| 86-92 GHz6 | | 81-86 GHz | | Fixed | −41 − 14(*f* − 86) dBW/100 MHz for 86.05 ≤ *f* ≤ 87 GHz  −55 dBW/100 MHz for 87 ≤ *f*≤ 91.95 GHz  where *f* is the centre frequency of the 100 MHz reference bandwidth expressed in GHz | |
| 92-94 GHz | | Fixed | −41 − 14(92 − *f*) dBW/100 MHz for 91 ≤ *f* ≤ 91.95 GHz  −55 dBW/100 MHz for 86.05 ≤ *f* ≤ 91 GHz  where *f* is the centre frequency of the 100 MHz reference bandwidth expressed in GHz | |
| 1 The unwanted emission power level is to be understood here as the level measured at the antenna port.  2 The mean power is to be understood here as the total power measured at the antenna port (or an equivalent thereof) in the band 1 400-1 427 MHz, averaged over a period of the order of 5 s.  4 The band 1 429-1 435 MHz is also allocated to the aeronautical mobile service in eight Region 1 administrations on a primary basis exclusively for the purposes of aeronautical telemetry within their national territory (No. **5.342**).  5 The recommended maximum levels apply under clear-sky conditions. During fading conditions, these levels may be exceeded by earth stations when using uplink power control.  6 Other maximum unwanted emission levels may be developed based on different scenarios provided in Report ITU-R F.2239 for the band 86-92 GHz. | | | | | | | |

**Reasons:** To ensure protection of EESS (passive) considering the dynamic nature of IMT stations stipulating the unwanted emission levels of IMT stations (–65 dBW/27MHz per IMT mobile stations and –75 dBW/27 MHz per IMT base station) as mandatory limits in Resolution 750 may be too stringent and excessive. Therefore it is preferred that these levels be stipulated as “recommended values” similar to other applications in the mobile service in the frequency bands   
1 427-1 452 MHz.

MOD IND/107A1/8

1 300-1 525 MHz

|  |  |  |  |
| --- | --- | --- | --- |
| Allocation to services | | | |
| Region 1 | Region 2 | | Region 3 |
| 1 452-1 492  FIXED  MOBILE except aeronautical mobile  BROADCASTING  BROADCASTING-SATELLITE 5.208B  5.341 5.342 5.345 | | 1 452-1 492  FIXED  MOBILE 5.343 ADD 5.XXY  BROADCASTING  BROADCASTING-SATELLITE 5.208B  5.341 5.344 5.345 | |

ADD IND/107A1/9

5.XXY The band 1 452-1 492 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution **XXX**. This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations.     (WRC‑15)

**Reasons:** The use of the L-band for mobile broadband/IMT services could be very beneficial in many markets to assist with wide area coverage and in-building coverage of mobile broadband services. The size of the proposed band will also substantially assist with meeting the future IMT capacity requirements. Further, it is also possible to envisage that this band could benefit from widespread economies of scale, if the band is underutilised and can be made available in many countries over a period of time.

MOD IND/107A1/10

1 300-1 525 MHz

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Allocation to services | | | | |
| Region 1 | Region 2 | | Region 3 | |
| 1 492-1 518  FIXED  MOBILE except aeronautical mobile ADD 5.B11  5.341 5.342 | | 1 492-1 518  FIXED  MOBILE 5.343 ADD 5.B11  5.341 5.344 | | 1 492-1 518  FIXED  MOBILE ADD 5.B11  5.341 |

**Reasons:** To identify the frequency band 1 492-1 518 MHz for IMT. This band is already allocated to the mobile service on a primary basis in three ITU Regions and is expected to provide globally harmonized spectrum for IMT.

ADD IND/107A1/11

5.B11 The band 1 492-1 518 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations.     (WRC‑15)

**Reasons:** To identify the frequency band 1 492-1 518 MHz for IMT in three ITU Regions.

NOC IND/107A1/12

1 300-1 525 MHz

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Allocation to services | | | | |
| Region 1 | Region 2 | | Region 3 | |
| 1 518-1 525  FIXED  MOBILE except aeronautical mobile  MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A  5.341 5.342 | | 1 518-1 525  FIXED  MOBILE 5.343  MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A  5.341 5.344 | | 1 518-1 525  FIXED  MOBILE  MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A  5.341 |

**Reasons:** NOC is proposed for the frequency band 1 518-1 525 MHz. As indicated in section 1/1.1/4.1.2.9 of the CPM Report, this frequency band is currently in use by GSO MSS operators (space-to-Earth links). In the case of co-channel sharing, geographic separation between IMT-Advanced stations and MES would be required to avoid harmful interference to MESs. The minimum separation distances range from 1 to 546 km in normal propagation conditions, and from 105 to 830 km in anomalous propagation conditions.

NOC IND/107A1/13

1 660-1 710 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 1 690-1 700  METEOROLOGICAL AIDS  METEOROLOGICAL-SATELLITE (space-to-Earth)  Fixed  Mobile except aeronautical mobile | 1 690-1 700  METEOROLOGICAL AIDS  METEOROLOGICAL-SATELLITE (space-to-Earth) | |
| 5.289 5.341 5.382 | 5.289 5.341 5.381 | |
| 1 700-1 710  FIXED  METEOROLOGICAL-SATELLITE (space-to-Earth)  MOBILE except aeronautical mobile | | 1 700-1 710  FIXED  METEOROLOGICAL-SATELLITE (space-to-Earth)  MOBILE except aeronautical mobile |
| 5.289 5.341 | | 5.289 5.341 5.384 |

**Reasons:** NOC is proposed for the frequency band 1 695-1 710 MHz. As indicated in section 1/1.1/4.1.3.1 of the CPM Report, there are hundreds of MetSat stations worldwide in the 1 695-1 710 MHz frequency band operated by almost all national meteorological services and many other users. According to the studies in ITU-R, sharing between IMT stations and MetSat stations in the 1 695-1 710 MHz frequency band is not feasible.

NOC IND/107A1/14

2 700-4 800 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 2 700-2 900 AERONAUTICAL RADIONAVIGATION 5.337  Radiolocation  5.423 5.424 | | |

**Reasons:** NOC is proposed for the frequency band 2 700-2 900 MHz. As indicated in section 1/1.1/4.1.5.1 of the CPM Report, all studies carried out by ITU-R show that within the same geographical area co-frequency operation of mobile broadband systems and radar is not feasible. Furthermore, there is widespread usage of this frequency range in some countries for radar. In addition, harmonized usage of all or a portion of this frequency range by the MS for the implementation of IMT may not be feasible, in particular on a global basis.

NOC IND/107A1/15

2 700-4 800 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| ... | ... | ... |
| 3 500-3 700  FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE except aeronautical mobile  Radiolocation 5.433 | ... |
| 3 600-4 200  FIXED  FIXED-SATELLITE (space-to-Earth)  Mobile | 3 600-3 700  FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE except aeronautical mobile  Radiolocation  5.435 |
|  | ... | |

**Reasons:** NOC is proposed for the frequency band 3 600-3 700 MHz. The use of this frequency band by FSS for space-to-Earth links is extensive. As indicated in section 1/1.1/4.1.8.2 of the CPM Report, when FSS earth stations are deployed in a typical ubiquitous manner or with no individual licensing, sharing between IMT-Advanced and the FSS is not feasible in the same geographical area since no minimum separation distance can be guaranteed.

NOC IND/107A1/16

2 700-4 800 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| ... | ... | ... |
| ... | ... |
| 3 600-4 200  FIXED  FIXED-SATELLITE (space-to-Earth)  Mobile | ... |
|  | 3 700-4 200  FIXED  FIXED-SATELLITE (space to-Earth)  MOBILE except aeronautical mobile | |

**Reasons:** NOC is proposed for the frequency band 3 700-3 800 MHz. The use of this frequency band by FSS for space-to-Earth links is extensive. As indicated in section 1/1.1/4.1.8.2 of the CPM Report, when FSS earth stations are deployed in a typical ubiquitous manner or with no individual licensing, sharing between IMT-Advanced and the FSS is not feasible in the same geographical area since no minimum separation distance can be guaranteed.

NOC IND/107A1/17

2 700-4 800 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| ... | ... | ... |
| ... | ... |
| 3 600-4 200  FIXED  FIXED-SATELLITE (space-to-Earth)  Mobile | ... |
|  | 3 700-4 200  FIXED  FIXED-SATELLITE (space to-Earth)  MOBILE except aeronautical mobile | |

**Reasons:** NOC is proposed for the frequency band 3 800-4 200 MHz. The use of this frequency band by FSS for space-to-Earth links is extensive. As indicated in section 1/1.1/4.1.8.2 of the CPM Report, when FSS earth stations are deployed in a typical ubiquitous manner or with no individual licensing, sharing between IMT-Advanced and the FSS is not feasible in the same geographical area since no minimum separation distance can be guaranteed.

NOC IND/107A1/18

2 700-4 800 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 4 500-4 800 FIXED  FIXED-SATELLITE (space-to-Earth) 5.441  MOBILE 5.440A | | |

**Reasons:** NOC is proposed for the frequency band 4 500-4 800 MHz. This frequency band is a part of Appendix 30B for FSS, which is envisaged and used as a supporting backbone to the telecommunication infrastructure of many developing countries, in particular those which are located in high rain fall zones/areas of the globe. As indicated in section 1/1.1/4.1.9.3 of the CPM Report, when FSS earth stations are deployed in a typical ubiquitous manner or with no individual licensing, sharing between IMT-Advanced and the FSS is not feasible in the same geographical area since no minimum separation distance can be guaranteed.

NOC IND/107A1/19

4 800-5 570 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 5 350-5 460 EARTH EXPLORATION-SATELLITE (active) 5.448B  RADIOLOCATION 5.448D  AERONAUTICAL RADIONAVIGATION 5.449  SPACE RESEARCH (active) 5.448C | | |
| 5 460-5 470 EARTH EXPLORATION-SATELLITE (active)  RADIOLOCATION 5.448D  RADIONAVIGATION 5.449  SPACE RESEARCH (active)  5.448B | | |

**Reasons:** NOC is proposed for the frequency band 5 350-5 470 MHz due to unresolved issues in ITU-R studies for this frequency band regarding (i) sharing between EESS (active) systems and RLANs and (ii) sharing between radar systems and RLANs as indicated in section 1/1.1/5.17 of the CPM Report.

NOC IND/107A1/20

5 570-7 250 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 5 725-5 830  FIXED-SATELLITE (Earth-to-space)  RADIOLOCATION  Amateur | 5 725-5 830  RADIOLOCATION  Amateur | |
| 5.150 5.451 5.453 5.455 5.456 | 5.150 5.453 5.455 | |
| 5 830-5 850  FIXED-SATELLITE (Earth-to-space)  RADIOLOCATION  Amateur  Amateur-satellite (space-to-Earth) | 5 830-5 850  RADIOLOCATION  Amateur  Amateur-satellite (space-to-Earth) | |
| 5.150 5.451 5.453 5.455 5.456 | 5.150 5.453 5.455 | |

**Reasons:** NOC is proposed for the frequency band 5 725-5 850 MHz due to unresolved issues in ITU-R studies for this frequency band to ensure protection of certain radars that operate across or in portions of the 5 250-5 850 MHz frequency range as indicated in section 1/1.1/5.18 of the CPM Report.

NOC IND/107A1/21

5 570-7 250 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 5 925-6 700 FIXED 5.457  FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B  MOBILE 5.457C  5.149 5.440 5.458 | | |

**Reasons:** NOC is proposed for the frequency band 5 925-6 425 MHz. The use of this frequency band by FSS for Earth-to-space links is extensive. As indicated in section 1/1.1/4.1.13.2 of the CPM Report, ITU-R studies concluded that sharing and compatibility between IMT-Advanced systems and FSS networks in 5 925-6 425 MHz frequency band is only feasible under certain conditions. These conditions include deployment of IMT Advanced systems only indoor and establishment of a limit on the maximum allowable e.i.r.p. for IMT-Advanced stations in this frequency range.

SUP IND/107A1/22

RESOLUTION 233 (WRC‑12)

Studies on frequency-related matters on International Mobile   
Telecommunications and other terrestrial   
mobile broadband applications

**Reasons:** Resolution 233 (WRC-12) does not need to be maintained as no further studies would be conducted under this Resolution.

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