



Radiocommunication Bureau (BR)

Administrative Circular
CA/246

24 April 2019

To Administrations of Member States of the ITU and Radiocommunication Sector Members

Subject: Summary of conclusions of the twenty-sixth Radiocommunication Advisory Group meeting

The Radiocommunication Advisory Group (RAG) met for the twenty-sixth time from 15 to 17 April 2019 in Geneva.

The summary of conclusions of the meeting is contained in the Annex to this letter.

Additional information about this meeting may be found on the RAG website at <http://www.itu.int/ITU-R/go/RAG>.

Mario Maniewicz
Director

Annex: 1

Distribution:

- Administrations of Member States of ITU
- Observer (Resolution 99 (Rev. Dubai, 2018))
- Observers which participate in an advisory capacity pursuant to Nos. 278 and 279 of the ITU Convention
- Observers from Sector Members of the Radiocommunication Sector which do not participate in an advisory capacity pursuant to No. 280 of the ITU Convention
- Chairmen and Vice-Chairmen of Radiocommunication Study Groups
- Chairman and Vice-Chairmen of the Radiocommunication Advisory Group
- Chairman and Vice-Chairmen of the Conference Preparatory Meeting
- Members of the Radio Regulations Board
- Secretary-General of ITU, Deputy Secretary-General of ITU, Director of the Telecommunication Standardization Bureau, Director of the Telecommunication Development Bureau

ANNEX

SUMMARY OF CONCLUSIONS OF THE
TWENTY-SIXTH RADIOCOMMUNICATION ADVISORY GROUP MEETING

Radiocommunication Advisory Group
Geneva, 15-17 April 2019



Document
RAG19/TEMP/2-E (edited)
16 April 2019
English only

Chairman, RAG

TWENTY-SIXTH MEETING OF THE
RADIOCOMMUNICATION ADVISORY GROUP

SUMMARY OF CONCLUSIONS

SUMMARY OF CONCLUSIONS

Agenda Item	Subject	Conclusions
1	Opening remarks	<p>The meeting was officially opened by the Chairman, Mr. Daniel Obam (Kenya). The ITU Secretary-general delivered his opening remarks and called on all participants to work with focus on the forthcoming Conference in Sharm el-Sheikh scheduled to take place from October 28 until November 22, 2019. The Director of the BDT made her opening remarks and welcomed participants to this session, stressing her willingness to cooperate with the Radiocommunication Bureau. The BR Director also welcomed all participants to this first RAG meeting of the cycle and stressed the role of the RAG in providing advice to the Director on the way forward to better responding to membership requests in a more efficient and effective manner.</p> <p>The Chairman congratulated the SG and the two Directors present and expressed his appreciation to Member States and Sector Members for their contribution to the work of the RAG. He further invited RAG vice-chairs and RRB members present in the room to introduce themselves.</p>
2	Approval of the agenda <i>(Doc. RAG19/ADM/1(Rev.1))</i>	The draft agenda in Doc. RAG19/ADM/1(Rev.1) was adopted without changes.
3	PP-18 results	RAG noted the report on PP-18 results, with emphasis on issues relating to the work of the ITU-R sector, including the Strategic and financial Plans for the period 2020- 2023.
4	Council-19 related matters <i>(Doc. RAG19/1 + Add.2)</i>	<p>RAG noted the continued progress on free online access to ITU-R publications, as well as the efforts made in the field of Conformance and interoperability.</p> <p>RAG agreed with the Director's proposal to change the structure of the report that is being presented to the meeting, with the objective of maintaining some degree of consistency with the other ITU reporting documents, particularly those submitted to Council with similar information. RAG, however, reminded the Bureau that clear distinction should be made among the reports as they do not address the same audience and in consideration of the different mandates.</p> <p>RAG noted the information provided in the Director's report on cost recovery for satellite network fillings and called on the Bureau to inform WRC-19 on the excessive number of submissions under Article 6 of Appendix 30B the overwhelming majority of which are of global coverage with limited small service area.</p>

Agenda Item	Subject	Conclusions
		<p>RAG noted the draft budget of the Bureau for the period 2020-2021. The meeting noted the report on the Space protocol following the decision of PP-18. RAG also invited the bureau to rationalize its participation in the Regional preparatory meetings through enhanced use of remote presentation by the Bureau where possible and other electronic modes of participation. The Director was requested to provide the list of missions to the next meeting of the RAG. The meeting also highlighted the necessity of early recruitment of newly budgeted positions in order to ensure that staff members recruited for the said positions would be able to take on their duties on the first day of 2020, which will correspond to the budget availability.</p>
5	<p>Implementation of WRC-15 Decisions (Docs. RAG19/1), 13</p>	<p>RAG noted actions undertaken so far by the Bureau to implement WRC-15 decisions relating to both space and terrestrial services, in particular the software development activities implementing Resolutions 907 and 908. RAG also highlighted the satisfaction expressed by those who have started utilizing the systems developed by the Bureau and encouraged the Bureau to continue in this direction cautiously in order to ensure that the entire membership is carried along. RAG noted that the Bureau is now able to make most notices of satellite networks available “as received” within 7 days against the 30 days as prescribed in Resolution 55 (Rev.WRC-15). RAG considered Doc. RAG19/13 from Japan and noted the proposals contained. The document highlighted the importance and effectiveness in the use of online submission tools and urged the Bureau to accelerate the process by implementing the tools for all types of comments and communications and to modernize the webpages dedicated to space services on its website, based on the success achieved so far with Resolution 908. RAG expressed its appreciation to the Administration of Japan for its continued support and contributions to the implementation of Resolution 908, which has allowed the BR to recruit web developers in addition to a full time engineer seconded by the administration of Japan to the ITU to assist in this project.</p>
6	<p>RA/WRC-19 preparation (Docs. RAG19/1)</p>	<p>RAG noted the report on the preparations for RA-19/WRC-19 and the successful completion of CPM19-2. The meeting also recognized the efforts being made by the Bureau in assisting Member States in their preparation for the Conference by attending the Regional preparatory meetings to explain the intricacies of some of the agenda items. RAG was also reminded that the RA-19 and WRC-19 will be conducted in a paperless manner, in line with the provisions of PP-18, Decision 5, Annex 2. RAG also noted the success of two previous inter-regional workshops organized in Geneva in preparation for the forthcoming Conference and the next session scheduled to take place from 4-6 September 2019 in Geneva. The meeting appreciated the Bureau’s participation in the regional preparatory activities and invited the Bureau to carefully consider its level of participation at the initial</p>

Agenda Item	Subject	Conclusions
		<p>Regional preparatory meetings of the inter-WRC cycle with a view to focusing more on the final meetings when substantive discussions will be taking place. RAG was informed that the Host Country Agreement for the holding of the RA-19/WRC-19/CPM23-1 in Egypt was signed on 25 March, 2019 and that all arrangements are now on track.</p> <p>RAG noted some issues relating to ITU-R Resolution 2 and urged Member States to reflect on the way forward. It was proposed that a correspondence group be established to review and possibly propose revisions to the resolution to be submitted to RA-19. RAG applauded the proposal to appoint Mr. Alexander Vassiliev as the Chairman of the Correspondence Group and approved the Terms of Reference of the Group (see Annex 2).</p>
7	<p>Study Group activities (Docs. RAG19/1(Add.1), 14, 17, 18, 19)</p>	<p>RAG noted the report on Study Group activities, in particular the progress achieved in its work and in the use of modern tools. The meeting also noted the progress made in the preparatory work carried by the respective Study Groups for RA-19 and WRC-19 and even beyond. It also noted that the increased participation in Study Group meetings, as well as the heavy schedule of ITU meetings combined with limited availability of meeting rooms at the ITU secretariat is continuing to pose logistical challenges for the scheduling of meetings of the ITU-R Study Groups and their associated Working Parties and sub-groups. RAG noted Document 17 from the Russian Federation and indicated that the Russian Federation might consider submitting it to RA-19 for consideration. RAG also noted Document 14 from Japan.</p> <p>RAG further noted documents 18 and 19 from the Russian Federation and indicated that the Russian Federation might consider submitting them to RA-19 for further consideration.</p>
8	<p>Draft Rolling Operational plan for 2020-2023 (Docs. RAG19/1(Add.2), 20)</p>	<p>RAG noted the draft rolling Operational Plan of the ITU-R for the period 2020-2023 (as included in Annex 1), and commented on the outcomes and outcome indicators. The meeting called for review of section 5.1. and called on the Bureau to review what is being measured and how best the items contained in the report could be reflected in the future operational plans. RAG also noted that the approach followed is the one approved by the PP-18 in the Strategic plan of the Union, which is the basis of the Operational plan. RAG requested the Director to review the proposed draft operational plan for 2020 if possible with new proposals.</p> <p>RAG further noted the proposed draft rolling Operational Plan of the General Secretariat for 2020-2023.</p>

Agenda Item	Subject	Conclusions
9	BR information system (Doc. RAG19/1))	<p>RAG noted the progress made by the BR in software development. The meeting further recognized efforts by the BR in migrating existing applications to modern platforms. RAG applauded efforts made by the BR in modernizing its software systems and providing more user friendly interfaces wherever possible. RAG also noted the importance that the Bureau attributes to the use of modern applications to facilitate the work of membership.</p> <p>The meeting noted with appreciation a number of software developments and enhancements made by BR. For terrestrial services these include the introduction of online free of charge HFBC schedules and software, integration of GE06 agreement Article 4 processing into TerRaSys, extension of web tools with terrestrial data, calculations and correspondences, development of GIS tools and some others. For space services, the most important achievements are the progress on the BR Space Information Systems roadmap and the release of the operational version of the on-line application “Satellite Interference Reporting and Resolution System”.</p>
10	Inter-sector coordination (Docs. RAG19/1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 21)	<p>RAG noted the information contained in addendum of the Director’s report concerning ITU-R cooperation with ITU-D and ITU-T, as well as with international and regional organizations.</p> <p>RAG also considered the liaison statements on Inter-sector coordination contained in Docs. RAG19/2 from ITU-T Study Group 5, RAG19/3 from ITU-R Working Party 5A, 5B and 5C to ITU-T 2,5,9,12,13,15,16 and RAG, RAG19/4 from TDAG to Chairman RAG19, RAG19/5 from ITU-T Study Group 5 to ITU-R Working Parties 1,A, 1B and 1C, RAG19/6 from ITU-T Study Group 5 to ITU-R Working Parties 5A, 5B and 5C, RAG19/7 from Chairman inter-Sector Coordination Group (ISCG) to RAG for consideration, RAG19/8 from TSAG to RAG on updated mapping on common interest areas, RAG19/9 from ITU-T Study Group 9 to RAG, RAG19/10 from TSAG to RAG for review and possible feedback and RAG19/21 which has summarized the liaison statements contained in this report.</p> <p>RAG urged study group counsellors to continue to draw the attention of participants of their respective study groups to the issues highlighted in the Liaison statements and did not recommend to respond directly to the liaison statements. RAG noted the mapping proposed by TSAG and ITU-T study groups. RAG further noted document RAG19/21 which includes the text of the liaison statement from TSAG, giving the mapping of questions and resolutions of common interests. The mapping of ITU-D study groups 1 and 2 questions with those of ITU-R relevant study groups will be posted on the Inter-Sector Coordination Group (ISCG) website (Table 1, Annex 3 to document RAG19/21).</p>

Agenda Item	Subject	Conclusions
11	Membership outreach activities <i>(Docs. RAG19/1, 15,16)</i>	<p>RAG noted the continued effort by the BR in providing free online access to its publications. The different types of BR publications and their related approach with regards to access was explained. RAG also noted the work carried out by the BR with regards to assistance to membership and urged the Bureau to continue the good effort. RAG considered Doc. 15 from China that raised two principal questions: a) training for Nano and Pico satellite operators; b) development of a handbook on this topic. The meeting advised the administration of China on the following actions: a) Introduce Nano and Pico satellite operators to ITU workshops and seminars where these issues are being considered. RAG also noted that the ITU is willing and is at the disposal of the administration of China to discuss their training needs and structure the best possible approach; b) Submit its proposal to the relevant ITU-R Study Groups for consideration of establishing a Handbook for Nano and Pico satellites.</p> <p>RAG also supported the proposal from Brazil to maintain the archive of recorded sessions of the WRS, including its related workshop activities, which helps increasing knowledge sharing with small enterprises and enables membership to review the content at a later stage. The BR director offered to consider this possibility. However, he mentioned that not all the sessions were carried out in rooms with recording facilities.</p> <p>RAG considered Doc. 16 from Cuba and noted their concerns with regards to access to software tools developed by the BR with emphasis on the tool developed for navigating the Radio Regulations. RAG noted the fact that this type of tools is not normally included in the free online category. Nevertheless, RAG requested the Director to take a closer a look at this request and evaluate options that could accommodate developing countries and facilitate their acquisition of such tools.</p> <p>RAG noted the request for the harmonization of ITU websites, an activity that the Deputy Secretary General is coordinating within the secretariat.</p>
12	Date of next meeting	The 27 th meeting of the RAG is planned to take place from 6 to 9 April 2020.
13	Any other business	

ANNEXES:

ANNEX 1: Draft ITU-R four-year Rolling Operational Plan (source: Doc. RAG19/1 Add.2)

ANNEX 2: Terms of reference of the RAG correspondence group on the review and possible revision of Resolution ITU-R 2-7 (source: Doc. TEMP/1Rev.1)

ANNEX 1

DRAFT ITU-R FOUR-YEAR ROLLING OPERATIONAL PLAN

(Source: Doc. RAG19/1-Add.2)

Radiocommunication Advisory Group
Geneva, 15-17 April 2019



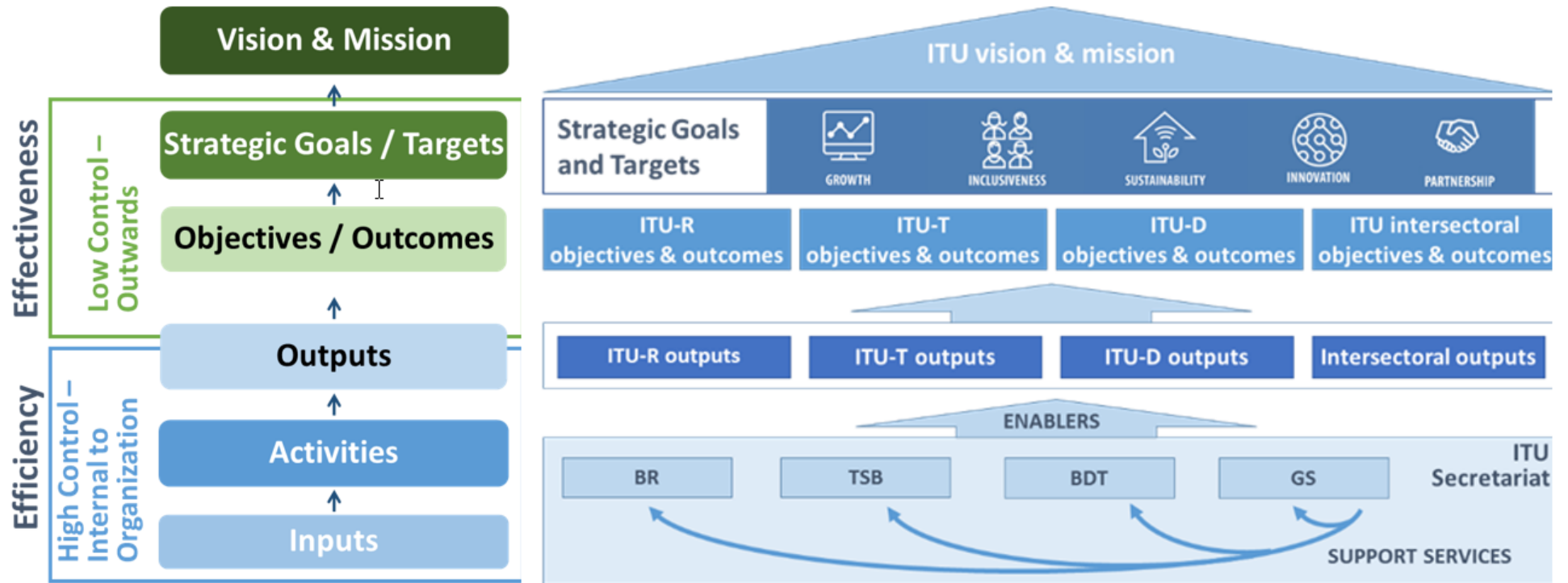
**Revision 1 to
Addendum 2 to
Document RAG19/1-E
27 March 2019
Original: English**

Director, Radiocommunication Bureau

REPORT TO THE TWENTY-SIXTH MEETING OF THE RADIOCOMMUNICATION ADVISORY GROUP

1 Introduction

The four-year rolling Operational Plan for the ITU-R, has been prepared in full alignment with the ITU Strategic Plan for 2020-2023, within the limits of the Financial Plan for 2020-2023 and the biennial budget 2020-2021. The structure follows the ITU results framework, outlining the Sector objectives, the corresponding outcomes and the indicators to measure their progress, as well as the outputs (products and services) produced by the activities of the Sector as well as the enablers by the Bureau.



2 Key priorities

The ITU-R Sector

Outline and key priorities for the ITU-R Sector

The period 2020-2023 will be marked by the completion of the implementation of the decisions of RA-19 and WRC-19, the preparation of RA-23 and WRC-23 as well as the implementation of their decisions and the development of key standards and best practices in radiocommunications. The key issues are listed below, against the four operational activities of the ITU-R Sector and the supporting activities of the Radiocommunication Bureau:

2.1 To establish and update international regulations on the use of the radio-frequency spectrum and satellite orbits

- The implementation of the decisions of WRC-19,
- The adoption by the RRB of the associated Rules of Procedure.

2.2 To implement and apply international regulations on the use of the radio-frequency spectrum and satellite orbits

- The development and delivery to the membership of the software tools relating to the application of the Radio Regulations and associated Rules of Procedure,
- The proper and timely application of the provisions of the Radio Regulations and applicable Regional Agreements for terrestrial and space services, with the update of the Master International Frequency Register (MIFR) and assignment and/or allotment Plans and Lists,
- The monitoring of harmful interference cases and more generally of disputes in sharing spectrum/orbit resources and the resolution of these cases,
- The associated publications (BR IFIC, Maritime service publications, list of international monitoring stations).

2.3 To establish and update worldwide Recommendations, Reports and Handbooks for the most efficient use of the radio-frequency spectrum and satellite orbits

- The preparation of RA-23 and WRC-23 in ITU-R Study Groups and in close collaboration with the regional groups, including the development of draft technical, regulatory, and procedural texts in support of the CPM23-2,
- The development of key Recommendations, Reports and Handbooks, in particular on the radio interface of IMT-2020, in close cooperation with ITU-T, regional organizations and other standard-making bodies.

2.4 To inform and assist the ITU-R membership in radiocommunication matters

- The publication and promotion of the ITU-R products (such as Radio Regulations, Recommendations, Reports, and Handbooks).
- In close cooperation with the other Sectors, the ITU regional offices, the relevant regional organizations, and the membership,

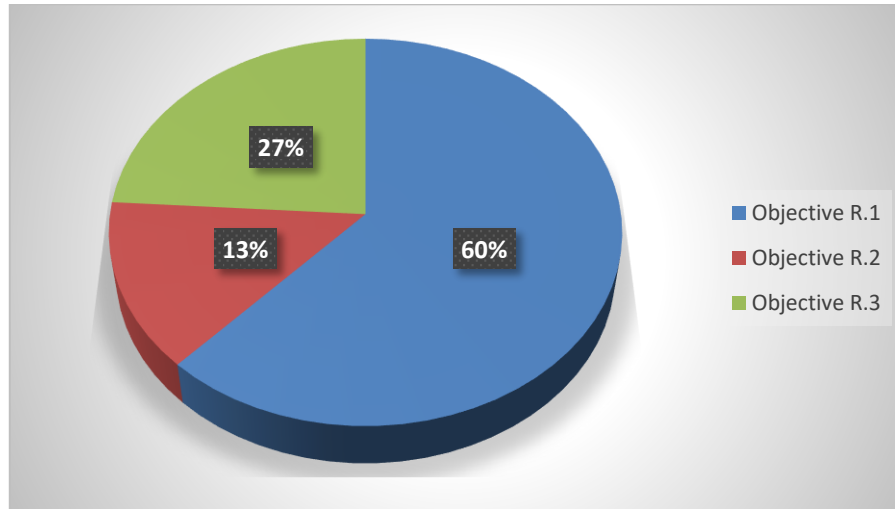
- The dissemination and sharing of information, including Worldwide and Regional Radiocommunication seminars, conferences, workshops and other events.
- The assistance to the membership in facing the challenges raised by the development of their radiocommunication services, in particular in relation to the transition to digital television broadcasting and the use of the digital dividend.

2.5 Supporting activities of the Radiocommunication Bureau

- The continuing development, improvement, and maintenance of the BR software tools, with a view to maintaining a high level of efficiency, reliability, user-friendliness, and satisfaction of the membership.
- The logistical and administrative support to ITU-R Study groups and the participation in the related activities of the regional groups.
- The assistance to membership, in close collaboration with the other Bureaux, the ITU regional offices, and the regional organizations.

3 Objectives, outcomes and outputs

3.1 Allocation of resources to ITU-R objectives and outputs for 2020-2021



R.1 Spectrum/orbit regulation and management	60%
R.2 Radiocommunication standards	13%
R.3 Knowledge sharing	27%

Planned allocation of resources per Output

	% of total	% of objective
R.1-1 Final acts of world radiocommunication conferences, updated Radio Regulations	3%	4%
R.1-2 Final acts of regional radiocommunication conferences, regional agreements	1%	2%
R.1-3 Rules of Procedure adopted by Radio Regulations Board (RRB)	4%	7%
R.1-4 Publication of space notices and other related activities	35%	59%
R.1-5 Publication of terrestrial notices and other related activities	17%	28%
R.2-1 Decisions of Radiocommunication Assembly, ITU-R resolutions	1%	9%
R.2-2 ITU-R recommendations, reports (including the CPM report) and handbooks	10%	73%
R.2-3 Advice from the Radiocommunication Advisory Group	2%	18%
R.3-1 ITU-R publications	11%	39%
R.3-2 Assistance to members, in particular developing countries and LDCs	7%	26%
R.3-3 Liaison/support to development activities	2%	
R.3-4 Seminars, workshops and other events	7%	9%
	26%	

* Cost of these Outputs is allocated to all the Objectives of the Union.

4 Risk analysis

Moving from strategy to implementation, the following top-level operational risks presented in the Table below have been identified, analysed and evaluated. The Bureaux and each Department will manage all the risks associated with the achievement of the corresponding outcomes.

RISK FOCUS	DESCRIPTION OF RISK	PROBABILITY	IMPACT LEVEL	MITIGATION ACTIONS ¹
OPERATIONAL RISK	a) Total or partial loss of integrity of data in the MIFR or in any of the Plans, resulting in inadequate protection of the rights of administrations to use spectrum/orbit resources	Low	Very High	<ul style="list-style-type: none"> - Daily backup of data - Development of high data security program - Ability to restore data/operation within a limited time period
	b) Total or partial loss of operations in the processing of notices, resulting in delays in the recognition of rights of administrations to use spectrum/orbit resources and risks for the corresponding investments.			
	c) Occurrence of harmful interference (e.g. due to lack of observance of the regulatory provisions), resulting in disruptions in the radiocommunication services provided by the membership.	Low	High	<ul style="list-style-type: none"> - Promote capacity building on international regulations, through worldwide and regional seminars, and any other appropriate events - Provide BR assistance in applying the international regulations - Promote regional or sub-regional coordination to resolve interference problems, with BR support - Report, inform and assist in resolving cases of harmful interference in accordance with the instructions to the Director of the Bureau in Resolution 186 (Rev. Dubai 2018)
ORGANIZATIONAL RISK	Inadequate facilities for meetings in ITU (e.g. due to lack of meeting rooms and overcrowded meetings schedule), resulting in membership dissatisfaction and delays in work programmes.	Medium	High	<ul style="list-style-type: none"> - Hold more meetings externally - Increase the use of virtual meeting rooms for small meetings

² Risk owners will be appointed by the Director of the Bureau.

5 Objectives, outcomes and outputs for 2020-2023

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

5.1 ITU-R

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

Outcome	Outcome Indicator	2015	2016	2017	2018	2023 target	Source
R.1-1: Increased number of countries having satellite networks and earth stations recorded in the Master International Frequency Register (MIFR)	Number of countries having satellite networks recorded in the MIFR	52	56	63	69	70	BR/MIFR
	Number of countries having earth stations recorded in the MIFR	76	77	78	81	120	
R.1-2: Increased number of countries having terrestrial frequency assignments recorded in the MIFR	Number of countries having terrestrial frequency assignments recorded in the MIFR	190	190	190	192	193	BR/MIFR
	Number of countries which registered terrestrial assignments in the MIFR within the last 4-year period	84	79	81	81	90	
R.1-3: Increased percentage of assignments recorded in the MIFR with favourable finding	Subject to Coordination (Terrestrial)	99.87%	99.88%	99.86%	99.87%	99.99%	BR/MIFR
	Subject to a Plan (Terrestrial)	74.46%	74.32%	74.40%	74.46%	75%	
	Others	98.37%	98.46%	98.46%	98.49%	98.49%	
R.1-4: Increased percentage of countries which have completed the transition to digital terrestrial television broadcasting	Percentage of countries which have completed the transition to digital terrestrial television	27%	28%	30%	30%	70%	BR & BDT

Outcome	Outcome Indicator	2015	2016	2017	2018	2023 target	Source
R.1-5: Increased percentage of spectrum assigned to satellite networks which is free from harmful interference	% of spectrum assigned to satellite networks which is free from harmful interference	99.96%	99.96%	99.96%	99.94%	99.99%	BR/MIFR
R.1-6: Increased percentage of assignments to terrestrial services recorded in the MIFR which are free from harmful interference	Percentage of assignments to terrestrial services recorded in the Master Register which are free from harmful interference (based on the number of cases reported to the ITU)	99.99%	99.99%	99.99%	99.99%	99.99%	BR/MIFR

Output	Financial resources ² (in k CHF)			
	2020	2021	2022	2023
R.1-1 Final acts of world radiocommunication conferences, updated Radio Regulations	1,622	1,685	1,958	8,934
R.1-2 Final acts of regional radiocommunication conferences, regional agreements	644	637	258	344
R.1-3 Rules of Procedure adopted by Radio Regulations Board (RRB)	2,387	2,055	2,311	2,322
R.1-4 Publication of space notices and other related activities	21,608	21,280	16,933	16,933
R.1-5 Publication of terrestrial notices and other related activities	10,321	10,138	8,412	8,083
Cost allocation to Plenipotentiary Conference and Council activities (PP, Council/CWGs)				
Total for Objective R.1				

²Estimates for 2022-2023. Allocation of resources for the subsequent years is subject to change upon Senior Management decisions.

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

Outcome	Outcome Indicator ³	2014	2015	2016	2017	2018	2023 target	Source
R.2-1: Increased mobile-broadband access, including in frequency bands identified for international mobile telecommunications (IMT)	Number of subscriptions (bn)	7.01	7.22	7.51	7.81	8.16	9.2	ITU BDT ICT Statistics
	% of mobile broadband subscriptions	38%	45%	51%*	55%*	65%		
	Number of subscribers (bn)	4.83	4.98	5.18	5.63	6.34	6.34	
R.2-2: Reduced mobile-broadband price basket, as a percentage of gross national income (GNI) per capita	Mobile broadband price basket as percentage of GNI per capita (prepaid, handset 500 MB) World	5.50	3.88	3.61	3.6	3.6	4	ITU BDT ICT Statistics
	<i>Developed Countries</i>	0.75	0.57	0.65	0.6	0.6		
	<i>Developing Countries</i>	7.2	5.1	4.6	4.8	4.8		
	<i>Least Developed Countries</i>	17.0	11.4	9.21	10.4	10.4		
	Number of countries with a price basket below 5%	117	135	150	145	145	193	
R.2-4: Increased number of households with digital terrestrial television reception	Number of households with DTT (millions)	203.3	235.5	271.9	311	335	453	Digital TV World Databook report, July 2017; Digital TV Research Ltd Databook report
	<i>Number of households with ATT (millions)</i>	319.8	251.6	184.1	136	104		
	<i>Total number of households DTT + ATT (millions)</i>	514.1	487.1	456	447	439		
	% of households with DTT	10.3%	11.8%	13.5%	14.90%	15.80%	22.70%	
	% of households with ATT	16.3%	12.6%	9.1%	6.50%	4.90%		
	% of households with Terrestrial TV	26.6%	24.5%	22.6%	21.40%	20.80%		

³ "n/a" specifies that indicator values are not yet available.

* Estimates.

Outcome	Outcome Indicator ³	2014	2015	2016	2017	2018	2023 target	Source
R.2-5: Increased number of satellite transponders (equivalent 36 MHz) in operation and corresponding capacity (Tbit/s); Number of VSAT terminals; Number of households with satellite television reception	Number of satellite transponders (equivalent 36 MHz) in operation	15997	17953	19772	25056	30742		Euroconsult (http://www.euroconsult-ec.com)
	Corresponding capacity (in Tbit/s)	1.095	1.269	1.491	1.978	2.581		Euroconsult (http://www.euroconsult-ec.com)
	Number of VSATs (millions)	3.786	3.891	3.838	3.972	4.082	4.35	Global VSAT Forum (https://gvf.org)
	Number of DTH (millions)	359.2	407.9	411.1	416	424	439	Digital TV World Databook report, July 2017; Digital TV Research Ltd
R.2-6: Increased number of devices with radionavigation-satellite reception	Number of operational GNSS constellations/satellites	2/48	4/75	5/90		6/137	6/144	BR/MIFR
	Number of devices with GNSS embedded Rx (billions)	3.6	4.2	5.0	5.8*	6.5*		European GNSS Agency: GNSS Report (https://www.gsa.europa.eu)
R.2-7: Increased number of Earth exploration satellites in operation, corresponding quantity and resolution of transmitted images and data volume downloaded (Tbytes)	Number of ERS satellites	180	215	219		265	440	BR/MIFR
	Quantity of transmitted images (million)	62	68	71				To be obtained from UN OOSA, UN Special Working Group
	Size of downloaded images (Terabytes)	27,000	35,000	37,000				To be obtained from UN OOSA, UN Special Working Group

Output	Financial resources ⁴ (in k CHF)			
	2020	2021	2022	2023
R.2-1 Decisions of the Radiocommunication Assembly, ITU-R resolutions	711	703	8,670	9,019
R.2-2 ITU-R recommendations, reports (including the CPM report) and handbooks	5,929	6,109	5,635	6,063
R.2-3 Advice from the Radiocommunication Advisory Group	1,430	1,521	1,367	1,340
Cost allocation to Plenipotentiary Conference and Council activities (PP, Council/CWGs)				
Total for Objective R.2				

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

Outcome	Outcome Indicator	2015	2016	2017	2018	2023 target	Source
R.3-1: Increased knowledge and know-how on the Radio Regulations, Rules of Procedures, regional agreements, recommendations and best practices on spectrum use	Number of ITU-R free online publication downloads (millions) ⁵	0.9	1.0	1.7	1.57	4	ITU-R Events Registration Database
	Number of capacity-building events organized/supported by BR (presence & virtual)	25	38	37	34	29	
	Number of participants on capacity building events organized/supported by ITU/BR (cumulated during the period between two WRCs)	1,518	737	1,363	669	2,000	
R.3-2: Increased participation in ITU-R activities (including through remote participation), in particular by developing countries	Number of technical assistances/events with BR participation	93	100	111	110	100	ITU-R Mission Plan
	Number of countries receiving BR technical assistance/events	78	61	62	74	80	ITU-R Mission Plan
	Number of participants/events in ITU-R conferences, assemblies and Study Group-related meetings (presence & virtual)	8972/38	6042/48	7061/52	4560/47	4560/47	ITU-R Events Registration Database
	Number of countries participating in ITU-R seminars and workshops, SG and WP meetings and events (presence & virtual)	161	130	78	137	193	ITU-R Events Registration Database

⁴ Estimates for 2022-2023. Allocation of resources for the subsequent years is subject to change upon Senior Management decisions..

* Estimates.

⁵ This number is appropriate for comparison purposes only, as the download of a single document/publication might count as several downloads.

Output	Financial resources ⁶ (in k CHF)			
	2020	2021	2022	2023
R.3-1 ITU-R publications	6,611	6,495	7,237	5,938
R.3-2 Assistance to members, in particular developing countries and LDCs	4,312	4,321	2,871	2,644
R.3-3 Liaison/support to development activities	1,521	1,456	1,637	1,674
R.3-4 Seminars, workshops and other events	4,355	4,625	3,862	3,677
Cost allocation to Plenipotentiary Conference and Council activities (PP, Council/CWGs)				
Total for Objective R.3				

⁶ Estimates for 2022-2023. Allocation of resources for the subsequent years is subject to change upon Senior Management decisions.

ANNEX 2

TERMS OF REFERENCE OF THE RAG CORRESPONDENCE GROUP ON THE REVIEW AND POSSIBLE REVISION OF RESOLUTION ITU-R 2-7

(Source: Doc. TEMP/1-Rev.1)

Radiocommunication Advisory Group
Geneva, 15-17 April 2019



Source: Addendum 1 to Document RAG19/1

**Revision 1 to Document
RAG19/TEMP/1-E (edited)
16 April 2019
English only**

Radiocommunication Advisory Group

TERMS OF REFERENCE OF THE RAG CORRESPONDENCE GROUP ON THE REVIEW AND POSSIBLE REVISION OF RESOLUTION ITU-R 2-7 ON

Conference Preparatory Meeting

Introduction:

During the closing CPM19-2 plenary session, it was requested to include in the Summary of discussions that it may be useful to revise Resolution ITU-R 2-7 in order to address the several points regarding the CPM, including the methods to satisfy agenda items and inclusion or otherwise of options, alternatives, views associated with these methods (see Section 4 of Doc. [CPM19-2/248](#)).

In addition, the Director of Radiocommunication Bureau was invited to kindly, if possible, indicate any improvement to Resolution ITU-R 2-7 to facilitate the task of RA-19 when considering the possible revision of that Resolution.

Apart from several points included in Doc. [CPM19-2/248](#), clarifications were sought during CPM19-2 on the application of the last sentence of *resolves* 1 of Resolution ITU-R 2-7, and in the response provided by the ITU Legal Advisor, it was indicated that a revision of this text should be envisaged, as appropriate. The Group should also consider decisions of previous RAG meetings where applicable and appropriate.

In view of the above, the RAG at its session in 2019 was invited to consider an appropriate course of action to initiate prior to RA-19 a review and the preparation of a possible draft revision of Resolution ITU-R 2-7. The RAG decided to establish a Correspondence Group to that aim with the Terms of Reference in the Annex.

ANNEX

Term of reference of the RAG Correspondence Group on the review and possible revision of Resolution ITU-R 2-7

In accordance with §§ A1.4.1 to A1.4.4 of Resolution ITU-R 1-7 and with Resolution ITU-R 52-1, review and prepare a draft revision of Resolution ITU-R 2-7 for consideration by the Chairman of the RAG and subsequent submission to the Radiocommunication Assembly 2019, taking into account the information provided in Section 6.8 of Add. 1 to Doc. RAG19/1, and any other additional proposals submitted to the Correspondence Group.

In particular, the Correspondence Group should address the structure for description of the method(s) to satisfy the agenda item as well as the criteria related to options, views and alternatives, if any, and the need to refer to advantages and disadvantages, if yes, where this reference to be made.

The Correspondence Group shall submit its final report by 20 September 2019 to the Chairman of the RAG.

The Chairman of the Correspondence Group is Mr Alexandre V. Vassiliev (E-mail: alexandre.vassiliev@mail.ru). Other relevant information for the work of this Correspondence Group (e.g. email reflector) will be provided on the RAG webpage.
