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| **Agenda item: ADM 1** | **Document C24/63-E** |
| **9 April 2024** |
| **Original: English** |
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| Report by the Secretary-General | |
| ANNUAL BUDGETARY IMPLICATIONS OF ADDRESSING THE WRC-23 DECISIONS | |
| **Purpose**  The Report of the Budget Control Committee ([Doc. 460(Rev.1](https://www.itu.int/md/R23-WRC23-C-0460/en))) of the WRC-23, identified the conference decisions, including additional areas of work, technical studies, and software developments, that required additional financial resources to be implemented. The estimated costs for the completion of these new activities are in the magnitude of 12.5 MCHF in combined one-time and recurrent expenses. WRC-23 requested the Secretary-General to bring this to the attention of the Council-24 session to discuss the most effective methodology for the funding of these activities as they should be concluded prior to the World Radiocommunication Conference scheduled to take place in 2027 (WRC-27).  The meeting of Council Working Group on Financial and Human Resources (CWG-FHR), which took place in January 2024, reviewed this matter and concluded that the request be submitted to the Council-24 session. This document provides the additional information requested during that CWG-FHR meeting (see §§20.4-20.5 of [CWGFHR17-24](https://www.itu.int/md/S24-CWGFHR17-C-0024/en)).  **Action required by the Council**  The Council is invited to take note of this document.  **Relevant link(s) with the Strategic Plan**  WRC outcomes are linked to the two strategic goals of the Union.  **Financial implications**  The financial implications of the WRC-23 decisions were estimated at CHF 12.5 million over the 2024-2027 timeframe. The annual budgetary implications are contained herein, and the funding is proposed in document [C24/19](https://www.itu.int/md/S24-CL-C-0019/en).  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **References**  [*WRC Doc. 460(Rev.1)*](https://www.itu.int/md/R23-WRC23-C-0460/en)*,* [*CWG-FHR-17/12*](https://www.itu.int/md/S24-CWGFHR17-C-0012/en)*,*[*CWGFHR17-24*](https://www.itu.int/md/S24-CWGFHR17-C-0024/en) *, Council documents* [*C24/13*](https://www.itu.int/md/S24-CL-C-0013/en)*,* [*C24/19*](https://www.itu.int/md/S24-CL-C-0019/en)*,* [*C24/INF/2*](https://www.itu.int/md/S24-CL-INF-0002/en) | |

# Introduction

The World Radiocommunication Conference, held in Dubai, UAE from 20 November to 15 December 2023, adopted some decisions on new activities, studies, and improvement of existing systems and infrastructure to enable the Radiocommunication Bureau respond in a timely manner to membership demands and also address strategic issues that will require the attention of WRC-27. WRC-23 identified these activities as priority areas for the ITU-R and the Radiocommunication Bureau is mandated to implement these activities and report to the forthcoming Conference (WRC‑27).

# Financial implications of decisions or resolutions of the Conference (WRC-23)

On the basis of the outcomes of the conference, the Budget Control Committee estimated that the financial implications of the WRC-23 decisions were CHF 12.5 million (see [C24/INF/2](https://www.itu.int/md/S24-CL-INF-0002/en)). For convenience, this section presents the information provided in the Report of the WRC-23 Budget Control Committee. Table 1 sets forth overall summary of the estimates in each of the major areas of responsibilities, as follows:

* Study Group – financial implications related to preparations for the 2027 and 2031 World Radiocommunication Conferences
* Terrestrial - financial implications related to updates to the radio regulations related to the terrestrial services
* Space - financial implications related to updates to the radio regulations related to the space services

**Table 1**

**FINANCIAL IMPLICATIONS FOR 2024 – 2027**

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## Financial implications for WRC-27 preparations and for terrestrial and space services

The Budget Control Committee identified the costs of the WRC-23 decisions with respect to the resources needed to prepare for WRC-27, which is mainly borne by the BR Study Groups Department, the costs of updating BR software systems used in filing and processing applications for frequency assignments in the terrestrial or space services, and the costs of additional staff needed to address higher workloads in identified areas. Tables 2-1, 2-2 and 2-3 provide the details of the financial implications of the WRC-23 in terms of both one-time and annual recurring costs.

**Table 2-1**

**ADDITIONAL COSTS FOR WRC-27 PREPARATIONS**

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**Table 2-2**

**ADDITIONAL cOSTS FOR TERRESTRIAL SERVICES SOFTWARE DEVELOPMENT**



**Table 2-3**

**ADDITIONAL cOSTS FOR space SERVICES SOFTWARE DEVELOPMENT**



# 2024 Budgetary implications of WRC-23 decisions

## 2024 Budgetary implications for WRC-27 preparations

The preparatory process for the WRC-27 is being initiated by each ITU-R Study Group and its associated Working Parties, in accordance with the outcomes and decisions of the first Conference Preparatory Meeting for the WRC-27, which was held in Dubai, UAE on 18-19 December 2023 and reported in [CA-270](https://www.itu.int/md/R00-CA-CIR-0270/en). The Budget Control Committee identified that some of WRC-27 agenda items would require holding more meetings and producing more documentation than is currently planned. These costs, however, would not be borne in 2024 because the ITU-R Study Groups and their associated Working Parties are just commencing the preparatory process and structuring their work programs and the studies to be carried out. For this reason, none of the costs associated with WRC-27 preparations would be incurred in 2024.

## 2024 Budgetary implications for WRC-23 decisions related to space and terrestrial services

The new software developments needed for implementing the WRC-23 decisions for space and terrestrial services would impose a one-time cost to the BR. The budget for these developments is required in 2024 so that this work could be carried out prior to the Radio Regulations (2024 Version) coming into force on 1 January 2025. Table 3-1 shows the 2024 costs to BR of implementing the conference decisions for space and terrestrial services.

**TABLE 3-1**

**2024 BUDGET NEEDED SPACE AND TERRESTRIAL SERVICES SOFTWARE DEVELOPMENT**

|  |  |
| --- | --- |
|  |  |
| **WRC-23/Final Acts Reference and Description** | **CHF** |
| **Software development for terrestrial radiocommunication services** | |
| New conditions and pfd limit calculations for HIBS | 175,284.00 |
| IMT pfd limit calculation with associated antenna directivity under No. 5.441B *Note 1* | 52,585.00 |
| New IMT spectrum mask for the 6 GHz band *Note 2* | 70,144.00 |
| New AM(OR)S pfd limit for protection of incumbent services in the 22 GHz band | 52,585.00 |
| **Total** | **350,568.00** |
| **Software development for space radiocommunication services** | |
| Res 406 (WRC-23): AMS(R) service in band 117.975-137 MHz | 43,821.00 |
| Res 678 (WRC-23): Space research service in the frequency band 14.8-15.35 GHz | 78,877.80 |
| Res 121 (WRC-23): AP30B ESIM | 438,210.00 |
| Res 123 (WRC-23): NGSO ESIM | 350,568.00 |
| Res 679 (WRC-23): Inter-satellite links: Protection of space and terrestrial services | 350,568.00 |
| Res 8 (WRC-23): Tolerances for certain orbital characteristics of NGSO | 262,926.00 |
| AI 7C (WRC-23): Protection of GSO MSS in 7/8 GHz and 20/30 GHz bands | 43,821.00 |
| AI 7D2 (WRC-23): RR AP4 parameters for Rec ITU-R S.1503 updates | 35,056.80 |
| AI 7D3 (WRC-23): BIU and BBIU reminders | 43,821.00 |
| AI 7K (WRC-23): Changes to Attachment to Res 553 | 26,292.60 |
| AI 9.1 (WRC-23): RR Article 21 changes | 26,292.60 |
| AI 9.1.d (WRC-23): Protection of EESS (passive) in band 36-37 GHz | 87,642.00 |
| AI 9.3 (WRC-23): Changes to AP30B Art 6 and Art 8, plenary minutes | 17,528.40 |
| AI 7E (WRC-23): Changes to AP30B Art 7 and Art 10 | 175,284.00 |
| AI 7F (WRC-23): Changes to AP30A Art 4 and AP30B Art 6 | 175,284.00 |
| AI 7G (WRC-23): Change to Res 770 EPFD Validation software | 175,284.00 |
| Res 126 (WRC-23): Temporary measures in AP30B | 87,642.00 |
| Res 676 + AI 9.2 (WRC-23): Changes to 9.52.1 (unacceptable interference), RR21, and improvements of BR processing | 87,642.00 |
| Res 677 (WRC-23): EESS (active) for spaceborne radar sounders | 148,991.40 |
| AI 1.19 (WRC-23): FSS (space-to-Earth) in band 17.3-17.7 GHz in Region 2 | 148,991.40 |
| Res 35 (Rev. WRC-23): NGSO BIU post-milestone procedure | 175,284.00 |
| **Total** | **2,979,828.00** |
| **Grand total** | **3,330,396.00** |

*Note 1*: The need for this software development was identified during WRC-23 when a possible relaxation of the pfd limit in No. **5.441B** had been discussed. Since WRC-23 decided to retain the pfd limit adopted by WRC-19 and the notification of a detailed IMT antenna pattern was not specified in the RR Appendix **4**, this software development is no longer required and can be removed from Table 3-1.

*Note 2*: During the discussions at the meetings of some Regional Groups after WRC-23 and the RAG-24, it has been identified that the compliance with the IMT spectrum mask for the 6 GHz band in Resolution **220 (WRC-23)** should be verified at a national level and communicated to BR by the relevant commitment of the notifying administration. Consequently, this software development is no longer required and can be removed from Table 3-1.

# Budgetary implications of WRC-23 Decisions for 2025-2027

## Budgetary implications of WRC-27 Preparatory Process for 2025 – 2027

Taking into account that draft text for the CPM27 Report will be due around the end of 2026, the additional meetings and documentation are presumed to occur in 2025 and 2026. The additional workload for the BR secretariat would persist through entire period. Table 4-1 presents the additional costs for the WRC-27 preparatory process in 2025-2027.

**TABLE 4-1**

**ADDITIONAL COSTS OF WRC-27 PREPARATORY PROCESS FOR 2025-2027**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2025** | **2026** | **2027** |
| **WRC-23/Final Acts Reference and Description** | **CHF** | **CHF** | **CHF** |
| WRC-27 Agenda Items requiring additional meetings by the concerned group(s) to be fully accomplished within the study cycle. Among other technical subjects, new areas of studies like space weather, communications on the moon, inter-satellite links, would result in additional activities Note 3 | 41’500 | 41’500 |  |
| Additional documentation would also be required, e.g. increase of translation and text processing Note 4 | 255’950 | 255’950 |  |
| The BR secretariat would need additional resources to support additional workload (1 G6 and 1 P3 staff equivalent) | 326’340 | 326’340 | 326’340 |
| **Total** | **623’790** | **623’790** | **326’340** |

*Note 3:* Most of these topics will impact the workload of SG4 (Satellite services) however, there will be some others that may be assigned to SG5 (Terrestrial services), SG7 (Science services) and/or SG1 (Spectrum management).

*Note 4:* Based on the above, we therefore estimate a need to have about additional 30 Working Party meeting days (including remote participation and webcast services) and about 3 additional Study Group meeting days (including captioning, interpretation, text translations of about 500 pages, remote participation and webcast services). All the above is under the assumption that the meetings of WPs are held in ITU HQ.

## Recuring Budgetary implications for terrestrial services

The WRC-23 Budget Control Committee did not identify any recurring financial implications for either the processing of terrestrial services submissions or for the maintenance of terrestrial services-related software.

## Recurring Budgetary implications for space services

The WRC-23 Budget Control Committee did, however, identify recurring financial implications for both the processing of space services submissions and for the maintenance of space services-related software. These costs are shown below in Tables 4-2 and 4-3, respectively.

## TABLE 4-2 Recurring budgetary implications for space services submissions processing (2025-2027)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **2025** | | **2026** | | **2027** | |
| **WRC-23/Final Acts Reference and Description** | **P3-level staff equivalent** | **CHF** | **P3-level staff equivalent** | **CHF** | **P3-level staff equivalent** | **CHF** |
| Res 121 (WRC-23): AP30B ESIM | 3 | 525'852.00 | 3 | 525'852.00 | 3 | 525'852.00 |
| Res 123 (WRC-23): NGSO ESIM | 2 | 350'568.00 | 2 | 350'568.00 | 2 | 350'568.00 |
| Res 679 (WRC-23): Inter-satellite links: Protection of space and terrestrial services | 1 | 175'284.00 | 1 | 175'284.00 | 1 | 175'284.00 |
| Res 8 (WRC-23): Tolerances for certain orbital characteristics of NGSO | 1 | 175'284.00 | 1 | 175'284.00 | 1 | 175'284.00 |
| AI 7E (WRC-23): Changes to AP30B Art 7 and Art 10 | 0.35 | 61'349.40 | 0.35 | 61'349.40 | 0.35 | 61'349.40 |
| AI 7F (WRC-23): Changes to AP30A Art 4 and AP30B Art 6 | 0.35 | 61'349.40 | 0.35 | 61'349.40 | 0.35 | 61'349.40 |
| AI 7H (WRC-23): Changes to AP30, AP30A, AP30B (Method H1C) | 0.25 | 43'821.00 | 0.25 | 43'821.00 | 0.25 | 43'821.00 |
| Res 126 (WRC-23): Temporary measures in AP30B | 0.15 | 26'292.60 | 0.15 | 26'292.60 | 0.15 | 26'292.60 |
| Res 76 (Rev. WRC-23): EPFD aggregate interference software | 0.25 | 43'821.00 | 0.25 | 43'821.00 | 0.25 | 43'821.00 |
| Res 676 + AI 9.2 (WRC-23): Changes to 9.52.1 (unacceptable interference), RR21, and improvements of BR processing | 0.5 | 87'642.00 | 0.5 | 87'642.00 | 0.5 | 87'642.00 |
| Res 677 (WRC-23): EESS (active) for spaceborne radar sounders | 0.05 | 8'764.20 | 0.05 | 8'764.20 | 0.05 | 8'764.20 |
| AI 1.19 (WRC-23): FSS (space-to-Earth) in band 17.3-17.7 GHz in Region 2 | 0.125 | 21'910.50 | 0.125 | 21'910.50 | 0.125 | 21'910.50 |
| Res 35 (Rev. WRC-23): NGSO BIU post-milestone procedure | 0.25 | 43'821.00 | 0.25 | 43'821.00 | 0.25 | 43'821.00 |
| **Total** | **9.275** | **1'625'759.10** | **9.275** | **1'625'759.10** | **9.275** | **1'625'759.10** |

## TABLE 4-3 Recurring budgetary implications for space services-related software maintenance (2025-2027)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **2025** | | **2026** | | **2027** | |
| **WRC-23/Final Acts Reference and Description** | **P3-level staff equivalent** | **CHF** | **P3-level staff equivalent** | **CHF** | **P3-level staff equivalent** | **CHF** |
| Res 121 (WRC-23): AP30B ESIM | 0.25 | 43'821.00 | 0.25 | 43'821.00 | 0.25 | 43'821.00 |
| Res 123 (WRC-23): NGSO ESIM | 0.2 | 35'056.80 | 0.2 | 35'056.80 | 0.2 | 35'056.80 |
| Res 679 (WRC-23): Inter-satellite links: Protection of space and terrestrial services | 0.2 | 35'056.80 | 0.2 | 35'056.80 | 0.2 | 35'056.80 |
| Res 8 (WRC-23): Tolerances for certain orbital characteristics of NGSO | 0.15 | 26'292.60 | 0.15 | 26'292.60 | 0.15 | 26'292.60 |
| Res 676 + AI 9.2 (WRC-23): Changes to 9.52.1 (unacceptable interference), RR21, and improvements of BR processing | 0.05 | 8'764.20 | 0.05 | 8'764.20 | 0.05 | 8'764.20 |
| Res 677 (WRC-23): EESS (active) for spaceborne radar sounders | 0.1 | 17'528.40 | 0.1 | 17'528.40 | 0.1 | 17'528.40 |
| AI 1.19 (WRC-23): FSS (space-to-Earth) in band 17.3-17.7 GHz in Region 2 | 0.1 | 17'528.40 | 0.1 | 17'528.40 | 0.1 | 17'528.40 |
| Res 35 (Rev. WRC-23): NGSO BIU post-milestone procedure | 0.1 | 17'528.40 | 0.1 | 17'528.40 | 0.1 | 17'528.40 |
| **Total** | **1.15** | **201'576.60** | **1.15** | **201'576.60** | **1.15** | **201'576.60** |

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