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|  | **Document RAG/26-E** |
| **23 February 2021** |
| **Original: English** |
| Director, Radiocommunication Bureau |
| report TO the twenty-EIGHTH meeting of the radiocommunication advisory group |

# 1 Introduction

This document provides status reports and information on some of the issues that appear on the draft agenda for the 27th meeting of RAG (see [CA/250](https://www.itu.int/md/R00-CA-CIR-0250/en) of 17 December 2019). This document is intended to assist the meeting in considering the relevant agenda items.

Separate reports will be submitted for some of the agenda items.

# 2 Council issues

Due to the COVID-19 restrictions, the ITU Council did not hold physical meetings in 2020. Instead, there were two Virtual Consultations of Councillors (VCCs) that were held on 9-12 June 2020 and 16-20 November 2020. Each of those VCCs was followed by a consultation by correspondence on outcomes of the VCC discussions. This procedure allowed the ITU Council to take decisions without meeting physically.

This section covers ITU Council matters, and includes updates the issues addressed by the two VCCs held in 2020, their subsequent consultations by correspondence on the outcomes of those discussions and related actions (see: <https://www.itu.int/en/council/2020/Pages/default.aspx> ) Discussion of the Council’s consideration of the draft agenda of the 2023 World Radiocommunication Conference (WRC-23) is included in section 5 of this report.

## 2.1 Free on-line access to ITU-R Publications

ITU continues to publish flagship and various other publications in both print and digital/electronic versions. By Decision 12 (Guadalajara, 2010), PP-10 adopted a free online access policy to include, inter alia, ITU R Recommendations and Reports. This policy was expanded by Council 2012 Decision 571, revised by Council 2013 and 2014, and confirmed by PP-14 revised Decision 12, which provides free online access for the general public, on a permanent basis. Many publications were added to the free online access to disseminate information and reach out to a wider general public. These include major publications such as the Radio Regulations, Rules of Procedure, Recommendations, Basic Texts of the Union, WCIT Final Acts, Council Resolutions and Decisions, and ITU Handbooks, resulting in only Maritime Service Publications and a few other titles still for sale.

Furthermore, in response to requests from Member States, in particular developing countries, in January 2017 the free access policy has been extended by the BR Director to include all ITU-R Handbooks.

The impact of these Decisions is well reflected by the large number of downloads of these publications, as indicated in Section 8.1.4.

## 2.2 Cost recovery for satellite network filings

The Bureau introduced to the first Virtual Consultation of Councillors held from 9 to 12 June 2020 the *Report by the Secretary-General on Cost Recovery for the Processing of Satellite Network Filings* (see [Document C20/16](https://www.itu.int/md/S20-CL-C-0016/en)), which presented a status report on the implementation of cost recovery for satellite network filings pursuant to Decision 482 (modified 2019) and contained proposals for modifying that Decision that were either consequential to decisions taken by WRC-19 or required to address a specific case of satellite network filings not covered by the Decision.

As the Council was unable to hold its scheduled session in June 2020 and keeping in mind the fact that this item was urgent, because ITU would be unable to recover the costs of processing the abovementioned satellite filings unless Decision 482 were modified as proposed by the Bureau, the Virtual Consultation of Councillors concluded that a consultation by correspondence of Council Member States on the approval of a draft modified Decision 482 as contained in Document C20/16 (amended with a date of entry into force set on 1st September 2020) should be organized.

The consultation of Council Member States was conducted from 26 June to 31 July 2020 (see [Circular DM-20/1009](https://www.itu.int/md/S20-DM-CIR-01009/en)). As a result of this consultation, Council Member States approved the modified Decision 482 as contained in Annex 4 of [Circular DM-20/1011](https://www.itu.int/md/S20-DM-CIR-01011/en) of 3rdAugust 2020. This modified version of Council Decision 482 entered into force on 1stSeptember 2020.

The virtual consultation of councillors also proposed to the next physical meeting of the Council to formally note the report contained in Document C20/16.

## 2.3 Budget for 2020-2021 and draft budget for 2022-2023 periods

Council 2019 adopted through Resolution 1396 the following budget for the ITU-R in the 2020-2021 timeframe.

The draft biennial Budget of the Union for 2022-2023 was presented by the secretariat based on Decision 5 (Rev. Dubai, 2018) and associated guidelines during the Council Working Group on Financial and Human Resources (CWG-FHR) which was held on 25-26 January 2021.



The amount of the contributory unit to be paid by Member States of CHF 318,000 has been maintained resulting in zero nominal growth since 2016. Expenses and revenue are balanced without any withdrawal from the Reserve Account.

As in previous budgets, a five per cent vacancy rate has been applied which implies recruitment delays, part-time service and leave without pay. Nevertheless, the implementation of the vacancy rate will pose as a significant challenge in the management of vacant positions and the recruitment process. The draft budget for 2022-2023 was based on the programme of activities of the Union, which includes the holding of the 2023 World Radiocommunication Conference (WRC-23).

It was reported that ITU anticipates that for 2022-2023, cost recovery revenue will decrease by some CHF 5.8 million as compared to 2020-2021, mainly on account of a lower projection of sales revenue from the release of new publications planned for 2022-2023 and this will be partially offset by the projected increase in cost recovery revenue from Satellite Network Filings (SNF).

BR Director clarified the issue on the budgeted sales of publications for 2022-2023. He informed the group that ITU-R has not changed its schedule of major publications. If the budgeted revenue is less in 2022-2023 than in 2020-2021, it is in relation with the release of new publications in the years following WRC (new editions of five main publications released in 2020-2021, three main publications in 2022-2023 and returning to five main publications in 2024-2025). The secretariat indicated that there will be no significant savings if any, to be expected from this period. There are still some unknown elements that may affect the 2020 result, such as differed revenue, provision for repatriation to be estimated through an actuarial study, etc. In the event there are funds available, they would be prioritized to meet Decision 619 requirements for 2021, which amount to 735 K CHF. The final result of the 2020 budget implementation will be presented to the 2021 Council after the official closing of accounts, which is due by March 2021.

## 2.4 Request of Council Working Group on Languages (CWG-LANG) for RAG review and update of document C14/INF/4

In 2008, with the view of implementing the use of the six official languages on an equal footing within the available budget, as required by Resolution 154 of the Plenipotentiary Conference, the Advisory groups of the Sectors and the General Secretariat identified in detail the documents and publications which would be produced in the different languages, as set out in the tables in Annex 1 of document [C08/56](https://www.itu.int/md/S08-CL-C-0056/en), which were submitted to the Council for endorsement.

In 2014, a detailed review of these tables was conducted and resulted in the publication of document [C14/INF/4](https://www.itu.int/md/S14-CL-INF-0004/en), which has guided the work of the Secretariat as refers to translation and interpretation at ITU.

In its 10th meeting (October 2020), the Group on Study and Evaluation of the Translation Procedures, where all sectors and the General Secretariat are represented, agreed on the need for a review of the measures and principles for interpretation and translation (document [C14/INF/4](https://www.itu.int/md/S14-CL-INF-0004/en)), in order to:

1. update the publications section of [C14/INF/4](https://www.itu.int/md/S14-CL-INF-0004/en), as some of the publications had either been discontinued or replaced by others;
2. implement a common language policy for ITU Web as soon as it is available;
3. consider the possibilities made available by machine translation and remote interpreting;
4. seek some sort of correlation in translation and interpretation services, where relevant.

To this end, the Group approved an action plan with a view to submitting revised measures and principles for interpretation and translation to the 2022 meeting of the CWG-LANG. This action plan was described in §5 of [CWG-LANG/11/2](https://www.itu.int/md/S21-RCLCWGLANG11-C-0002/en), the Secretary General’s Report to the 11th meeting of CWG-LANG that was held on 5 February 2020.

According to such action plan, the Bureaux and the General Secretariat were requested to prepare a draft proposal for submission to the relevant Advisory Group. The proposals so approved would be compiled in an Annex to the SG Report to CWG-LANG (2022 meeting), for endorsement and submission to Council-22.

RAG-21 is invited to review and endorse the proposed update to the BR section of Annex 2 of [C14/INF/4](https://www.itu.int/md/S14-CL-INF-0004/en), which is presented in the Annex to this report.

## 2.5 BR Director's contribution to the Experts Group on International Telecommunication Regulations (EG-ITR)

This topic is presented in Addendum 2 to this document.

# 3 Implementation of WRC-19 decisions

## 3.1 Financial implications of WRC-19 decisions

The World Radiocommunication Conference (WRC-19) identified some areas of additional work, studies and development for the implementation of the decisions of the Conference. The estimated costs for the completion of these new tasks are in the magnitude of CHF 1,721 million. The estimated allocations are contained in **Table** **1**.

WRC-19 requested the Secretary-General to bring this to the attention of Council-20 session to discuss the most effective methodology for the funding of these activities as they should be concluded prior to the next World Radiocommunication Conference in 2023.

In light of the COVID-19 pandemic, there was no physical meeting of ITU Council in 2020. The first Virtual Consultation of Councillors (VCC-1), which was held on 9-12 June 2020, reviewed the requested funding for implementing the results of the WRC-19, which was presented to it in Document C20/56 of Council **(**<https://www.itu.int/md/S20-CL-C-0056/en>). The outcome of VCC-1 was that the councillors proposed to the next physical meeting of the Council to authorize the Secretary-General to take relevant measures as a matter of priority:

* to allocate funds from annual savings generated during budget implementation in 2020, or
* to call for voluntary contributions,
* but not to withdraw from the reserve account.

After the VCC-1 the ITU implementation forecast for 2020 indicated significant anticipated savings for the ITU-R budget in the magnitude of CHF 3 million. Recognizing that the Radiocommunication Sector was under pressure to implement WRC-19 post conference work that included some IT developments for a total of CHF 925’000 that had been supported by councillors during VCC-1. Therefore, the BR requested and the Secretary General approved, consistent with his budgetary authority, the use of a limited portion of the 2020 ITU-R budget for implementing the IT developments needed to implement the decisions of the WRC-19.

The funding for the remaining CHF 796’000 that WRC-19 estimated would be required for the preparatory work for specific WRC-23 Agenda Items has not been secured. In light of the virtualization of ITU-R Study Group and Working Party meetings, these estimates need to be reviewed and revised at an appropriate time when it is possible to project the return to physical meetings of ITU-R Study Groups and their Working Parties. Table 1 presents a report on the status of funding for the implementation of WRC-19 decisions.

Table 1

Summary of the Estimated costs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Related WRC-19 Decision(s)** | **Required Support.** | **Amount CHF** | **Totals****CHF** |
| Funded bythe use of2020ITU-BRbudget  | Resolution 35 (WRC-19) | Software development costs, with the assistance of external resources (new database to follow the non-GSO deployment and software to update the MIFR accordingly) | 340 000 |  |
| Resolution 169 (WRC-19)  | Software development costs | 85 000 |  |
| Modifications to RR Nos. 9.36, 9.53A, Appendices 30, 30A and 30B  | Software development costs | 200 000 |  |
| Various RR provisions and Resolutions related to WRC-19 Agenda item 1.6 (non-GSO FSS)RR Nos. 5.550C, 5.550E, 22.5L, 22.5M and Resolutions 769 (WRC-19) and 770 (WRC-19) | Software development costs (implementation of the new methodology, taking benefit of any potential reuse of existing developments)  | 150 000 |  |
| Various Resolutions related to WRC-19 Agenda item 1.14 (HAPS) Resolution 122 (Rev.WRC-19) and (WRC-19 Resolutions 165, 166, 167,168) | Software development costs, including the development of calculation modules for more than 30 technical conditions, changes in the Master Register database and filing structure according to modified RR Appendix 4, and design of dedicated notification user interface. | 150 000  |  |
|  | **Subtotal** |  |  | **925 000** |
| Yet to be funded, if necessary | Resolution 245 (WRC-19) – studies  | Organizational and meeting support  | 456 000 |  |
| Resolution 235 (WRC-15) – studies related to agenda item 1.5 for WRC‑23 | Organizational and meeting support | 340 000 |  |
| **Subtotal** |  |  | **796 000** |
|  | **Total** |  |  | **1 721 000** |

### 3.2 Software development to implement WRC-19 decisions

The BR is finalizing software design and development to implement WRC-19 decisions.

The following presents a summary of the main tasks finalized since the last report or remaining to be finalized.

### 3.2.1 Implementation of WRC-19 decisions relating to terrestrial services:

* Completion of the update of the software used for processing and publication of terrestrial notices, both for internal (TerRaSys) and external (BR IFIC (Terrestrial)) utilization, as a result of WRC-19 decisions and related Rules of Procedure. These include changes in the terrestrial databases, validation, and examination software, and reference tables for the frequency bands shared with space services, subject to RR No. 9.21, identified for IMT, etc.). All necessary changes were implemented and are now fully in production.
* Development of the software modules for processing HAPS notifications (validation, examination, and publication tools). This task also comprises the development of calculation modules for checking technical conditions specified Resolutions 122 (Rev. WRC-19), 145 (Rev. WRC-19), 165 (WRC-19), 166 (WRC-19), 167 (WRC-19), and 168 (WRC-19), as well as the corresponding changes in the database and filing structure.
* Development of the examination software for identification of affected administrations using digital elevation models (DEM) for several frequency bands and services.

### 3.2.2 Implementation of WRC-19 decisions relating to space services:

* Review and update of the software used for processing and publication of satellite network submissions, both for internal and external (BR IFIC (Space)) use. These include changes in the database, validation, and examination software modules, reference tables, resulting from WRC-19 decisions, and related Rules of Procedure.
* Due to the fact that certain changes adopted by WRC-19 entered into force immediately, an intermediate release of space services software (version 9) was released on IFIC 2926 (4 August 2020). The full set of changes related to WRC-19 shall be available in the first quarter of 2021 as version 9.1 of BR Space Software.
* A partial list of changes to space service software includes:
* Changes to SpaceCap to improve the usability of NGSO capture screens and fully align them with WRC-19 changes to Appendix 4;
* Implementation of the coordination agreements (list of satellite networks) for first notifications and resubmissions of notifications (in SpaceCap, e-Submission, SpacePub, and in BR internal processing);
* The first phase of the implementation of Resolution 35 (WRC-19) was released in production in January 2021 as part of the regular updates to the e-Submission web application (as described in section 7.3.2);
* Examination software for Frequency Overlap with respect to other Space Services (FOS) (as described in section 7.3.3);

### 3.2.3 Other actions to implement WRC-19 decisions

As instructed by the Conference, the Bureau compiled all decisions of WRC-19 that do not appear in the Final Acts but were reflected in the minutes of WRC-19 plenary sessions and published them in Circular Letter **CR/456** (28.02.2020).

The Bureau developed drafts for new or modified Rules of Procedure in order to reflect the WRC‑19 decisions. These drafts were considered by the RRB together with comments received from administrations and the corresponding Rules of Procedure were approved by the Board at its 84th and 85th meetings.

the Bureau made changes reflecting the WRC-19 decisions in the relevant documentation, including validation and examination rules, guidelines for administrations on the submission of frequency assignments and allotments, and the Preface to the terrestrial BR IFIC.

To inform the administrations of the Conference decisions and their impact, the Bureau issued Circular Letters **CR/455, CR/461, CR/464, CR/467,** and **CR/472** (09.12.2020) consolidating the most relevant Conference decisions.

The Bureau also started the review of findings of the frequency assignments recorded in the Master Register in the frequency bands for which the allocation situation was changed as a result of the WRC-19 decisions entered into force on 1 January 2021.

# 4 Study Groups activities

This topic is presented in Addendum 1 to this document.

# 5 WRC-23 agenda, dates and venue, and related preparations

The WRC-23 Agenda, as contained in Resolution **811 (WRC-19)**, was considered at the 2020 Virtual Consultation of Councillors (VCC) of the Council, which was invited to adopt a new Resolution containing that Agenda. The first VCC, held from 9-12 June 2020, adopted Council Resolution 1399 containing the Agenda for the World Radiocommunication Conference (WRC-23), which was subsequently approved by correspondence on 3 August 2020 (see Circular Letters [DM-20/1011](https://www.itu.int/md/S20-DM-CIR-01011/en) and [CL-20/33](https://www.itu.int/dms_pub/itu-s/md/20/sg/cir/S20-SG-CIR-0033%21%21PDF-E.pdf)).

The VCC was also informed that on 31 December 2019, the ITU received an expression of interest by the Administration of the United Arab Emirates to host the WRC-23 in the UAE (see [Document CL20/55](https://www.itu.int/md/S20-CL-C-0055/en)). In view of the UAE’s expression of interest to host the WRC‐23, the BR has been in communication with the Administration of UAE on the ITU requirements for hosting RA-23 and WRC-23. A future meeting of the Council will be requested to adopt a modification of Resolution 1399 so that it includes the exact date and precise location of the WRC‑23. In line with the relevant provisions of Nos. 47 and 118 of the Convention, that modified resolution of the Council on this matter will be subject to the concurrence of the majority of the Member States of ITU.

Further to the adoption of Council Resolution 1399, the CPM-23 Steering Committee met virtually (e-meeting) on 3 September 2020 to review the preparation of the draft CPM Report to WRC‑23. The other members of the CPM-23 Management Team (i.e., the Chairmen of the ITU‑R Study Groups and of the ITU‑R responsible groups) were also invited to attend this e-meeting. Taking into account the possibility of holding RA-23 and WRC‐23 in the last quarter of 2023, the deadlines stipulated in Resolution ITU‑R 2-8, and the availability of the CICG, the Second Session of CPM-23 (CPM23-2) was agreed to be planned during the second quarter of 2023[[1]](#footnote-2)\*[\*](https://euc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en-us&rs=en-us&wopisrc=https%3A%2F%2Fituint.sharepoint.com%2Fsites%2FRAG2021%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F0b76ce913e034045a2fd7b96636be9dc&wdenableroaming=1&mscc=1&hid=-2452&uiembed=1&uih=teams&hhdr=1&dchat=1&sc=%7B%22pmo%22%3A%22https%3A%2F%2Fteams.microsoft.com%22%2C%22pmshare%22%3Atrue%2C%22surl%22%3A%22%22%2C%22curl%22%3A%22%22%2C%22vurl%22%3A%22%22%2C%22eurl%22%3A%22https%3A%2F%2Fteams.microsoft.com%2Ffiles%2Fapps%2Fcom.microsoft.teams.files%2Ffiles%2F1672087694%2Fopen%3Fagent%3Dpostmessage%26objectUrl%3Dhttps%253A%252F%252Fituint.sharepoint.com%252Fsites%252FRAG2021%252FShared%2520Documents%252FGeneral%252F1.%2520Input%2520Contributions%2520(C)%2520from%2520BR%252FR20-RAG-C-0026_DirectorReport_draft.docx%26fileId%3D0b76ce91-3e03-4045-a2fd-7b96636be9dc%26fileType%3Ddocx%26ctx%3Dfiles%26scenarioId%3D2452%26locale%3Den-us%26theme%3Ddefault%26version%3D20201217029%26setting%3Dring.id%3Ageneral%26setting%3DcreatedTime%3A1612806394748%22%7D&wdorigin=TEAMS-ELECTRON.teams.files&wdhostclicktime=1612806394682&jsapi=1&jsapiver=v1&newsession=1&corrid=f904d8bb-3270-46ed-be7d-1e9e8275f744&usid=f904d8bb-3270-46ed-be7d-1e9e8275f744&sftc=1&sams=1&accloop=1&sdr=6&scnd=1&hbcv=1&htv=1&hodflp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Medium&ctp=LeastProtected#_ftn1). It was further decided that the final draft CPM texts from the responsible groups shall be received by the respective CPM-23 Chapter Rapporteurs, with a copy to CPM-23 Chairman and to the Bureau by 21 August 2022[[2]](#footnote-3)\*\*, at the latest, taking into account the planned dates of the responsible groups’ meetings. The meeting of the CPM‑23 Management Team has been planned to be held on 2 and 3 November 2022\*\* to consolidate the draft CPM texts from the responsible groups into the draft CPM Report. The information above and useful references and guidelines for the preparation of the draft CPM Report were published on 17 September 2020 in Addendum 1 to [Administrative Circular CA/251](https://www.itu.int/md/R00-CA-CIR-0251/en).

Based on the information received from the Study Groups,the CPM-23 Steering Committee e‑meeting updated the list of the contributing ITU-R working parties in the allocation of ITU‑R preparatory work for WRC‑23. A subsequent update was made after the September to November 2020 blocks of ITU-R e-meetings, in consultation with the CPM-23 Management Team members. It was also agreed to postpone to 23 July 2021 the date by which service/application characteristics and parameters are to be sent by the contributing groups to the responsible groups (see [CA/251](https://www.itu.int/md/R00-CA-CIR-0251/en), Annex 4), in order to move the SG 4 block of meetings from May/June to July 2021, thus resolving an overlap of some of the planned meetings. This updated information was published on 11 February 2021 in Corrigendum 1 to Addendum 1 of CA/251.

Taking into account PP Resolution 80 (Rev. Marrakesh, 2002) and Resolution **72 (Rev.WRC-19)**, the preparations for WRC‑23 continued also at the regional level, with the BR’s active participation in the e-meetings of the regional groups, including APT, ASMG, ATU, CEPT, CITEL and RCC, wherever possible.

The Bureau is planning to organize three ITU Inter-regional Workshops on WRC-23 Preparation. The first one has been planned in Geneva on 30 November – 1 December 2021[[3]](#footnote-4)\*\*\*, in order to review the progress made halfway through the preparatory cycle on the ITU‑R studies related to the WRC‑23 agenda items and to provide opportunities for exchanging information and have a better understanding of the preliminary draft common proposals, positions and/or views on the WRC-23 topics from the concerned entities such as the main regional groups, international organizations and other stakeholders.

Detailed information regarding the ITU‑R preparatory studies for the WRC-23 agenda items and issues can be found on the regularly updated ITU webpage: [www.itu.int/go/rcpm-wrc-23-studies](http://www.itu.int/go/rcpm-wrc-23-studies), which includes also a link to the [studies on WRC-27 preliminary agenda items](http://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/wrc-27-preliminary-studies.aspx). Further information on the ITU Inter-regional Workshops on WRC-23 Preparation will be provided on the dedicated webpage. Information on the regional groups’ preparation for WRC-23 can be found at: [www.itu.int/go/wrc-23-regional](http://www.itu.int/go/wrc-23-regional).

# 6 Operational planning

The ITU-R Operational Plan has been structured in accordance with the results-based management concept of Union to ensure complete linkage with the budget and other financial tools of the Union.

The draft ITU‑R Operational Plan for the period 2022-2025 is presented in Document 27, for review and comments by RAG.

# 7 BR information system

## 7.1 Terrestrial software and tools

### 7.1.1 Changes in the examinations under No. 9.19 of the Radio Regulations

The Bureau completed of development of the software modules and associated tools for processing of terrestrial notices under RR No. **9.19**, following a new corresponding Rule of Procedure (RoP) and the modified approach for the identification of affected administrations under this provision for terrestrial stations versus planned and non-planned BSS networks.

### 7.1.2 Implementation of the regulatory examination under No. 5.441B of the Radio Regulations

The Bureau completed the development and testing of the software modules and associated tools for the regulatory examination of terrestrial notices under RR No. **5.441B**, following the adopted corresponding RoP for the identification of affected administrations under this provision. In particular, this included the development and automation of the application of ITU-R Recommendation P.528. The corresponding modules are now fully in production.

### 7.1.3 Processing of coordination requests under RR No. 9.21

The development of the software modules and associated tools for the processing of coordination requests under RR No. **9.21** continued during 2020. The algorithms and software modules used for technical examinations under No. **9.21** have been reviewed in accordance with the corresponding RoPs: existing algorithms were revised, and new algorithms were introduced, in particular regarding RoP B6. The testing of these algorithms is undergoing. The completion of the software for checking the corresponding assignments (subject to **9.21**) notified under RR Article **11** to the Master Register and its integration into TerRaSys is scheduled for the fourth quarter of 2021.

### 7.1.4 Migration from Ingres to SQL Server

The work on the migration of the TerRaSys database from Ingres to SQL Server continued during 2020, including:

* Final review and stabilization of the database structures, schemas, and procedures (including archiving) to adapt them and take advantage of the modern technology offered by the new DBMS;
* Review and redesign of the data types used for some fields and the introduction of new geographic data types provided by the new DBMS, which offer efficient techniques for performing fast complex geographic queries;
* Continued redesign of various TerRaSys software components and applications used to access the database, with the view of taking advantage of the modern technology offered by the new DBMS and using web applications and modern software development technologies;

The new database system and software modules for the processing and front-end validation of the electronic terrestrial notifications were finalized and are currently under Beta testing. Work on the migration of the software modules for examination and publication is undergoing.

It is expected that the full migration and restructuring of the existing system will be completed by the end of 2021 - beginning of 2022.

Copies of the existing terrestrial database on the new DBMS platform are now available and are being used by various BR applications through the web to display, validate and process terrestrial frequency notifications.

## 7.2 Progress in fulfilling the BR Space Information Systems roadmap (RAG-19, 2012)

RAG-19 (2012) advised the Director to implement recommended actions within the proposed timeframe, as described in the agreed roadmap, comprising: Phase 1 (Implementation of WRC 12 decisions); Phase 2 (Rewrite some existing software); and Phase 3 (Set up a project team to implement a common framework, security system, and centralized space database). RAG encouraged Member States and Sector Members to submit their comments on Phase 3.

In 2020, the BR continued to maintain existing legacy software, while at the same time working on implementing new versions of key software applications. This parallel effort is both a necessity due to operational exigencies as well as the reason why certain modernization projects are still underway.

### 7.2.1 Progress toward achieving the objectives of Phase 2 of the roadmap

#### 7.2.1.1 Rewrite legacy software for technical examination

* Rewrite PFD for protection of terrestrial services calculation: The new-generation PFD software was released on the BR IFIC 2923 (15 June 2020)
* Rewrite PFD for protection of space services: Ongoing.
* Migrate technical examination software written in Fortran from Compaq Visual Fortran compiler to Intel Fortran compiler: Ongoing.
* Migration of GIMS Fortran components: Not yet started.
* Mspace – Migration of Visual Basic 6 components to .NET: Ongoing.

#### 7.2.1.2 Design and develop the BR Space Information System (BR SIS)

* Rewrite SpaceCap written in Visual Basic 6: Ongoing. In 2021, the first modules of SpaceCap implemented in BRSIS will be made available, as of BR Space Software version 9.1.
* Migrate SRS MDB to more modern technology: Although the choice of technology to replace MDB files is clear, the reliance of BR internal space services processing on MDB files is such that migration to SQLite databases cannot be delivered before WRC-23. Even when the BR Space Software applications move to SQLite, backward compatibility with the MDB format, as well as conversion tools, will be retained for the foreseeable future.
* Migrate SNS database on Ingres to SQL Server: The migration of Ingres-environment-specific internal processing applications continued in 2020. The remaining internal processing applications must be rewritten or adapted in 2021, to be in production in the first quarter of 2022 at the latest.
* Review SNTrack: Parts of SNTrack will be replaced by a Space Management Information System in 2021 to complete the back-office functionality of the e-Submissions system.
* Review SNS Online (and merge with SNL Online): Ongoing. Development of the web application "ITU Space Explorer" to replace the data mining system previously contained in the SNS Online and SNL Online is part of the project to implement Resolution 908 and to satisfy Resolution 186 (Rev. PP-18 Dubai) Resolves 4. After the concept design and the prototype approvals in 2020, phase 1 is progressing in 2021 and should be available to external users in 2022.

### 7.2.2 Progress toward achieving the objectives of Phase 3 of the roadmap

The work done during the previous phases, as well as the design and technology choices made thereafter, provide a foundation for successful completion of Phase 3, which will be as follows:

* The Space databases shall be migrated to the SQL Server platform by the end of 2021/early 2022.
* A schema redesign, preserving equivalence of data, but with the objective to eliminate certain redundancies, will be delivered in phases, starting from a between-WRC release of BR Space Software (version 9.2) tentatively scheduled for the end of 2021/early 2022.
* Activities on centralizing and streamlining risk, recovery, and security management: Ongoing.

## 7.3 Software developments related to space services

### 7.3.1 Implementation of Resolution 907 (Rev. WRC-15): Use of modern electronic means of communication for satellite network-related administrative correspondence

During 2020, work continued on implementing Resolution 907 (Rev. WRC-15), to deliver a secure online system “e-Communications” to modernize and enhance the current correspondence system between Administrations and ITU as well as amongst Administrations, with the addition of the following features:

* Indication of Read/Unread status to each incoming correspondence.
* Indication of Handled status, which means that the correspondence has been handled by a user in a receiving Administration.
* Export of correspondences as PDF files and send as email attachments to allow users to share correspondences efficiently.
* Improvement of sorting and querying functions on a list of correspondence

The Bureau also updated e-Communications system in February 2021 to improve the process for comments sent from affected Administrations to notifying Administrations in the space services Planned bands and to introduce a more user-friendly layout. The Bureau is also continuously improving the performance of the system.

This online system has been facilitating communications related to space services between Administrations and the Bureau, as well as between Administrations, despite the limitations caused by the COVID-19 outbreak and remote working environments implemented by most Administrations.

### 7.3.2 Implementation of Resolution 908 (Rev.WRC-15): Electronic submission of satellite network filings

In 2020, the following functionalities were implemented on the e-Submission system:

* Publication of API comments as received
* Support of SNS version 9
* Exporting the list of As-Received as a csv file
* Upload of the additional data items required under the Appendix 4 (rev. WRC-19)
* Publication of Resubmission of notifications as received
* Other improvements in user-friendliness of the layout

The Bureau also updated e-Submission in January 2021 to introduce a new type of submission under Resolution 35 (WRC-19). The improvements in internal processes and processing software are being implemented concurrently with the above externally visible functionality.

To assist in the development and testing, the Administration of Japan has made a financial contribution and has also made available a space regulatory/technical expert in Geneva. The Radiocommunication Bureau renews its thanks to the Administration of Japan for the specific assistance in the development of this project.

### 7.3.3 Implementation of the new FOS examination software

The development of the new Frequency Overlap with respect to other Space Services (FOS) examination software was finished in January 2021 and the new function has been introduced into GIBC, allowing for identification of affected administrations for coordination of satellite networks under the following provisions:

* Under Radio Regulations (RR) No. 9.11A for satellite systems for which the requirement to coordinate is included in a footnote to the Table of Frequency Allocations as follows:
	+ RR No. 9.12: Non-GSO with respect to Non-GSO. Frequency bands for which a footnote refers to RR Nos. 9.11A or 9.12.
	+ RR No. 9.12A: Non-GSO with respect to GSO. Frequency bands for which a footnote refers to RR Nos. 9.11A or 9.12A.
	+ RR No. 9.13: GSO with respect to Non-GSO. Frequency bands for which a footnote refers to RR Nos. 9.11A or 9.13.
* Under RR No. 9.21 for any station of a service for which the requirement to seek the agreement of other administrations is included in a footnote to the Table of Frequency Allocations referring to this provision:
	+ RR No. 9.21A: Non-GSO with respect to GSO bandwidths overlap
	+ RR No. 9.21B: GSO/Non-GSO with respect to Non-GSO bandwidths overlap

## 7.4 Other BR software and tools

### 7.4.1 Radio Regulations tools

The Bureau continues to update and maintain software tools to facilitate the use and analysis of the Radio Regulations (RR):

1. The Radio Regulation Navigation Tool, which was released during Q2-2017, is based on the active version of the RR and ITU-R Recommendations. An updated version is under preparation to incorporate WRC-19 outcomes and to align with the most recent corpus of texts (RR 2020, ITU-R Recommendations, Rules of Procedure, etc.). This is expected to be released during the second quarter of 2021. Yearly free updates will be released to incorporate the latest versions of the RoP when available.
2. The software tool to conduct detailed search and analysis of the Table of Frequency Allocations in Article 5 of the Radio Regulations, enables filtering and reformatting by frequency range, service, category of service, footnote, country, etc. The tool has been updated based on the outcomes of the WRC-19 and the RR 2020 Edition to introduce the changes into the frequency allocations, country footnotes, and related references to associated Resolutions and Recommendations. The updated package now also includes links to the relevant ITU-R Recommendations referenced in RR5, as well as the relevant Rules of Procedure. The package is now also equipped with a utility to extract the National Table of Frequency Allocations for a specific country as it results from combining the various provisions of RR5. The tool was demonstrated during WRS-20 and is now available for purchase at the ITU sales website. All software and data updates will be provided regularly and freely to the subscribers, until the WRC-23.

### 7.4.2 Further enhancement of web tools

The online tools eBroadcasting (former eBCD2.0) and eMIFR were integrated into the eTerrestrial portal, implemented with the latest web technologies, and put in production in December 2020. The tools to support the GE84 optimization process were also developed and deployed at the same time. The Online Validation (rebranded to eValidation) will be integrated in the first semester of 2021. Maps are implemented using the open source OpenLayers library, chosen by the BR Task Force (see 7.4.4)

### 7.4.3 Compatibility analysis software for FM sound broadcasting – GE84 optimization

The BR deployed in 2020 an online tool for the GE84 Plan (FM broadcasting) optimization in Africa in the band 87.5-108 MHz: the GE84 Optimization tool. This tool performs compatibility calculations based on the GE84 Agreement and evaluates the incompatibilities for all the frequencies in the GE84 band. The aim is to identify possible new channels based on the calculations of interference received and generated with respect to the GE84 Plan entries and any other frequency requirements which may be submitted to the analysis. This tool will serve as the basis for optimizing the FM band in Africa. It has been made available to all administrations party to the GE84 Agreement.

### 7.4.4 BR Geographic Information Systems

The BR GIS Task Force, comprised of staff from all BR departments, has been established to harmonize GIS activities in the BR. An initial activity of the Task Force was to implement the BR GIS Platform using GeoServer. Its current activity is to transfer all relevant radio-meteorological data (geospatial data catalogue) and other relevant datasets currently in the IDWM to the server. This data will be made available to users via Open Geospatial Consortium (OGC) compliant web services. The BR is implementing GIS functionalities in its web tools using the open source OpenLayers library. The ITU is a member of the UN Geospatial Network, a coalition of entities within the UN system that is tasked to strengthen the coordination and coherence of geospatial information management within the United Nations system. The BR participates in the Steering Committee of this network, co-chairs the Innovation & Technology Task Force of this network and leads the ITU Inter-Sectorial Task Force on Geospatial Information Management.

#### 7.5 Business Continuity and Disaster Recovery (both Space and Terrestrial Services)

Work on further strengthening the ITU Risk Management Framework continued in 2020 and the first quarter of 2021, with the BR's full participation in the Inter-Sectoral Task Force Working Group on Risk Management. To meet the schedule presented to the 1st VCC in document [61](https://www.itu.int/md/S20-CL-C-0061/en), BR management attended workshops and conducted brainstorming sessions in order to add to the ITU risk register entries from the ITU-R’s and BR’s unique perspective and context.

# 8 Outreach

Outreach activities include dissemination of information and assistance to membership, the publication of ITU-R outputs, the organization of, and the participation in, seminars and workshops, as well as the development and maintenance of communication and promotion tools. The purpose of these activities is to ensure that the outputs produced by the ITU-R Sector (regulations, recommendations, reports, and handbooks) are disseminated worldwide so that they may form the basis for the formulation of national and regional policies and decisions for the use of the radio spectrum. To carry out these activities, the BR relies on close cooperation with the other Bureaux and Sectors, the ITU regional and area offices, and the relevant international organisations and national authorities.

## 8.1 Publications

### 8.1.1 Regulatory publications

*Radio Regulations and Rules of Procedure*

The 2020 edition of the Radio Regulations was published in September 2020. Following the 2015 World Radiocommunication Conference, a 2017 edition of the Rules of Procedure has been published. Seven updates were published since then (November 2017, July 2018, March 2019, July 2019, October 2019, July 2020, and November 2020). The next edition of the Rules of Procedure is scheduled for publication in the 2nd quarter of 2021.

BR also published 11 HFBC schedules every year in accordance with RR Article **12**.

### 8.1.2 Service publications

#### 8.1.2.1 Background and general observations

#### The Bureau prepares and issues the following service publications, as specified in Article 20 of the Radio Regulations.

* BR IFIC − International Frequency Information Circular
* List IV − List of Coast Stations and Special Service Stations
* List V − List of Ship Stations and Maritime Mobile Service Identity Assignments
* List VIII − List of International Monitoring Stations
* Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services

#### 8.1.2.2 List of Coast Stations and Special Service Stations (List IV)

#### This List contains information notified to the ITU (i.e. Call Sign, MMSI, geographical coordinates, transmitting and receiving frequencies, etc.) of coast stations that provide watch-keeping using digital selective calling techniques, public correspondence service, medical advice, navigational and meteorological warnings, notices to navigators and radio time signals, etc.

#### The List of Coast Stations and Special Service Stations (List IV) is published every two years, in CD‑ROM format. One edition of List IV was published in June 2020.

Information pertaining to this list is made available via the online information system ITU Maritime mobile Access and Retrieval System (MARS). A compilation of all changes notified to the ITU is provided on the web every six months.

#### 8.1.2.3 List of Ship Stations and Maritime Mobile Service Identity Assignments (List V)

This List contains information notified to the ITU on Ship, Coast and Search and Rescue (SAR) Aircrafts Stations, Accounting Authority Identification Codes (AAICs), and contact information of notifying administrations.

The List of Ship Stations and Maritime Mobile Service Identity Assignments (List V) is published every year, in CD‑ROM format. One edition of List V was published in April 2019.

Information pertaining to this List is also made available via the online information system MARS. A compilation of all changes notified to the ITU is provided on the web every three months.

#### 8.1.2.4 List of International Monitoring Stations (List VIII)

#### The List of International Monitoring Stations (List VIII) contains the addresses and other relevant information of centralizing offices, including the detailed information related to monitoring stations measuring terrestrial and space emissions. A direct download facility is available, free of charge, with TIES access.

One edition of this List was published in December 2019

#### 8.1.2.5 List of service publications issued

Table 8.1.2.5-1 below summarizes the different publications for the period 2017-2020:

Table 8.1.2.5-1

Summary information regarding the service publications issued in the period 2017 – 2020

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2017 | 2018 | 2019 | 2020 |
| BR IFIC (International Frequency Information Circular) | 25 | 25 | 25 | 26 |
| List IV (List of Coast Stations and Special Service Stations) | Edition of 2017 (November) |   | Edition of 2019 (December) |   |
| List V (List of Ship Stations and Maritime Mobile Service Identity Assignments) | Edition of 2017 (April) | Edition of 2018 (April) | Edition of 2019 (April) | Edition of 2020 (June) |
| List VIII (List of International Monitoring Stations) |   |   | Edition of 2019 (December) |   |
| Maritime Manual |   |   |   | Edition of 2020 (November) |

### 8.1.3 Study Groups publications

Since RAG-20, the ITU‑R Study Groups publications continued to be developed in accordance with Resolution ITU-R 1-8.

The full list of ITU-R Questions, ITU-R Recommendations and ITU-R Reports approved since RAG‑20 can be found in Addendum 1 to Doc. RAG/26.

#### • ITU-R Questions

Since RAG-20, one revised ITU-R Question was approved in accordance with the procedures established in Resolution ITU-R 1-8 and published. Also, five ITU-R Questions were suppressed during this period.

#### • ITU-R Recommendations

Since RAG-20, four new ITU-R Recommendations and 11 revised ITU-R Recommendations were approved in accordance with the procedures established in Resolution ITU-R 1-8 and published on the ITU website in English. Publication in 6 languages for few of these ITU-R Recommendations is in progress.

#### • ITU-R Reports

Since RAG-20, two new and 12 revised ITU-R Reports were published on the ITU website in English.

#### • ITU-R Handbooks

Since RAG-20, Volume 5: Deployment of Broadband Wireless Access Systems of the Land Mobile (including Wireless Access) Handbook was approved by WP 5A and it is published on the ITU website.

### 8.1.4 ITU-R Publications downloads

#### 8.1.4.1 Radio Regulations and the Rules of Procedure

Concerning these regulatory documents, Table 8.1.4.1-1 shows the number of deliveries for the RR‑2016 and RR-2020 editions.

Table 8.1.4.1-1

Number of deliveries of the Radio Regulations

|  |  |  |  |
| --- | --- | --- | --- |
| **RR-16** | **2018** | **2019** | **2020\* (2016 ed and 2020 ed)** |
| **Hard copies sold** | 257 | 182 | 2016 ed:  59  2020 ed: 1 170 |
| **DVD’s sold** | 1 264 | 1 063 | 2016 ed: 482  2020 ed: 5 061 |
| **Free downloads** | 5 342\* | 18 400\*\* | 2016 ed: 10 818 2020 ed: 2 318 |
| \*Cumulative value from December 2016 to September 2018.\*\*Cumulative value from 1 January to 1 December 2019. |

#### 8.1.4.2 ITU-R Recommendations

As a result of the free online access policy, ITU-R Recommendations are accessed and downloaded worldwide. In a 45-month period (January 2017 to December 2020), more than five million downloads of ITU-R Recommendations from ITU web site were recorded. Table 8.1.4.21 summarizes their distribution by year and series. At this time, there are 1 182 ITU-R Recommendations in force.

Table 8.1.4.2-1

Distribution of ITU-R Recommendations (downloads)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SERIES | 2017 | 2018\* | 2019 | 2020 | TOTAL | % |
| P | 316 019 | 280 201 | 290 677 | 351 395 | 1 238 292 | 21.83% |
| BT | 269 185 | 254 048 | 167 909 | 201 022 | 892 164 | 15.73% |
| M | 208 528 | 182 366 | 236 681 | 329 236 | 956 811 | 16.87% |
| SM | 147 502 | 136 164 | 130 949 | 154 205 | 568 820 | 10.03% |
| BS | 152 305 | 135 637 | 106 231 | 129 114 | 523 287 | 9.23% |
| F | 131 647 | 107 795 | 107 027 | 135 623 | 482 092 | 8.50% |
| S | 103 445 | 90 408 | 75 665 | 101 589 | 371 107 | 6.54% |
| BO | 32 071 | 34 735 | 14 614 | 24 649 | 106 069 | 1.87% |
| SA | 25 168 | 25 301 | 22 836 | 39 557 | 112 862 | 1.99% |
| RS | 28 578 | 21 263 | 13 571 | 22 707 | 86 119 | 1.52% |
| V | 18 827 | 19 778 | 29 689 | 36 926 | 105 220 | 1.86% |
| TF | 18 354 | 17 323 | 13 294 | 19 945 | 68 916 | 1.22% |
| SF | 15 181 | 15 584 | 13 168 | 15 739 | 59 672 | 1.05% |
| BR | 16 844 | 15 014 | 8 210 | 13 405 | 53 473 | 0.94% |
| RA | 9 589 | 9 100 | 6 916 | 9 900 | 35 505 | 0.63% |
| SNG | 3 221 | 3 049 | 2 064 | 2 711 | 11 045 | 0.19% |
| TOTAL | **1 496 464** | **1 347 766** | **1 239 501** | **1 587 723** | **5 671 454** | 100.00% |

\*Up to Sept 2018 |
|  |

#### 8.1.4.3 ITU-R Reports

As ITU-R Recommendations, ITU-R Reports have been promulgated worldwide touching most of the audiences and contributing to good technical practices in certain aspects of radiocommunications. In a 45-month period (1 January 2017 to 1 December 2020), more than
1 000 000 downloads of ITU‑R Reports from ITU web site were recorded. Table 8.1.4.3-1 summarizes their distribution by year and series. Currently, there are 593 ITU-R Reports in force.

Table 8.1.4.3-1

Distribution of ITU-R Reports (downloads)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SERIES | 2017 | 2018\* | 2019 | 2020 | TOTAL | % |
| M | 76 531 | 63 114 | 90 065 | 112 052 | 341 762  | 30.24 |
| BT | 53 616 | 45 439 | 54 621 | 63 401 | 217 077 | 19.21 |
| SM | 44 340 | 40 327 | 74 915 | 108 430 | 268 012 | 23.72 |
| BS | 24 015 | 15 503 | 23 054 | 32 983 | 95 555 | 8.46 |
| BO | 12 572 | 9 315 | 9 690 | 16 794 | 48 371 | 4.28 |
| P | 10 541 | 7 520 | 13 322 | 17 742 | 49 125 | 4.35 |
| S | 10 142 | 7 282 | 8 339 | 9 524 | 35 287 | 3.12 |
| F | 6 152 | 5 177  | 9 475 | 10 981 | 31 785 | 2.81 |
| RS | 3 764 | 2 966 | 2 730 | 4 322 | 13 782 | 1.22 |
| RA | 3 292 | 2 502 | 2 736 | 3 774 | 12 304 | 1.09 |
| SA | 3 106 | 2 860 | 4 438 | 5 422 | 15 826 | 1.40 |
| SF | 303 | 266 | 81 | 330 | 980 | 0.09 |
| BR | 65 | 35 | 43 | 64 | 207 | 0.02 |
| TOTAL | **248 439** | **202 306** | **293 509** | **385 819** | **1 130 073** | 100% |
| \*Up to Sept 2018\*Up to Sept 2018 \*\*The new software required to process the weblogs is under procurement process. |  |

#### 8.1.4.4 Handbooks on Spectrum management

Following the BR director’s decision in 2017, all ITU-R Handbooks are now free to download at the ITU website. More than 100 000 downloads were registered as of the end of 2020. Table 8.1.4.4‑1 provides the distribution of ITU-R Handbooks on spectrum management and monitoring and other handbooks sold.

At this time, a total of 42 ITU-R Handbooks are published including the Spectrum Management Series. It should be noted that of these 42 published Handbooks, 38 are in force, 1 is merged and 3 are suppressed but still available on the ITU website, for reference purposes.

Table 8.1.4.4-1

Distribution of ITU-R Handbooks on spectrum management and monitoring

|  |  |  |  |
| --- | --- | --- | --- |
| **Handbook** | **2018** | **2019** | **2020** |
| **Spectrum Management Series (hard copies sold)** | 9 | 9 | 3 |
| **Other Handbooks (hard copies sold)** | 21 | 20 | 4 |
| **GRAND TOTAL** | **30** | **29** | **7** |

## 8.2 Seminars, workshops and other events

During 2020 a new WRS/RRS intra WRCs cycle has started: WRS/RRS 2020-2023. Those Seminars aim at disseminating worldwide the updates contained in the Radio Regulations Ed. 2020 (with the decisions taken by WRC-19) along with its associated Rules of Procedure (RoP). Based on the prior WRS/RRS experiences, this WRS/RRS 2020-2023 cycle plans to conduct two biennial World Radiocommunication Seminars (WRS), complemented by eleven Regional Radiocommunication Seminars (RRS) (each one aimed to a different subregion), as follows:

TABLE 8.2.2-1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Language** | **2020** | **2021** | **2022** | **2023** |
| **Africa (Sub-Saharan): 2** |   |  |  |  |  |
| French Africa | English/French  |  | 1Q |  |  |
| English Africa  | English/French  |  |  |  | 1Q |
| **Americas: (3)** |  |  |  |  |  |
| South America | Spanish |  |  | 2Q |  |
| Meso America  | Spanish |  | 2Q |  |  |
| Caribbean  | English | July |  |  |  |
| **Asia & Pacific: (3)** |  |  |  |  |  |
| Pacific Islands States | English |  | 3Q |  |  |
| Central Asia | English |  |  | 3Q |  |
| South Asia | English | October |  |  |  |
| **Arab States (1)** | Arab/English |  | 4Q |  |  |
| **CIS (1)** | Russian |  |  | 1Q |  |
| **Eastern Europe (1)** | English/Russian |  |  |  | 2Q |
| **WRS (2)** | all UN languages | December |  | December |  |

As in prior cycles, to optimize the necessary resources, this planning has the following principles:

* 1st semester 2020: no RRS/WRS, updating RR and associated software tools;
* 2nd semester 2023: no RRS/WRS: preparation of upcoming WRC-23;
* Two WRS per cycle (every 2 years): WRS-20 and WRS-22;
* The first WRS after a WRC will have a specific session devoted to explaining in detail, the modifications on the RRs introduced by the WRC;
* The two RRSs for Africa will be scheduled in different years than the WRS, considering that the participation in RRS Africa is nearly twice as large as other RRSs, and allowing for an even distribution of the fellowship budget;
* RRSs will be carried out in the predominant language of the region, which helps reduce interpretation costs and allows for an easier exchange of information during the event;
* The programs of the RRSs will be tailored to the specific needs of the region concerned;
* The last day(s) of each RRS will be devoted to a Forum-type session, where panellists from outside the region could be invited to enlarge the scope of the discussions (provision of interpretation from/to English might become necessary for that day).

The above planning shall be duly coordinated/and adjusted with ITU Regional Offices (ROs) as well as pertinent regional groups, considering the challenges arisen by the current outbreak and the subsequent changes of format (online events), and its implications on the involved ITU Staff (BR, ROs)

**8.2.1** **World Radiocommunication Seminars (WRS)**

As a part of the WRS/RRS 2020-2023 cycle, the WRS-20 was conducted in December 2020. It was initially planned for the 1st week of December in Geneva, but due to the travel restrictions related to the pandemic, WRS changed to a virtual format, with the following changes:

* WRS-20 was presented over 2 weeks, i.e., from 30 November to 11 December, with 3-hour sessions daily,
* to accommodate participants in different time zones worldwide, WRS-20 sessions were presented twice each day:
	+ Morning sessions (Geneva time) were presented for participants in the Asia-Pacific, and East and Southern Africa Regions,
	+ Afternoon sessions (Geneva time) were presented for participants in the Americas, Europe, CIS, Arab States, and West Africa Regions.
* Recordings of the seminar sessions were also made available on the event website.

Additionally, noting that more and more people are using and deploying radiocommunication systems and considering the BR role to inform all individuals and organizations worldwide about the Radio Regulations and how to implement them, for the first time, the WRS plenary sessions were opened to everyone, no matter whether they are members of ITU or not.

During the first week, the plenary sessions (opened to everyone) covered the basics of spectrum management at national, regional, and global levels. It also reviewed the ITU Radio Regulations as updated by WRC-19, overviewed the regulatory framework for terrestrial and space radiocommunication services, and updated participants on the current activities of the ITU-R Study Groups. These plenary sessions were conducted on the 6 UN languages.

The second week, limited to ITU members only, featured basic training workshops on how to use ITU-developed tools for frequency notifications and technical examinations. Web tutorial exercises enabled participants to master both the procedures and the software that the ITU Radiocommunication Sector (ITU-R) uses to process filings. Participants were able to alternate between space and terrestrial services.

The WRS-20 attracted 2,183 participants from 159 countries, which shows the big success of this event, with many times more participants than the average WRS physical editions.

**8.2.2** **Regional Radiocommunication Seminars (RRS)**

As a complement to the biennial WRS, the BR maintained its strategy for regional outreach through the organization of Regional Radiocommunication Seminars (RRS) aimed to visit every developing region worldwide, fostering human capacity building on the use of the radio-frequency spectrum and satellite orbits, in particular, the application of the provisions of the ITU Radio Regulations.

RRSs are jointly organized with the spectrum management authorities of host countries, in close cooperation with relevant regional organizations and the ITU regional/areas offices. Their agendas include two days of theoretical sessions and one or two days of workshops on terrestrial and space services. They are complemented with a one or two-day forum, dedicated to spectrum-related topics of particular interest to the region.

During 2020, two RRS were conducted as follows:

* **ITU Regional Radiocommunication Seminar 2020 for the Americas (RRS-20-Americas)**

The ITU Regional Radiocommunication Seminar 2020 for the Americas Region (RRS-20 Americas) was jointly organized by ITU (BT and Americas Office) and the Caribbean Telecommunications Union (CTU). It was planned to be held in the Caribbean during the 3rd week of July 2020, following traditional format (5 days, 6 hours per day) but due to the pandemic situation, its format was adjusted to:

* Online sessions;
* 2 weeks (10 days), only 3 hours daily.

Hence, the RRS-20-Americas was conducted online from 13 to 24 July 2020, using the Zoom license from CTU. Considering the local time difference, sessions were conducted from 09:00 to 12:30, Caribbean time (UTC-4H), i.e., 15:00 to 18:30 Geneva time (DST).

From Monday 13 to Thursday 16 July, the seminar covered plenary sessions; Friday 17 and Monday 20 July the seminar performed tutorials on the process of coordination and notification. RRS-20-Americas concluded with a 4 half-day Forum on "*WRC-19 Outcomes: Challenges and opportunities for the Region*”. gathering main stakeholders in the region. The addressed topics included: DTT, HTSS; Non-GSO Constellations; ESIM, Emergency Communications, Aeronautical, Maritime, ITS, IMT and Broadband Systems, 5G Spectrum Pricing. Round Table WRC-19 Outcomes and WRC-23 Agenda Challenges.

Participation largely exceeded expectations: based upon prior RRS on the region, it was expected around 40-60 participants from 15-20 countries, but the event was attended by more than 350 participants from 38 countries, including 29 countries from the Americas, which shows the great success of this event.

* **ITU Regional Radiocommunication Seminar 2020 for Asia and the Pacific (RRS‑20‑Asia&Pacific)**

The Regional Radiocommunication Seminar 2020 for Asia and the Pacific (RRS-20 Asia&Pacific) was organized by ITU (BR and Asia&Pacific Office) in cooperation with the Asia Pacific Telecommunity (APT). It was planned to be held on a Pacific Island State the 3rd week of October 2020, following traditional format (5 days, 6 hours per day) but due to the pandemic situation, its format was adjusted as prior RRS. Hence, the RRS-20-Asia&Pacific was conducted online from 19 to 30 October 2020, using the GoToWebinar license from ITU. Considering the local time difference, sessions were conducted from 14:00 to 17:30, Bangkok time (UTC+7H), i.e., 08:00 to 11:30 Geneva time.

From Monday to Thursday, 19-22 October, the seminar covered plenary sessions; on Friday and Monday, 17 and 20 October, the seminar performed tutorials on the process of coordination and notification. RRS-20-Americas concluded with a 4 half-day Forum on "*WRC-19 Outcomes: Challenges and opportunities for the Region*” gathering main stakeholders in the region. The Forum topics included: New trends on Broadcasting, HTSS; Non-GSO Constellations; ESIM, Emergency Communications, Aeronautical, Maritime, ITS, IMT and Broadband Systems, 5G Spectrum Pricing, Cognitive Radio & Software Defined Radio Round Table WRC-19 Outcomes and WRC-23 Agenda Challenges.

As in prior RRS online, participation largely exceeded expectations: the event was attended by more than 300 participants from over 30 countries, as well as 10 international organizations, and representatives of the telecommunication industry, operators, international organizations, associations, and academia from the Asia-Pacific region, which shows the great success of this event.

Table 8.2.2-2 provides a summary of the RRSs held in 2020.

Table 8.2.2-2

ITU Regional Radiocommunication Seminars (2020)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Date | RRS | Place | Host | Cooperation | Forum Topics | Lang. | Parts/Adms |
| **2020** |
| 13-24 July 2020 | RRS-20 Americas | E-meeting | − | Caribbean Telecommunications Union (CTU) ITU Americas Office | • Broadcasting: towards DTT.• Satellite systems: HTSS, non-GSO constellations and ESIM.• ITU assistance on preparation of National Plan for Emergency Communication Policies and Procedural Frameworks• IMT & Broadband Systems: Bands, regional status, Fixed, HAPS, RLAN/Wi-Fi.• General Principles, challenges and approaches of 5G spectrum pricing.• Round Table on WRC-19 outcomes and WRC-23 Agenda challenges. | E | 350/38 |
| 19-30 October 2020 | RRS-20 Asia-Pacific | E-meeting | − | Asia-Pacific Telecommunity (APT)ITU Asia&Pacific Office | • Newest trends on broadcasting.• Satellite systems: HTSS, non-GSO constellations and ESIM.• National and band plans on emergency communications.• Transport Systems: Aeronautical, Maritime, ITS.• IMT & Broadband Systems: Bands, Status, Fixed, HAPS, RLAN/Wi-Fi.• General Principles, challenges and approaches of 5G spectrum pricing.• Trends and challenges of Cognitive Radio and Software Defined Radio.• Round Table on WRC-19 outcomes and WRC-23 Agenda challenges. | E | 300/30 |

### 8.2.3 Planned World and Regional Radiocommunication Seminars for 2021-2023

Based on the WRS/RRS 2020-2023 planning (Table 8.2.2-1), the following seminars are being considered for 2021:

* RRS-21-Africa: 1Q 2021, online, E/F
* RRS-21-Americas: 2Q 2021, online S
* RRS-21-Asia&Pacific; 3Q 2021, online, E
* RRS-21-Arab States; 4Q 2021, online, A/E

As indicated above, this 2021 planning is currently coordinated/and adjusted with ITU ROs as well as pertinent regional groups, considering the challenges that have arisen due to the SARS-CoV-2 outbreak and the subsequently necessary changes in the delivery format for these events.

### 8.2.4 Other events

BR experts kept attending and providing support to several events such as those organized by Specialized UN Agencies and by Regional Telecommunication Organizations, as well as non-ITU Conferences and Symposia. The BR also organized Seminars and Workshops and responded to Assistance requests from Member States. Due to the travel restrictions arisen from the SARS-CoV-2 outbreak, almost all meetings were conducted online, including large events as:

* SADC Capacity Building Workshop on Satellite issues
* ITU/ATU Workshop on implementation of WRC-19 agenda item 1.4
* ITU/PRIDA Workshops on Spectrum Management – E/F
* ITU/ PRIDA Workshops on IoT and digital services – E/F
* ITU Reg. Sem. Europe & CIS - Spectrum & Broadcast
* Workshops CG 1 to 4 -GE84 Plan optimization for African countries – E/ F
* ITU/ITSO Training for Americas
* ITU Workshop on Spectrum Monitoring for the Arab Region

## 8.3 Assistance to the Member States, in particular in developing countries and LDCs

### 8.3.1 Assistance to administrations of developing countries

The Bureau continued assisting Administrations of developing countries in areas such as:

* Supporting national spectrum management activities in the rapidly changing regulatory environment (see Resolution **7 (Rev.WRC-19)**) and providing technical assistance in the field of space radiocommunication (Resolution **15 (Rev.WRC-03)**) either in ITU headquarters or in the field.
* Participation in the meetings of the regional coordination groups, as requested by Article 12 of the Radio Regulations.
* Provision of assistance in long-term spectrum roadmap for mobile broadband and assignment for mobile broadband (IMT)
* Provision of guidelines and technical support for the transition to Digital Television and the allocation of the digital dividend.

During 2020 direct technical assistances in progress were concluded. No new direct requests were received.

### 8.3.2 Assistance to Regional Groups

The BR continued its participation in the meetings of the regional coordination groups (e.g. HFCC), as requested by Article 12 of the Radio Regulations, providing the necessary assistance and collaboration, as follows:

#### 8.3.2.1 Assistance to ATU

**GE84 Plan optimization project for Africa:** The Bureau in collaboration with ATU held in total 5 online workshops (in English and French) in September 2020-October 2020 and January 2021. The 1st Frequency Coordination Meeting on Optimization of the GE84 Plan for Africa took place virtually from 15-19 February 2021.

**PRIDA**: The Policy and Regulatory Initiative for Digital Africa (PRIDA) project, is an initiative by the African Union, European Union and ITU. It also includes Regional Economic Communities, ATU, Regional Regulatory Associations, National Regulators, and other stakeholders. The BR, jointly with BDT are actively participating on the Action "*Increasing wireless broadband penetration through improved and harmonized spectrum utilization and regulations*". In that sense, during 2020 five meetings were conducted:

* Workshop on Modern Spectrum Management and SMS4DC –E: Zanzibar, Tanzania 2 - 4 March 2020
* Workshop on Modern Spectrum Management and SMS4DC - E: online 20 April - 1 May 2020
* Workshop on Modern Spectrum Management and SMS4DC - F: online 11-22 May 2020
* Workshop. IoT and Digital Services. - F: online 24 - 28 August 2020
* Workshop. IoT and Digital Services. - E: online 7 - 11 September 2020

## 8.4 Strategic Partnerships, including inter-sector cooperation

Due to the SARS-CoV-2 outbreak only one ITU/ITSO online Capacity Building Workshop on Satellite Communications, which was an on-line event organized for the Americas on 2-27 November 2020. This workshop is part of a capacity-building partnership between the ITU and ITSO for the delivery of satellite communications-related training.

### 8.4.1 Cooperation with ITU-D

BR works closely with the BDT on issues of mutual interest to ITU-R and ITU-D. The BR has participated in relevant meetings of ITU-D Study Groups, Rapporteur Groups, and TDAG, where liaison activities have involved topics such as spectrum management, digital broadcasting and migration from analogue systems, the transition towards and implementation of IMT, and broadband wireless access technologies. These topics are in addition to the collaboration undertaken through ITU-D Question 9-3/2, which calls for the identification of study topics in ITU-R (and ITU-T) that are of particular interest to developing countries.

In close cooperation with the BDT and the ITU regional and area offices, and other relevant international organizations and national authorities, the BR organized and participated in the following (online) events:

* ITU Reg. Sem. Europe & CIS - Spectrum & Broadcast, 1-2 July 2020
* ITU Joint 5G Conference for Europe and CIS, 22-23 October 2020
* ITU Workshop on Spectrum Monitoring for the Arab Region, 9-11 November 2020
* ITU/CITC Workshop on Radio Spectrum for IMT-2020 and beyond, 8-10 December 2020

#### 8.4.1.1 GSR

The BR contributed to the ITU Global Symposium of Regulators in 2020 by participating in a panel discussion related to the role of spectrum for the digital transformation process, and spectrum licensing principles for new services.

#### 8.4.1.2 World Telecommunication/ICT Indicators Symposium, WTIS

The WTIS 2020 was held online from 1-3 December 2020. BR and BDT jointly supported the discussions relating to IMT National Spectrum Allocations and Assignments.

#### 8.4.1.3 ICT Survey and ICT Eye

The BR cooperated with the BDT on the indicators and definitions for gathering data on mobile broadband technologies and standards by participating in the meetings of the Ad-Hoc Group of the Expert Group on Telecom-ICT Indicators (EGTI).

In 2020, the EGTI meeting was conducted online on 14,18 and 29 September 2020. The IMT spectrum-related indicator was discussed, as well as collected data on:

* Amount of spectrum offered for IMT services, by frequency band, in MHz:
* Total spectrum, in MHz, made available for use (i.e. allocated) through any formal national publication, such as the National Frequency Plan, for IMT or IMT Advanced services, including any of the air interfaces in accordance with ITU-R Recommendations concerning these standards for mobile communications.
* Amount of spectrum licensed for IMT services, by frequency band, in MHz
* Total spectrum, in MHz, assigned nationally for use for IMT systems, including any of the air interfaces in accordance with ITU-R Recommendations concerning these standards for mobile communications.

They were included in the 2020 data collection. BR and BDT are working jointly on how to process and deliver the relevant indicators on this matter.

#### 8.4.1.4 Spectrum Management Training Programme (SMTP)

Since 2013, the BR has actively participated in a joint project with the BDT to develop the Spectrum Management Training Programme (SMTP) through its different phases: design, material preparation, peer review, pilot test. Several updates occurred over the years and BR performed regularly a review of the material contained in the current SMTP. Recent updates were performed to include the outcomes from WRC-19/RA-19. Further work is expected in the coming years.

During 2020 BR performed an extensive revision and updating of the whole content of SMTP, to include WRC-19 decisions and subsequent RR-20 updates, as well as align the modules with the ITU‑R works and outcomes (Recommendations, Reports, etc.). A second review of some modules is in progress.

### 8.4.2 ITU Telecom

The BR supported the ITU Telecom team in the organization of the ITU Virtual Digital World 2020 and moderated two sessions. A ministerial round table on "The role of digital technologies during and after COVID-19 pandemic" and a second session on "Entering the 5G era: demand, deployment, and disquiet".

## 8.5 Membership

### 8.5.1 ITU Membership

Tables 8.5.1-1 to 8.5.1-3 show the Membership by Sector and Region, along with the associated contributions in 2020 and the evolution of the number of ITU-R Sector Members, Associates and Academia during the period 2016 to 2020.

Table 8.5.1-1



Table 8.5.1-2



Table 8.5.1-3



### 8.5.2 ITU-R Membership

Table 8.5.2 shows the evolution of the number of ITU-R Sector Members, Associates, and Academia during the period 2017 to 2020.

Table 8.5.2

Evolution of the ITU-R membership since 2017

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **2017** | **2018** | **2019** | **2020** | **2020 vs 2017** | **% Increase** |
| **Sector Members** | 265  | 263  | 272  | 276 | 11 | 4.2%  |
| **Associates** | 21  | 20  | 21 | 23 | 2 | 9.6%  |
| **Academia\*** | 121 | 148  | 158  | 163 | 42  | 34.7%  |

|  |
| --- |
| *\*As per PP-14 decision, Academia membership encompasses all 3 ITU sectors* |

## 8.6 Communication and promotion

### 8.6.1 Website

The BR completed the enhancements, updates, and translations of the [ITU-R website](http://www.itu.int/en/ITU-R) menus, in accordance with the guidelines for the harmonization of sectoral web menus. This was presented during the Council Working Group CWG-LANG at its meeting held on 14 February 2020.

Table 8.6-1 below shows the current status of the translation of all level-0-and-1 webpages of the [ITU‑R website](http://www.itu.int/en/ITU-R) and their availability in the six ITU official languages. The figures in this table refer to the number of landing pages in the various departments of the BR (level 0) and the number of pages that are then accessible via one click only (level 1).

Table 8.6.1-1

ITU-R web pages languages statistics

|  |  |
| --- | --- |
|  | Status of ITU-R web pages translations for levels 0+1(Q1/2020) |
| **E** | **F** | **S** | **A** | **C** | **R** |
| SSD | Space | 31 | 19 | 18 | 4 | 5 | 5 |
| TSD | Terrestrial | 21 | 6 | 6 | 6 | 6 | 6 |
| SGD | Study Groups | 32 | 16 | 16 | 14 | 14 | 14 |
| Conf. | Conferences/Meetings/Seminars/Workshops | 15 | 9 | 9 | 8 | 8 | 8 |
| Others | Information/Promotion/Events | 14 | 9 | 9 | 9 | 9 | 9 |
| ITU-R website (total) | 113 | 59(52%) | 58(51%) | 41(36%) | 42(37%) | 42(37%) |

### 8.6.2 Promotion and media relations

During 2020, the primary focus of BR’s communications was related to BR's virtual meetings and webinars and promoting the work of the Bureau online and through social media The Radiocommunication Bureau organized three Satellite webinars between September and November 2020. The webinars attracted a record 5,476 participants from 135 countries. The webinars provided participants with an opportunity to be updated with the current technical and regulatory situation, evolution, and trends in the satellite industry. The World Radiocommunication Seminar WRS-20 attracted over 3,400 participants from more than 140 countries to learn about regulatory aspects of radiocommunication and how to use radio-frequency spectrum and satellite orbits equitably. The virtual RRS-20 Asia-Pacific attracted 300 participants from 30 administrations and the virtual RRS-20 Americas attracted 350 participants from 38 administrations. UN or World days such as the Media relations was performed in cooperation with the ITU Comms, Media and Press Office answering over one hundred media queries or giving interviews related to core subjects and work areas of the Radiocommunication Bureau during this period. Issuing articles and radiocommunication experts giving interviews targeting UN World Days related to the work of the Bureau was also a new focus during 2020 e.g. World Amateur Radio Day, Space Week, World Standards Day, World Maritime Day, World Radio Day – to name a few.

#### 8.6.2.1 FAQs, Media Backgrounders & ITU News

The following Frequently Asked Questions (FAQs), Backgrounders for the media, articles and ITU News magazines, and other resources continued to be crafted or maintained during 2020.

FAQs:

* [ITU-R FAQ on Universal Time Scale (UTC) – Leap Second](https://www.itu.int/en/ITU-R/Documents/ITU-R-FAQ-UTC.pdf)
* [ITU-R FAQ on International Mobile Telecommunications (IMT)](https://www.itu.int/en/ITU-R/Documents/ITU-R-FAQ-IMT.pdf)
* [ITU-R FAQ on the Digital Dividend and the Digital Switchover (DSO)](https://www.itu.int/en/ITU-R/Documents/ITU-R-FAQ-DD-DSO.pdf)
* [ITU-R FAQ on Radio Regulations](https://www.itu.int/en/ITU-R/terrestrial/Pages/by-categories-faq.aspx?maincategorizedby=1)

Backgrounders for the media and the general public:

* Terrestrial Issues:
	+ [5G - Fifth Generation of Mobile Technologies (IMT-2020 and beyond)](https://www.itu.int/en/mediacentre/backgrounders/Pages/5G-fifth-generation-of-mobile-technologies.aspx)
	+ [5G, human exposure to electromagnetic fields (EMF) and health](https://www.itu.int/en/mediacentre/backgrounders/Pages/5G-EMF-health.aspx)
	+ [High-Altitude Platform Systems (HAPS)](https://www.itu.int/en/mediacentre/backgrounders/Pages/High-altitude-platform-systems.aspx)
	+ [Radiocommunications for keeping ships and people safe at sea](https://www.itu.int/en/mediacentre/backgrounders/Pages/Radiocommunications-for-keeping-ships-and-people-safe-at-sea.aspx)
* [ITU Study Groups](https://www.itu.int/en/mediacentre/backgrounders/Pages/itu-study-groups.aspx)
* [ITU-R: Managing the radio-frequency spectrum for the world](https://www.itu.int/en/mediacentre/backgrounders/Pages/itu-r-managing-the-radio-frequency-spectrum-for-the-world.aspx)
* Satellite issues:
	+ [Earth stations in motion (ESIM)](https://www.itu.int/en/mediacentre/backgrounders/Pages/Earth-stations-in-motion-satellite-issues.aspx)
	+ [Non-GSO satellite systems](https://www.itu.int/en/mediacentre/backgrounders/Pages/Non-geostationary-satellite-systems.aspx)
	+ [Non-GSO satellite systems with short duration missions](https://www.itu.int/en/mediacentre/backgrounders/Pages/non-GSO-satellite-systems-with-short-duration-missions.aspx)

MyITU

As from the release of MyITU (beta) in the 4th Quarter of 2020, the following four BR articles were amongst the top 10 most visited articles on MyITU News:

* [Ham radio and emergency comms: Filling the USGS 'donut hole' - My ITU](https://www.itu.int/en/myitu/News/2020/07/24/18/15/Ham-radio-emergency-comms-Filling-USGS-donut-hole)
* [Five key uncertainties around high-speed Internet from low Earth orbit - My ITU](https://www.itu.int/en/myitu/News/2020/08/18/07/51/Uncertainties-high-speed-Internet-low-earth-orbit-LEO-satellite-broadband)
* [Why this year’s World Radiocommunication Seminar plenary is open to everyone: ITU Radiocommunication Bureau Director Mario Maniewicz - My ITU](https://www.itu.int/en/myitu/News/2020/11/27/17/53/World-Radiocommunication-Seminar-WRS-20-plenary-open-to-all-Mario-Maniewicz)
* [Satellite Innovation Space Technology to reach the Unconnected](https://www.itu.int/en/myitu/News/2020/10/13/07/22/Satellite-innovation-Space-technology-to-reach-the-unconnected)
* [Here’s how the diversity of radio services improves lives worldwide](https://news.itu.int/heres-how-the-diversity-of-radio-services-improves-lives-worldwide/)
* World Radio Day:
	+ 2020: [Here’s how the diversity of radio services improves lives worldwide](https://news.itu.int/heres-how-the-diversity-of-radio-services-improves-lives-worldwide/)
	+ [2021](https://www.itu.int/en/myitu/News/2021/02/12/10/47/Celebrating-resilience-radio-World-Radio-Day-2021-Mario-Maniewicz): [Celebrating the resilience of radio](https://www.itu.int/en/myitu/News/2021/02/12/10/47/Celebrating-resilience-radio-World-Radio-Day-2021-Mario-Maniewicz)

Articles in ITU News:

* [10 things you didn’t know rely on the ITU Radio Regulations - My ITU](https://www.itu.int/en/myitu/News/2020/11/16/08/16/10-things-rely-on-ITU-Radio-Regulations)
* [ITU Radio Regulations updated - My ITU](https://www.itu.int/en/myitu/News/2020/09/14/14/08/ITU-Radio-Regulations-updated-2020-Edition)
* [How ITUs Radiocommunication Sector is working towards the Connect 2030 Agenda - My ITU](https://www.itu.int/en/myitu/News/2020/05/23/12/02/How-ITUs-Radiocommunication-Sector-is-working-towards-the-Connect-2030-Agenda)
* [Reducing digital exclusion: Africa's roadmap towards WRC-23 - My ITU](https://www.itu.int/en/myitu/News/2020/09/01/07/19/Reducing-digital-exclusion-Africa-Region-Roadmap-to-WRC-23-Mario-Maniewicz)
* [Amid rising sound broadcasting demand, Africa paves the road to more FM stations - My ITU](https://www.itu.int/en/myitu/News/2020/10/15/09/12/Rising-sound-broadcasting-demand-Africa-FM-stations-John-Omo)
* More ITU News articles by the BR Director can be found [here](https://news.itu.int/?s=By+Mario+Maniewicz%2c+Director)

ITU News Magazine – special editions:

* [ITU News Magazine - Space science for achieving the Sustainable Development Goals - My ITU](https://www.itu.int/en/myitu/Publications/2021/01/15/13/00/ITU-News-Magazine-no-6-2020)

Other resources created, maintained and updated during this period are:

* [Free online access to ITU-R Publications, Software and Databases](http://www.itu.int/oth/R040200003F/en)
* [Artificial Intelligence (AI) making radiocommunications smarter](https://www.itu.int/en/action/ai/emerging-radio-technologies/Pages/default.aspx)
* [ITU global standard for international mobile telecommunications ´IMT for 2020 and beyond´](https://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5d/imt-2020/Pages/default.aspx)
* [Radiocommunications and Climate Change](https://www.itu.int/en/ITU-R/information/Pages/climate-change.aspx)
* [Emergency Radiocommunications](https://www.itu.int/en/ITU-R/information/Pages/emergency.aspx)
* [ITU-R Sector contribution to Bridging the Digital Disabilities Divide](https://www.itu.int/ITU-R/go/disabilities-divide/en)

#### 8.6.2.3 Branding communications, Sales and Marketing

The branding and communication activities carried out during 2020 centered around using the new MyITU platform in collaboration with Sales and Marketing to promote the following ITU-R Publications:

* [Final Acts of WRC-19 - My ITU](https://www.itu.int/en/myitu/Publications/2020/06/25/16/38/Final-Acts-of-WRC-19)
* [Radio Regulations 2020 - My ITU](https://www.itu.int/en/myitu/Publications/2020/09/02/14/23/Radio-Regulations-2020)
* [Maritime Manual 2020 - My ITU](https://www.itu.int/en/myitu/Publications/2020/09/02/14/28/Maritime-Manual-2020)
* [The RR5 Software - My ITU](https://www.itu.int/en/myitu/Publications/2020/10/30/17/09/The-RR5-Table-of-Frequency-Allocations-software)
* [List V - List of Ship Stations and Maritime Mobile Service Identity Assignments 2020 - My ITU](https://www.itu.int/en/myitu/Publications/2020/09/02/14/38/List-V---List-of-Ship-Stations-and-Maritime-Mobile-Service-Identity-Assignments-2020)

#### 8.6.2.4 Exhibitions and demos

Due to the global health crisis and resulting global travel restrictions, there were no exhibitions and demos organized during this period.

#### 8.7 Gender Equity

Promoting gender equality in all spheres of today’s digital society has never been more crucial as the world embarks on the Decade of Action to achieve the 2030 Agenda for Sustainable Development. Digital technologies are crucial to the attainment of all the 17 Sustainable Development Goals and increasing the share of women with access to and using digital technologies to better their lives - and by extension improve the lives of their families and society is a development challenge we all have a stake in.

The following activities were set up in 2020:

### 8.7.1 RAG Correspondence Group on Gender

At the last WRC-19, the ITU Member states unanimously adopted a declaration that promotes gender equality, equity and parity in the work of the ITU Radiocommunication Sector. As a follow-up for the implementation of the WRC-19 Gender Declaration, the **Radiocommunication Advisory Group (RAG)** - which among others reviews the priorities and strategies adopted in the Radiocommunication Sector - established a **Correspondence Group on Gender** to consider an appropriate course of action to initiate and implement the provisions of the WRC-19 Gender Declaration before the next Radiocommunication Assembly (RA-23).

The meeting endorsed the appointment of Mrs. Lucia Luisa La Franceschina of Italy as the Chairman of the Correspondence Group and Mrs. Olfa Jammeli of Tunisia as its Vice Chairman. Under their leadership, the Correspondence Group will also provide guidance and encouragement toward the equitable selection of chairmen, vice chairmen, and rapporteurs in the work of the ITU-R Study Groups and their Working Parties or other subgroups, the Conference Preparatory Meeting (CPM), and in the work of the Radiocommunication Advisory Group itself.

ITU-R Member States and Sector Members are encouraged to actively participate in the work of the RAG Correspondence Group on Gender by registering through the dedicated website available [here](https://www.itu.int/en/ITU-R/conferences/rag/cg-gender/Pages/default.aspx).

### 8.7.2 Network of Women for WRC-23 (#NOW4WRC23)

Prior to the WRC-19, the ITU Network of Women for WRC-19 was launched, which is dedicated to promoting women in radiocommunications, telecommunications/ICT and related fields to help meet UN Sustainable Development Goal 5 on achieving gender equity. The aim of this initiative was to start building capacity and to encourage larger participation of women in key roles, to attend our meetings and conferences as delegates, chairs, and vice-chairs, for example, and to work towards achieving the 30 percent threshold necessary for any real change. Additionally, it aims to encourage greater gender inclusion, to ensure women delegates play key roles for future radiocommunications conferences and events, and to grow the ITU women's community, capacity, and contribution.

Shortly after the last meeting of the GTF (25.11.20), the **Network of Women for WRC-23** had its [kick-off meeting](https://www.itu.int/en/mediacentre/Pages/cm08-2020-Radiocommunication-Sector-gender-equality-equity-parity.aspx) alongside the 2020 World Radiocommunication Seminar (WRS-20) on 30.11.20. Also, all regional co-chairs have been nominated and finally confirmed: CITEL-Jennifer Manner (USA); CEPT-Amela Hatibovic-Sehic (Sweden); ASMG-Asma Al Mheiri (UAE) and Zeina Mokaddem (Inmarsat); APT- Ms. Zhu Keer (China); RCC (TBC); ATU-Aminata Niang Diagne (Senegal); and regional NOW4WRC23-meetings have been held alongside regional meetings (e.g. ECC PT1, 27.01.2021).

The RAG Correspondence Group on Gender will support and provide input to the ongoing work of the **“Network of Women for WRC-23”** to enhance and maximize the effectiveness of this initiative.

**9 Remaining follow-up actions requested by RAG at its meeting in 2020**

In response to RAG’s requests at its 2020 meeting as contained in the Summary of Conclusions (Administrative Circular [CA/252](https://www.itu.int/md/R00-CA-CIR-0252/en)), in addition to what has been reported in the sections above, BR has implemented the following actions:

**9.1 Compendium of WRC plenary decisions not reflected in the Radio Regulations**

Under agenda item 4 of CA/252, RAG noted that a [compendium of past WRC plenary decisions](https://www.itu.int/en/ITU-R/conferences/RRB/Documents/ai%204_1_compendium%20to%20be%20published%20as%20special%20topics_English.docx) which are not reflected in the Radio Regulations, is already available on the Radio Regulations Board (RRB) website. However, RAG requested that this information be more prominently displayed on the ITU-R website for easy access by the membership. This document has been updated to include the relevant WRC-15 plenary decisions (see Circular Letter [CR/389](https://www.itu.int/md/R00-CR-CIR-0389/en)) and WRC-19 plenary decisions (see Circular Letter [CR/456)](https://www.itu.int/md/R00-CR-CIR-0456/en), which complement the relevant plenary decisions of past WRCs since 1995 already contained in the document. In addition to the location on the RRB website, other suitable locations on the ITU-R website have been identified where this document is now also linked, e.g., the web pages of CPM and Study Groups.

**9.2 Other actions carried out by the BR Study Groups Department**

The other actions requested by the RAG at its 2020 meeting were carried out by the BR SGD and are presented in Section 9 of Addendum 1 to this document.

**ANNEX**

**Proposed update to ITU-R section of Annex 2 of
C14/INF/4 - Measures and Principles for Interpretation and Translation in ITU**

| **ITU-R** | ***Languages*** | ***Remarks*** |
| --- | --- | --- |
|  | **E** | **A** | **C** | **S** | **F** | **R** |  |
| **1. Radiocommunication Assembly** |  |  |  |  |  |  |  |
| Interpretation | x | x | x | x | x | x |  |
| Contributions | x | x | x | x | x | x |  |
| 1000 series | x | x | x | x | x | x |  |
| Agendas  | x | x | x | x | x | x |  |
| Information documents | x | x | x | x | x | x | Depends on contents |
| Lists of participants | x |  |  |  |  |  |  |
| Resolutions | x | x | x | x | x | x |  |
| **2 WRC** |  |  |  |  |  |  |  |
| Interpretation | x | x | x | x | x | x |  |
| Agenda of the conference | x | x | x | x | x | x |  |
| Reports/contributions/proposals | x | x | x | x | x | x |  |
| Working/temporary documents | x | x | x | x | x | x |  |
| Daily agendas | x | x | x | x | x | x |  |
| Administrative documents | x | x | x | x | x | x |  |
| Information documents | x | x | x | x | x | x | Depends on contents |
| List of participants | x |  |  |  |  |  |  |
| Minutes | x | x | x | x | x | x |  |
| Provisional Final Acts | x | x | x | x | x | x |  |
| **3. WRC information sessions [[4]](#footnote-5)** |  |  |  |  |  |  |  |
| Interpretation | x | x | x | x | x | x |  |
| **4a. RAG**  |  |  |  |  |  |  |  |
| Interpretation | x | x | x | x | x | x |  |
| Contributions  | x | x | x | x | x | x |  |
| Temporary documents  | x |  |  |  |  |  |  |
| RAG summary of conclusions | x | x | x | x | x | x |  |
| **4b. Study groups** |  |  |  |  |  |  |  |
| Interpretation  | x | x | x | x | x | x |  |
| All document types  | x |  |  |  |  |  |  |
| **5. RRB** |  |  |  |  |  |  |  |
| Interpretation | x | x | x | x | x | x | Depends on composition of the Board |
| All document types | x | x | x | x | x | x |  |
| **6. World radiocommunication seminars** |  |  |  |  |  |  |  |
| Interpretation | x | x | x | x | x | x | Plenary sessions only |
| Documents | x | x | x | x | x | x |  |
| Presentations | x |  |  |  |  |  |  |
| **7. Publications** |  |  |  |  |  |  |  |
| Approved Recommendations | x | x | x | x | x | x |  |
| ITU-R Reports | x | x | x | x | x | x | Depends on contents |
| Handbooks | x | x | x | x | x | x | Depends on contents |
| Opinions | x | x | x | x | x | x |  |
| Radio Regulations | x | x | x | x | x | x |  |
| BR-IFIC | x | x | x | x | x | x |  |
| Preface to IFL | x | x | x | x | x | x |  |
| Rules of Procedure | x | x | x | x | x | x |  |
| Final Acts (definitive) | x | x | x | x | x | x |  |
| HFBC schedule | x |  |  | x | x |  |  |
| Maritime Manual | x | x | x | x | x | x |  |
| Service publications (maritime) | x | x | x | x | x | x |  |
| Lists  | x | x | x | x | x | x |  |
| **8. Administrative documents** |  |  |  |  |  |  |  |
| Circulars  | x | x | x | x | x | x | Except circulars concerning working parties/task groups (E only) |
|  annexes | x | x | x | x | x | x | Depends on contents |
| Promotional material and website | x | x | x | x | x | x | Depends on contents |
| General information to delegates | x | x | x | x | x | x | Depends on contents |

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1. \* The precise planned dates for CPM23-2 will be determined based on the dates of WRC-23, once established. [↑](#footnote-ref-2)
2. \*\* These dates may be postponed after the planned dates for CPM23-2 have been determined. [↑](#footnote-ref-3)
3. \*\*\* These dates and the venue may change depending on the evolution of the Covid-19 situation. [↑](#footnote-ref-4)
4. Res. 72 (Rev. WRC-07). [↑](#footnote-ref-5)