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| **Radiocommunication Advisory GroupGeneva, 25-27 May 2020** | C:\Users\murphy\AppData\Local\Temp\Temp1_ITU logo Entire package.zip\jpg\ITU official logo_blue_RGB.jpg |
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|  | **Document RAG20/INFO/2-E** |
| **26 March 2020** |
| **English only** |
| Director, BR |
| ITU-R Objectives, outcomes and outputs for 2020-2023 |

This information document presents the outcome indicators of the Radiocommunication Sector for the last four years, in a similar format as presented in previous RAG meetings for information only. It complements the data in the ITU Draft Operational Plan presented in Section 2 of Part 2 of Document 10.

Objectives, outcomes and outputs for 2020-2023

The objectives will be met by achieving the related outcomes, through the implementation of the outputs. Sector and inter-sectoral objectives, in the context of the remit of each Sector and the GS, contribute to the overarching goals of the Union.

R.1 Meet, in a rational, equitable, efficient, economical, and timely way, the ITU membership's requirements for radio-frequency spectrum and satellite-orbit resources, while avoiding harmful interference.

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| Outcome  | Outcome Indicator  | 2016  | 2017  | 2018  | 2019  | Source   |
| R.1-1: Increased number of countries having satellite networks and earth stations recorded in the Master International Frequency Register (MIFR)  | Number of countries having satellite networks recorded in the MIFR  | 56  | 63  | 69  | 70  | BR/MIFR  |
| Number of countries having earth stations recorded in the MIFR  | 77  | 78  | 81  | 81  |
| Number of countries which registered satellite networks in the MIFR within the last 4-year period (\*Some satellite networks received in 2019 have not yet been published.)  | 50  | 54  | 55  | 51  |
| Number of countries which registered earth stations in the MIFR within the last 4-year period (\*\*Some earth stations received in 2019 have not yet been published.)  | 23  | 25  | 28  | 24\*\*  |
| R.1-2: Increased number of countries having terrestrial frequency assignments recorded in the MIFR  | Number of countries having terrestrial frequency assignments recorded in the MIFR  | 190  | 190  | 192  | 192  | BR/MIFR  |
| Number of countries which registered terrestrial assignments in the MIFR within the last 4-year period   | 79  | 81  | 81  | 89   |
| R.1-3: Timely processing of satellite and terrestrial assignments  |  Average processing time delay for satellite assignments (months)  | 0.07  | 1.51  | 1.34  | 0.24  | BR/MIFR  |
| Average processing time delay for terrestrial assignments (months)  | 0.66  | 3.12  | 2.8  | 2.9  | BR/MIFR  |
| R.1-4: Increased percentage of countries which have completed the transition to digital terrestrial television broadcasting  | Percentage of countries which have completed the transition to digital terrestrial television  | 28%  | 30%  | 30%  | 37%  | BR & BDT  |
| R.1-5: Increased percentage of spectrum assigned to satellite networks which is free from harmful interference   | % of spectrum assigned to satellite networks which is free from harmful interference  | 99.96%   | 99.96%  | 99.92%  | 99.95%  | BR/MIFR  |
| R.1-6: Increased percentage of assignments to terrestrial services recorded in the MIFR which are free from harmful interference  | Percentage of assignments to terrestrial services recorded in the Master Register which are free from harmful interference (based on the number of cases reported to the ITU)  | 99.99%  | 99.99%  | 99.99%  | 99.99%  | BR/MIFR  |

R.2 Provide for worldwide connectivity and interoperability, improved performance, quality, affordability, and timeliness of service and overall system economy in radiocommunications, including through the development of international standards

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| **Outcome**  | **Outcome Indicator**  | **2016**  | **2017**  | **2018**  | **2019**  | **Source**  |
| **R.2-1**: Increased mobile-broadband access, including in frequency bands identified for international mobile telecommunications (IMT)  | Number of subscriptions (bn)  | 7.51  | 7.81  | 7.91  | 8.30  | ITU BDT ICT Statistics  |
| % of mobile broadband subscriptions    | 51%  | 60%  | 67%  | 77%  |
| Number of subscribers (bn)  | 5.18  | 5.39  | 5.46  | 5.73  |
| **R.2-2**: Reduced mobile-broadband price basket, as a percentage of gross national income (GNI) per capita   | Mobile broadband price basket as percentage of GNI per capita (prepaid, handset 500 MB)  World  |  3.61  |  3.6  |  3.6  |  \*  | ITU BDT ICT Statistics \*Data will be available by the end of the 2Q 2020  |
| *Developed Countries*  | 0.65  | 0.6  | 0.6  | \*  |
| *Developing Countries*  | 4.6  | 4.8  | 4.8  | \*  |
| *Least Developed Countries*  | 9.21  | 10.4  | 10.4  | \*  |
| Number of countries with a price basket below 5%  | 150  | 145  | 139  | \*  |
| **R.2-3**: Increased number of households with digital terrestrial television reception  | Number of households with DTT (millions)  | 271.9  | 311  | 335  | \*\*  | Digital TV World Databook report; Digital TV Research Ltd \*Data will be available by the end of the 2Q 2020  |
| *Number of households with ATT (millions)*  | 184.1  | 136  | 104  | \*\*  |
| *Total number of households DTT + ATT (millions)*  | 456  | 447  | 439  | \*\*  |
| % of households with DTT  | 13.5%  | 14.90%  | 15.80%  | \*\*  |
| % of households with ATT  | 9.1%  | 6.50%  | 4.90%  | \*\*  |
| % of households with Terrestrial TV  | 22.6%  | 21.40%  | 20.80%  | \*\*  |
| **R.2-4**: Increased number of satellite transponders (equivalent 36 MHz) in operation and corresponding capacity (Tbit/s); Number of VSAT terminals; Number of households with satellite television reception  | Number of satellite transponders (equivalent 36 MHz) in operation   | 19772  | 25056  | 28765  | 31206  | Euroconsult (http://www.euroconsult-ec.com)  |
| Corresponding capacity (in Tbit/s)  | 1.491  | 1.978  | 2.546  | 2.866  | Euroconsult (http://www.euroconsult-ec.com)  |
| Number of VSATs (millions)  | 3.897  | 4.007  |  4.205  | 4.236  | Global VSAT Forum (https://gvf.org)  |
| Number of DTH (millions)  | 411.1  | 416  | 424  | \*  | Digital TV World Databook report; Digital TV Research Ltd \*Data will be available by the end of the 2Q 2020  |

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| **Outcome**  | **Outcome Indicator**  | **2016**  | **2017**  | **2018**  | **2019**  | **Source**  |
| **R.2-5**: Increased number of devices with radionavigation-satellite reception  | Number of operational GNSS constellations/satellites (the number of satellites may include several times the same operational satellite since more than one satellite network may support the operations of an actual satellite)  |  6/507  |  6/575  |  6/576  |  6/603  |  BR/MIFR  |
| Number of devices with GNSS embedded Rx (billions) †Estimates  | 5.0  | 5.8†  | 6.5†  | 6.4  | European GNSS Agency: GNSS Report  (https://www.gsa.europa.eu)  |
| **R.2-6**: Increased number of Earth exploration satellites in operation and corresponding number of countries operating Earth exploration satellites~~)~~  | Number of Earth exploration satellites (GSO/non-GSO systems/all satellites)  | 146/46/896  | 168/51/1020  | 179/52/1125  | 191/52/1176  | BR/MIFR  |
| Number of countries operating Earth exploration satellites  | 29  | 33  | 34  | 35  | BR/MIFR  |

R.3 Foster the acquisition and sharing of knowledge and know-how on radiocommunications

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| **Outcome**  | **Outcome Indicator**  | **2016**  | **2017**  | **2018**  | **2019**  | **Source**  |
| **R.3-1**: Increased knowledge and know-how on the Radio Regulations, Rules of Procedures, regional agreements, recommendations and best practices on spectrum use  | Number of ITU-R free online publication downloads (millions)   | 1.0  | 1.7  | 1.57  | 1.56  | Google Analytics  |
| Total number of events/participants in ITU seminars, workshops and capacity-building events (world and regional seminars, and symposiums) organized by BR   |  14/1523  |  19/857  |  11/815  |  5/634  | ITU Events Registration Database  |
| Number of technical assistances for terrestrial services provided/countries receiving /time spent (days) \* The change in method to calculate the number of technical assistances provided by the ITU makes comparison with previous numbers misleading.  |  \*  |  \*   |  \*  |  33/84/118  |  TSD  |
| **R.3-2**: Increased participation in ITU-R activities (including through remote participation), in particular by developing countries  | Total number of events/participants in ITU-R conferences, assemblies and Study Group-related meetings    | 48/6043  | 52/7050  | 47/6528  | 38/9679  | ITU-R Events Registration Database  |

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