# ITU-R Publications related to the Sustainable Development Goals (SDGs)

In response to Resolution ITU-R 61-2 "ITU-R's contribution in implementing the outcomes of the World Summit on the Information Society and the 2030 Agenda for Sustainable Development", the Radiocommunication Bureau continues to work on WSIS implementation and follow-up activities within its mandate as well as in achieving the Sustainable Development Goals (SDGs).

This document lists the ITU-R publications directly relevant to the specific SDGs.

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 1 – No poverty**<br>  <br><br>*Economic growth must be inclusive to provide sustainable jobs and promote equality.* | **Handbooks**<br>• ITU-R HDB-62 – Handbook on Global Trends in IMT<br><br>**Number of ITU-R publications:**<br>**Handbooks:** 1 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 2 – Zero Hunger**<br>  <br>*The food and agriculture sector offers key solutions for development, and is central for hunger and poverty eradication.* | **Recommendations**<br>• Recommendation ITU-R M.2083 – IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond<br>• Recommendation ITU-R M.2115 – Technical and operational characteristics of and protection criteria for aeronautical mobile systems operating in the 45.5-47 GHz frequency range<br>• Recommendation ITU-R RS.577 – Frequency bands and required bandwidths used for spaceborne active sensors operating in the Earth exploration-satellite (active) and space research (active) services<br>• Recommendation ITU-R RS.1744 – Technical and operational characteristics of ground-based meteorological aids systems operating in the frequency range 272-750 THz<br>• Recommendation ITU-R RS.1804 – Technical and operational characteristics of Earth exploration-satellite service (EESS) systems operating above 3 000 GHz<br>• Recommendation ITU-R RS.1883 – Use of remote sensing systems in the study of climate change and the effects thereof<br><br>**Reports**<br>• Report ITU-R M.2204 – Characteristics and spectrum considerations for sense and avoid systems use on unmanned aircraft systems<br>• Report ITU-R M.2224 – System design guidelines for wide area sensor and/or actuator network (WASN) systems<br>• Report ITU-R M.2440 – The use of the terrestrial component of International Mobile Telecommunications for narrowband and broadband machine-type communications<br>• Report ITU-R M.2441 – Emerging usage of the terrestrial component of International Mobile Telecommunication (IMT)<br>• Report ITU-R M.2458 – Radionavigation-satellite service applications in the 1 164-1 215 MHz, 1 215-1 300 MHz and 1 559-1 610 MHz frequency bands<br>• Report ITU-R RA.2259 – Characteristics of radio quiet zones<br>• Report ITU-R RS.2274 – Spectrum requirements for spaceborne synthetic aperture radar applications planned in an extended allocation to the Earth exploration-satellite service around 9 600 MHz<br>• Report ITU-R RS.2178 – The essential role and global importance of radio spectrum use for Earth observations and for related applications<br>• Report ITU-R SM.2045 – Spectrum management principles, challenges and issues related to dynamic access to frequency bands by means of radio systems employing cognitive capabilities<br>• Report ITU-R SM.2423 – Technical and operational aspects of low-power wide-area networks for machine-type communication and the Internet of Things in frequency ranges harmonised for SRD operation |
| | **Number of ITU-R publications:**<br>**Recommendations:** 6<br>**Reports:** 10 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 3 – Good health and well-being**<br>  <br>*Ensuring healthy lives and promoting the well-being for all at all ages is essential to sustainable development.* | **Handbooks**<br>• ITU-R HDB-33 – Handbook on HF broadcasting system design<br>• ITU-R HDB 41 – Handbook on Mobile-satellite service (MSS)<br>• ITU-R HDB 46 – Migration to IMT-2000 Systems Supplement 1 Handbook – Deployment of IMT-2000 Systems<br>• ITU-R HDB-57 – Handbook on Land Mobile – Volume 5 – Deployment of Broadband Wireless Access Systems<br>• ITU-R HDB-62 – Handbook on Global Trends in IMT<br><br>**Questions**<br>• Question ITU-R 239/1 – Electromagnetic field measurements to assess human exposure<br>• Question ITU-R 37-6/5 – Digital land mobile systems for specific applications<br><br>**Recommendations**<br>• Recommendation ITU-R BS.1698 – Evaluating fields from terrestrial broadcasting transmitting systems operating in any frequency band for assessing exposure to non-ionizing radiation<br>• Recommendation ITU-R BT.1702 – Guidance for the reduction of photosensitive epileptic seizures caused by television<br>• Recommendation ITU-R F.1490 – Generic requirements for fixed wireless access systems<br>• Recommendation ITU-R M.1787 – Description of systems and networks in the radionavigation-satellite service (space-to-Earth and space-to-space) and technical characteristics of transmitting space stations operating in the bands 1 164-1 215 MHz, 1 215-1 300 MHz and 1 559-1 610 MHz<br>• Recommendation ITU-R M.1822 – Framework for services supported by IMT<br>• Recommendation ITU-R M.2083 – IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond<br>• Recommendation ITU-R SM.1056 – Limitation of radiation from industrial, scientific and medical (ISM) equipment<br>• Recommendation ITU-R SM.1755 – Characteristics of ultra-wideband technology<br>• Recommendation ITU-R SNG.770 – Uniform operational procedures for digital satellite new gathering (DSNG)<br><br>**Reports**<br>• Report ITU-R BS.2037 – Evaluating fields from terrestrial broadcasting transmitting systems operating in any frequency band for assessing exposure to non-ionizing radiation<br>• Report ITU-R BT.2049 – Broadcasting of multimedia and data applications for mobile reception<br>• Report ITU-R BT.2293 – Principles for the comfortable viewing of stereoscopic three-dimensional television (3DTV) images<br>• Report ITU-R BT.2420 – Collection of usage scenarios and current statuses of advanced immersive audio-visual systems |

| SDG | Related ITU-R Publication(s) |
|---|---|
| | • Report ITU-R F.2086 – Technical and operational characteristics and applications of broadband wireless access in the fixed service<br>• Report ITU-R M.2038 – Technology trends<br>• Report ITU-R M.2072 – World mobile telecommunication market forecast<br>• Report ITU-R M.2218 – Traffic forecasts and estimated spectrum requirements for future development of the mobile-satellite service in the range 4-16 GHz<br>• Report ITU-R M.2224 – System design guidelines for wide area sensor and/or actuator network (WASN) systems<br>• Report ITU-R M.2243 – Assessment of the global mobile broadband deployments and forecasts for International Mobile Telecommunications<br>• Report ITU-R M.2320 – Future technology trends of terrestrial IMT systems<br>• Report ITU-R M.2377 – Radiocommunication objectives and requirements for Public Protection and Disaster Relief<br>• Report ITU-R M.2440 – The use of the terrestrial component of International Mobile Telecommunications for narrowband and broadband machine-type communications<br>• Report ITU-R M.2441 – Emerging usage of the terrestrial component of International Mobile Telecommunication (IMT)<br>• Report ITU-R M.2458 – Radionavigation-satellite service applications in the 1 164-1 215 MHz, 1 215-1 300 MHz and 1 559-1 610 MHz frequency bands<br>• Report ITU-R RA.2259 – Characteristics of radio quiet zones<br>• Report ITU-R SM.2180 – Impact of industrial, scientific and medical (ISM) equipment on radiocommunication services<br>• Report ITU-R SM.2212 – Impact of power line telecommunication systems on radiocommunication systems operating in the VHF and UHF bands above 80 MHz<br>• Report ITU-R SM.2405 – Spectrum management principles, challenges and issues related to dynamic access to frequency bands by means of radio systems employing cognitive capabilities<br>• Report ITU-R SM.2422 – Visible light for broadband communications |
| | **Number of ITU-R publications:**<br>**Handbooks:** 5<br>**Questions:** 2<br>**Recommendations:** 9<br>**Reports:** 20 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 4 – Quality education**<br>  <br>*Obtaining a quality education is the foundation to improving people's lives and sustainable development.* | **Handbooks**<br>• ITU-R HDB-33 – Handbook on HF broadcasting system design<br>• ITU-R HDB 46 – Migration to IMT-2000 Systems Supplement 1 Handbook – Deployment of IMT-2000 Systems<br>• ITU-R HDB-52 – Amateur and amateur-satellite services<br>• ITU-R HDB-57 – Handbook on Land Mobile – Volume 5 – Deployment of Broadband Wireless Access Systems<br>• ITU-R HDB-62 – Handbook on Global Trends in IMT<br><br>**Recommendations**<br>• Recommendation ITU-R BT.2075 – Integrated broadcast-broadband system<br>• Recommendation ITU-R F.1490 – Generic requirements for fixed wireless access systems<br>• Recommendation ITU-R M.1768 – Methodology for calculation of spectrum requirements for the terrestrial component of International Mobile Telecommunications<br>• Recommendation ITU-R M.1822 – Framework for services supported by IMT<br>• Recommendation ITU-R M.2047 – Detailed specifications of the satellite radio interfaces of International Mobile Telecommunications-Advanced (IMT-Advanced)<br>• Recommendation ITU-R M.2083 – IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond<br><br>**Reports**<br>• Report ITU-R BT.2003 – The harmonization of DTV standards between broadcast and non-broadcast applications<br>• Report ITU-R BT.2025 – Progress on development and implementation of interactivity in broadcasting systems and services<br>• Report ITU-R BT.2070 – Broadcasting of content protection signalling for television<br>• Report ITU-R F.2086 – Technical and operational characteristics and applications of broadband wireless access in the fixed service<br>• Report ITU-R M.2038 – Technology trends<br>• Report ITU-R M.2072 – World mobile telecommunication market forecast<br>• Report ITU-R M.2176 – Vision and requirements for the satellite radio interface(s) of IMT-Advanced |

| SDG | Related ITU-R Publication(s) |
|---|---|
| | • Report ITU-R M.2243 – Assessment of the global mobile broadband deployments and forecasts for International Mobile Telecommunications<br>• Report ITU-R M.2370 – IMT traffic estimates for the years 2020 to 2030<br>• Report ITU-R M.2398 – Scenarios and performance of an integrated MSS system operating in frequency bands below 3 GHz<br>• Report ITU-R SA.2312 – Characteristics, definitions and spectrum requirements of nanosatellites and picosatellites, as well as systems composed of such satellites<br>• Report ITU-R SM.2012 – Economic aspects of spectrum management<br>• Report ITU-R SM.2405 – Spectrum management principles, challenges and issues related to dynamic access to frequency bands by means of radio systems employing cognitive capabilities |
| | **Number of ITU-R publications:**<br>**Handbooks:** 5<br>**Recommendations:** 6<br>**Reports:** 13 |
| **SDG 5 – Gender equality**<br>  <br>*Gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world.* | **Handbooks**<br>• ITU-R HDB-62 – Handbook on Global Trends in IMT<br><br>**Resolutions**<br>• Resolution ITU-R 15-6 – Appointment and maximum term of office for Chairmen and Vice-Chairmen of Radiocommunication Study Groups, the Coordination Committee for Vocabulary and of the Radiocommunication Advisory Group |
| | **Number of ITU-R publications:**<br>**Handbooks:** 1<br>**Resolutions:** 1 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 6 – Clean water and sanitation**<br>  <br>*Clean, accessible water for all is an essential part of the world we want to live in.* | **Handbooks**<br>• ITU-R HDB-33 – Handbook on HF broadcasting system design<br><br>**Recommendations**<br>• Recommendation ITU-R P.527 – Electrical characteristics of the surface of the Earth<br><br>**Reports**<br>• Report ITU-R M.2136 – Theoretical analysis and testing results pertaining to the determination of relevant interference protection criteria of ground-based meteorological radars<br>• Report ITU-R M.2440 – The use of the terrestrial component of International Mobile Telecommunications for narrowband and broadband machine-type communications<br>• Report ITU-R M.2441 – Emerging usage of the terrestrial component of International Mobile Telecommunication (IMT)<br>• Report ITU-R RS.2178 – The essential role and global importance of radio spectrum use for Earth observations and for related applications<br>• Report ITU-R S.2365 – Assessment on use of spectrum in the 10-17 GHz band for the GSO fixed-satellite service in Region 1<br>• Report ITU-R S.2366 – Assessment on use of spectrum in the 13-17 GHz range for the GSO fixed-satellite service in Regions 2 and 3 |
| | **Number of ITU-R publications:**<br>**Handbooks:** 1<br>**Recommendations:** 1<br>**Reports:** 6 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 7 – Affordable and clean energy**<br>  <br>*Ensure access to affordable, reliable, sustainable and modern energy for all.* | **Recommendations**<br>• Recommendation ITU-R M.2083 – IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond<br><br>**Reports**<br>• Report ITU-R BT.2385 – Reducing the environmental impact of terrestrial broadcasting systems<br>• Report ITU-R M.2320 – Future technology trends of terrestrial IMT systems<br>• Report ITU-R M.2440 – The use of the terrestrial component of International Mobile Telecommunications for narrowband and broadband machine-type communications<br>• Report ITU-R M.2441 – Emerging usage of the terrestrial component of International Mobile Telecommunication (IMT)<br>• Report ITU-R M.2458 – Radionavigation-satellite service applications in the 1 164-1 215 MHz, 1 215-1 300 MHz and 1 559-1 610 MHz frequency bands<br>• Report ITU-R RS.2274 – Spectrum requirements for spaceborne synthetic aperture radar applications planned in an extended allocation to the Earth exploration-satellite service around 9 600 MHz<br>• Report ITU-R SM.2351 – Smart grid utility management systems<br>• Report ITU-R SM.2405 – Spectrum management principles, challenges and issues related to dynamic access to frequency bands by means of radio systems employing cognitive capabilities<br>• Report ITU-R SM.2423 – Technical and operational aspects of low-power wide-area networks for machine-type communication and the Internet of Things in frequency ranges harmonised for SRD operation |
| | **Number of ITU-R publications:**<br>**Recommendations:** 1<br>**Reports:** 9 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 8 – Decent work and economic growth**<br>  <br>*Sustainable economic growth will require societies to create the conditions that allow people to have quality jobs.* | **Handbooks**<br>• ITU-R HDB-57 – Handbook on Land Mobile – Volume 5 – Deployment of Broadband Wireless Access Systems<br>• ITU-R HDB-62 – Handbook on Global Trends in IMT<br>**Recommendations**<br>• Recommendation ITU-R M.2083 – IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond<br>• Recommendation ITU-R SM.1603 – Spectrum redeployment as a method of national spectrum management<br>• Recommendation ITU-R S.1878 – Multi-carrier based transmission techniques for satellite systems<br>**Reports**<br>• Report ITU-R BT.2385 – Reducing the environmental impact of terrestrial broadcasting systems<br>• Report ITU-R F.2323 – Fixed service use and future trends<br>• Report ITU-R M.2072 – World mobile telecommunication market forecast<br>• Report ITU-R M.2077 – Traffic forecasts Traffic forecasts and estimated spectrum requirements for the satellite component of IMT-2000 and systems beyond IMT-2000* for the period 2010 to 2020<br>• Report ITU-R M.2243 – Assessment of the global mobile broadband deployments and forecasts for International Mobile Telecommunications<br>• Report ITU-R M.2320 – Future technology trends of terrestrial IMT systems<br>• Report ITU-R M.2370 – IMT traffic estimates for the years 2020 to 2030<br>• Report ITU-R M.2411 – Requirements, evaluation criteria and submission templates for the development of IMT-2020<br>• Report ITU-R M.2412 – Guidelines for evaluation of radio interface technologies for IMT-2020<br>• Report ITU-R M.2441 – Emerging usage of the terrestrial component of International Mobile Telecommunication (IMT)<br>• Report ITU-R M.2458 – Radionavigation-satellite service applications in the 1 164-1 215 MHz, 1 215-1 300 MHz and 1 559-1 610 MHz frequency bands<br>• Report ITU-R M.2460 – Key elements for integration of satellite systems into Next Generation Access Technologies<br>• Report ITU-R S.2173 – Multi-carrier based transmission techniques for satellite systems<br>• Report ITU-R SM.2012 – Economic aspects of spectrum management<br>• Report ITU-R SM.2405 – Spectrum management principles, challenges and issues related to dynamic access to frequency bands by means of radio systems employing cognitive capabilities<br>• Report ITU-R SM.2351 – Smart grid utility management systems<br>• Report ITU-R SM.2353 – The challenges and opportunities for spectrum management resulting from the transition to digital terrestrial television in the UHF bands |
| | **Number of ITU-R publications:**<br>**Handbooks:** 2<br>**Recommendations:** 3<br>**Reports:** 17 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 9 –Industry, innovation and infrastructure**<br>  <br>*Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.* | **Recommendations**<br>• Recommendation ITU-R M.1308 – Evolution of land mobile systems towards IMT-2000<br>• Recommendation ITU-R M.2083 – IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond<br>• Recommendation ITU-R SM.2103 – Global harmonization of short-range devices categories<br><br>**Reports**<br>• Report ITU-R BT.2420 – Collection of usage scenarios and current statuses of advanced immersive audio-visual systems<br>• Report ITU-R M.2117 – Software-defined radio in the land mobile, amateur and amateur-satellite services<br>• Report ITU-R M.2243 – Assessment of the global mobile broadband deployments and forecasts for International Mobile Telecommunications<br>• Report ITU-R M.2330 – Cognitive radio systems in the land mobile service<br>• Report ITU-R M.2441 – Emerging usage of the terrestrial component of International Mobile Telecommunication (IMT)<br>• Report ITU-R M.2445 – Intelligent transport systems (ITS) usage<br>• Report ITU-R RS.2178 – The essential role and global importance of radio spectrum use for Earth observations and for related applications<br>• Report ITU-R SM.2012 – Economic aspects of spectrum management<br>• Report ITU-R SM.2015 – Methods for determining national long-term strategies for spectrum utilization<br>• Report ITU-R SM.2045 – Spectrum management principles, challenges and issues related to dynamic access to frequency bands by means of radio systems employing cognitive capabilities<br>• Report ITU-R SM.2093 – Guidance on the regulatory framework for national spectrum management<br>• Report ITU-R SM.2351 – Smart grid utility management systems<br>• Report ITU-R SM.2353 – The challenges and opportunities for spectrum management resulting from the transition to digital terrestrial television in the UHF bands<br>• Report ITU-R SM.2404 – Regulatory tools to support enhanced shared use of the spectrum |
| | **Number of ITU-R publications:**<br>**Recommendations:** 3<br>**Reports:** 14 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 10 – Reduced inequalities**<br>  <br>*To reduce inequalities, policies should be universal in principle, paying attention to the needs of disadvantaged and marginalized populations.* | **Recommendations**<br>• Recommendation ITU-R M.1041 – Future amateur radio systems<br>• Recommendation ITU-R M.2083 – IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond |
| | **Number of ITU-R publications:**<br>**Recommendations:** 2 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 11 – Sustainable cities and communities**<br>  <br>*There needs to be a future in which cities provide opportunities for all, with access to basic services, energy, housing, transportation and more.* | **Recommendations**<br>• Recommendation ITU-R SM.2103 – Global harmonization of short-range devices categories<br><br>**Reports**<br>• Report ITU-R M.2370 – IMT traffic estimates for the years 2020 to 2030<br>• Report ITU-R M.2415 – Spectrum needs for Public Protection and Disaster Relief (PPDR)<br>• Report ITU-R M.2440 – The use of the terrestrial component of International Mobile Telecommunications for narrowband and broadband machine-type communications<br>• Report ITU-R M.2441 – Emerging usage of the terrestrial component of International Mobile Telecommunication (IMT)<br>• Report ITU-R M.2458 – Radionavigation-satellite service applications in the 1 164-1 215 MHz, 1 215-1 300 MHz and 1 559-1 610 MHz frequency bands<br>• Report ITU-R SM.2422 – Visible light for broadband communications<br>• Report ITU-R SM.2423 – Technical and operational aspects of low-power wide-area networks for machine-type communication and the Internet of Things in frequency ranges harmonised for SRD operation<br><br>**Number of ITU-R publications:**<br>**Recommendations:** 1<br>**Reports:** 7 |
| **SDG 12 – Responsible Production and Consumption**<br>  <br>*Ensure responsible production and consumption patterns.* | **Reports**<br>• Report ITU-R BT.2385 – Reducing the environmental impact of terrestrial broadcasting systems<br><br>**Number of ITU-R publications:**<br>**Reports:** 1 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 13 – Climate action**<br>  <br>*Climate change is a global challenge that affects everyone, everywhere.* | **Questions**<br>• Question ITU-R 214-6/3 – Radio noise<br><br>**Recommendations**<br>• Recommendation ITU-R M.1874 – Technical and operational characteristics of oceanographic radars operating in sub-bands within the frequency range 3-50 MHz<br>• Recommendation ITU-R RS.577 – Frequency bands and required bandwidths used for spaceborne active sensors operating in the Earth exploration-satellite (active) and space research (active) services<br>• Recommendation ITU-R RS.1165 – Technical characteristics and performance criteria for systems in the meteorological aids service in the 403 MHz and 1 680 MHz bands<br>• Recommendation ITU-R RS.1624 – Sharing between the Earth exploration-satellite (passive) and airborne altimeters in the aeronautical radionavigation service in the band 4 200-4 400 MHz<br>• Recommendation ITU-R RS.1804 – Technical and operational characteristics of Earth exploration-satellite service (EESS) systems operating above 3 000 GHz<br>• Recommendation ITU-R RS.1883 – Use of remote sensing systems in the study of climate change and the effects thereof<br><br>**Reports**<br>• Report ITU-R BT.2299 – Broadcasting for public warning, disaster mitigation and relief<br>• Report ITU-R BT.2385 – Reducing the environmental impact of terrestrial broadcasting systems<br>• Report ITU-R M.2370 – IMT traffic estimates for the years 2020 to 2030<br>• Report ITU-R M.2377 – Radiocommunication objectives and requirements for Public Protection and Disaster Relief<br>• Report ITU-R RS.2068 – Current and future use of the band 13.25-13.75 GHz by spaceborne active sensors<br>• Report ITU-R RS.2178 – The essential role and global importance of radio spectrum use for Earth observations and for related applications<br>• Report ITU-R RS.2274 – Spectrum requirements for spaceborne synthetic aperture radar applications planned in an extended allocation to the Earth exploration-satellite service around 9 600 MHz<br>• Report ITU-R RS.2315 – Global survey of radio frequency interference levels observed by the Aquarius scatterometer at 1 260 MHz and Aquarius and soil moisture and ocean salinity radiometers at 1 413 MHz<br>• Report ITU-R S.2151 – Use and examples of systems in the fixed-satellite service in the event of natural disasters and similar emergencies for warning and relief operations<br>• Report ITU-R S.2365 – Assessment on use of spectrum in the 10-17 GHz band for the GSO fixed-satellite service in Region 1<br>• Report ITU-R S.2366 – Assessment on use of spectrum in the 13-17 GHz range for the GSO fixed-satellite service in Regions 2 and 3<br>• Report ITU-R SA.2427 – Studies on the suitability of existing allocations to the space operation service below 1 GHz and additional sharing studies on possible new and/or upgraded allocations |

| SDG | Related ITU-R Publication(s) |
|---|---|
| | • Report ITU-R SA.2429 – Studies related to proposed change in 460-470 MHz secondary allocation for METSAT (space-to-Earth) to primary and addition of primary allocation to EESS (space-to-Earth)<br>• Report ITU-R SM.2158 – Impact of power line telecommunication systems on radiocommunication systems operating below 80 MHz<br>• Report ITU-R SM.2351 – Smart grid utility management systems |
| | **Number of ITU-R publications:**<br>**Questions:** 1<br>**Recommendations:** 6<br>**Reports:** 15 |
| **SDG 14 – Life below water**<br>  <br>*Careful management of this essential global resource is a key feature of a sustainable future.* | **Handbooks**<br>• ITU-R HDB-55 – Handbook on Satellite time and frequency transfer and dissemination<br><br>**Questions**<br>• Question ITU-R 208-6/3 – Propagation factors in frequency sharing issues affecting space radiocommunication services and terrestrial services<br><br>**Recommendations**<br>• Recommendation ITU-R M.1653 – Operational and deployment requirements for wireless access systems including radio local area networks in the mobile service to facilitate sharing between these systems and systems in the Earth exploration-satellite service (active) and the space research service (active) in the band 5 470-5 570 MHz within the 5 460-5 725 MHz range<br>• Recommendation ITU-R RS.515 – Frequency bands and bandwidths used for satellite passive remote sensing<br>• Recommendation ITU-R RS.577 – Frequency bands and required bandwidths used for spaceborne active sensors operating in the Earth exploration-satellite (active) and space research (active) services<br>• Recommendation ITU-R RS.1166 – Performance and interference criteria for active spaceborne sensors<br>• Recommendation ITU-R RS.1624 – Sharing between the Earth exploration-satellite (passive) and airborne altimeters in the aeronautical radionavigation service in the band 4 200-4 400 MHz<br>• Recommendation ITU-R RS.1883 – Use of remote sensing systems in the study of climate change and the effects thereof<br>• Recommendation ITU-R RS.2017 – Performance and interference criteria for satellite passive remote sensing<br>• Recommendation ITU-R SA.1627 – Telecommunication requirements and characteristics of EESS and MetSat service systems for data collection and platform location |

| SDG | Related ITU-R Publication(s) |
|---|---|
| | **Reports**<br>• Report ITU-R F.2437 – Sharing and compatibility studies of HAPS systems in the fixed service for the frequency band 6 440-6 520 MHz<br>• Report ITU-R RS.2068 – Current and future use of the band 13.25-13.75 GHz by spaceborne active sensors<br>• Report ITU-R RS.2165 – Identification of degradation due to interference and characterization of possible interference mitigation techniques for passive sensors operating in the Earth exploration-satellite service (passive)<br>• Report ITU-R RS.2178 – The essential role and global importance of radio spectrum use for Earth observations and for related applications<br>• Report ITU-R RS.2315 – Global survey of radio frequency interference levels observed by the Aquarius scatterometer at 1 260 MHz and Aquarius and soil moisture and ocean salinity radiometers at 1 413 MHz<br>• Report ITU-R SA.2430 – Technical studies for establishing in-band power limits for earth stations operating in the frequency ranges 399.9-400.05 MHz and 401-403 MHz within the MSS, EESS and MetSat services |
| | **Number of ITU-R publications:**<br>**Handbooks:** 1<br>**Questions:** 1<br>**Recommendations:** 8<br>**Reports:** 6 |
| **SDG 15 – Life on land**<br>  <br>*Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and biodiversity loss.* | **Recommendations**<br>• Recommendation ITU-R M.2115 – Technical and operational characteristics of and protection criteria for aeronautical mobile systems operating in the 45.5-47 GHz frequency range<br>• Recommendation ITU-R RS.1804 – Technical and operational characteristics of Earth exploration-satellite service (EESS) systems operating above 3 000 GHz<br>• Recommendation ITU-R RS.1883 – Use of remote sensing systems in the study of climate change and the effects thereof<br><br>**Reports**<br>• Report ITU-R M.2458 – Radionavigation-satellite service applications in the 1 164-1 215 MHz, 1 215-1 300 MHz and 1 559-1 610 MHz frequency bands<br>• Report ITU-R RS.2165 – Identification of degradation due to interference and characterization of possible interference mitigation techniques for passive sensors operating in the Earth exploration-satellite service (passive)<br>• Report ITU-R RS.2178 – The essential role and global importance of radio spectrum use for Earth observations and for related applications |
| | **Number of ITU-R publications:**<br>**Recommendations:** 3<br>**Reports:** 3 |

| SDG | Related ITU-R Publication(s) |
|---|---|
| **SDG 16 – Peace, Justice and strong Institutions**<br>  <br>*Access to justice for all, and building effective, accountable institutions at all levels.* | **Recommendations**<br>• Recommendation ITU-R BT.2075 – Integrated broadcast-broadband system<br><br>**Reports**<br>• Report ITU-R BT.2049 – Broadcasting of multimedia and data applications for mobile reception<br>• Report ITU-R BT.2299 – Broadcasting for public warning, disaster mitigation and relief<br>• Report ITU-R M.2072 – World mobile telecommunication market forecast<br>• Report ITU-R M.2243 – Assessment of the global mobile broadband deployments and forecasts for International Mobile Telecommunications<br>• Report ITU-R M.2377 – Radiocommunication objectives and requirements for Public Protection and Disaster Relief<br>• Report ITU-R SM.2012 – Economic aspects of spectrum management |
| | **Number of ITU-R publications:**<br>**Recommendations:** 1<br>**Reports:** 6 |
| **SDG 17 – Partnerships for the Goals**<br>  <br>*Revitalize the global partnership for sustainable development.* | – |