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Proposed programme budget for 2022

Programme planning

Proposed programme budget for 2022

Part II
Political affairs

Section 6
Peaceful uses of outer space

Programme 5
Peaceful uses of outer space

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* A/76/50.

** In keeping with paragraph 11 of resolution 72/266 A, the part consisting of the programme plan and programme performance information is submitted through the Committee for Programme and Coordination for the consideration of the General Assembly.

*** In keeping with paragraph 11 of resolution 72/266 A, the part consisting of the post and non-post resource requirements is submitted through the Advisory Committee on Administrative and Budgetary Questions for the consideration of the General Assembly.

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Foreword

Over the course of 2022, the Office for Outer Space Affairs will continue to facilitate and support global policy discussions among Member States to ensure a more safe, secure and sustainable outer space.

The year 2020 has amplified the trend set in the late 2010s. The global record for satellites launched in a year was broken by 118 per cent. While this is a great success, such rapid deployment of new objects into space also poses challenges and risks. To guarantee that the space sector can thrive and reach its full potential in both developed and developing contexts, certain prerequisites must be met, and to that end continued dialogue and multilateral engagement is pivotal.

The Office will also, in line with its mandate, seek innovative ways to ensure that space benefits are accessible to all in order to bridge the prevalent gap in space capabilities. One of the highlights of 2020 was the launch by Guatemala of its first satellite, making it the second nation to succeed under the Office's Access to Space for All initiative, underlining the transformative power of robust partnerships and international cooperation and demonstrating the importance and relevance of the United Nations.

A considerably higher degree of emphasis must also be devoted to establishing a more inclusive and diverse sector, which will in turn translate into innovation and higher productivity and revenue generation. Therefore, the Office will intensify its efforts towards achieving gender equality in the sector, seek opportunities to engage people with disabilities on space science and continue efforts to elevate the voices of the youth.

Finally, as space is a game-changer, especially with regard to supporting countries in the achievement of the Sustainable Development Goals, the Office will further reinforce its assistance to States, through its established programmes, to strengthen their capacities in space science and technology and their applications and to increase understanding of the normative framework that guides the conduct of outer space activities. The Office will capitalize, as appropriate, on the lessons of 2020, applying solutions and other innovative tools, including those that have proven effective in achieving greater reach, to build back better.

(*Signed*) Simonetta **Di Pippo**
Director, Office for Outer Space Affairs

A. Proposed programme plan for 2022 and programme performance for 2020

Overall orientation

Mandates and background

6.1 The Office for Outer Space Affairs is responsible for advancing international cooperation in space activities. The mandate derives from the priorities established in relevant General Assembly resolutions and decisions, including resolutions 1472 A (XIV) and 74/82, on international cooperation in the peaceful uses of outer space, 74/67, on transparency and confidence-building measures in outer space activities, and 75/92 on the continuity of the work of the Committee on the Peaceful Uses of Outer Space and its subsidiary bodies, as appropriate.

6.2 The core functions of the Office are: (a) serving as the secretariat of the Committee on the Peaceful Uses of Outer Space and its subsidiary bodies (resolution 1472 A (XIV)), as the executive secretariat of the International Committee on Global Navigation Satellite Systems and its Providers' Forum (resolutions 61/111 and 64/86) and as the secretariat of the Space Mission Planning Advisory Group (resolution 71/90); (b) implementing the United Nations Programme on Space Applications (resolutions 2601 (XXIV) and 37/90) and the Programme on the Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) (resolution 61/110); (c) maintaining the Register of Objects Launched into Outer Space (resolutions 1721 B (XVI) and 3235 (XXIX)); and (d) discharging the responsibilities of the Secretary-General under the United Nations treaties and principles on outer space and related resolutions (resolutions 2222 (XXI), 2345 (XXII), 2777 (XXVI), 3235 (XXIX), 34/68, 37/92, 41/65, 47/68, 59/115 and 62/101).

6.3 New technologies and the increasing number of actors are rapidly changing the structure and content of space activities. This increasingly complex environment, combined with the relevance of space science and technology and their applications for achieving the goals of the global agenda, as well as the need to ensure the long-term sustainability of outer space activities, are the main drivers of the responsibilities of the Office under the programme.

Programme of work

Peaceful uses of outer space

Objective

6.4 The objective, to which this programme contributes, is to strengthen international cooperation in the conduct of space activities for peaceful purposes and advance the use of space science and technology and their applications.

Strategy

6.5 To contribute to the objective, the Office for Outer Space Affairs will continue to work with Member States to promote cooperation in the peaceful uses of outer space, particularly through substantive secretariat services to the Committee on the Peaceful Uses of Outer Space, the Scientific and Technical Subcommittee, the Legal Subcommittee and their working groups, among which is the Working Group on the Long-term Sustainability of Outer Space Activities. The Working Group, under a five-year workplan, will be guided by the following framework: (a) identifying and studying challenges and considering possible new guidelines for the long-term sustainability of outer space activities; (b) sharing experiences, practices and lessons learned from the voluntary national implementation of the adopted guidelines; and (c) raising awareness and building capacity, in

particular among emerging space nations and developing countries. The Committee on the Peaceful Uses of Outer Space serves as the principal forum for continued institutionalized dialogue on issues related to the implementation and review of the guidelines. The Office would also support and provide services to the International Committee on Global Navigation Satellite Systems and its Providers' Forum and the Space Mission Planning Advisory Group.

6.6 The Office also plans to work with Member States, inter- and non-governmental entities and other partners to implement specific initiatives and activities to advocate for the responsible use of outer space, including through: (a) the implementation of the international regime governing space activities; (b) the registration of space objects launched into outer space; (c) space debris mitigation; (d) transparency and confidence-building measures in outer space activities as appropriate; and (e) civil satellite-based positioning, navigation, timing and value added services, which will help Member States make progress towards ensuring a more safe, secure and sustainable outer space.

6.7 The Office will, in line with its mandate, deliver workshops, seminars, training courses, technical advisory missions and initiatives and provide support and other services to assist States with: (a) building or enhancing their capacities in areas such as space law and policy, space sustainability, climate change, environmental monitoring, natural resources management, global health, satellite communications, space weather, space exploration, astronomy, search and rescue, disaster risk reduction and global navigation satellite systems; (b) promoting and enhancing knowledge-sharing; (c) supporting institution-building efforts; and (d) developing collaborative platforms to increase the number of countries, in particular developing countries, that make use of space-based solutions to accelerate the achievement of the Sustainable Development Goals.

6.8 The Office also plans to continue supporting the regional centres for space science and technology education, established by and affiliated with the United Nations, located in Africa (Morocco and Nigeria), Asia and the Pacific (China and India), Latin America and the Caribbean (Brazil and Mexico) and Western Asia (Jordan), which, inter alia, deliver education and training in one or more of the following disciplines: remote sensing and geographic information systems; meteorological satellite applications; satellite communications and geopositioning systems; space and atmospheric science; and global navigation satellite systems.

6.9 The Office will further continue to raise awareness on the work of the Committee on the Peaceful Uses of Outer Space, the activities and initiatives of the Office and on the benefits of space activities, especially with regard to achieving sustainable development, by: (a) organizing outreach activities, including the commemoration of historical milestones, international days and other celebrations; and (b) developing and issuing publications, papers, information materials and training media.

6.10 For 2022, the Office's planned deliverables and activities reflect strengthened approaches which incorporate lessons from the coronavirus disease (COVID-19) pandemic. Such planned deliverables and activities include assistance and capacity development on the use of space technologies to address resilient recovery efforts, increasing the development of online courses and training materials and making greater use of national experts when possible to ensure continuity of services.

6.11 The above-mentioned work is expected to result in:

(a) Greater participation in the work of the Committee on the Peaceful Uses of Outer Space, its Scientific and Technical Subcommittee, Legal Subcommittee and their working groups;

(b) Greater understanding, acceptance and application of the international legal regime governing outer space activities;

(c) Greater access to space, and strengthened capacity of countries, in particular developing countries, in using science and technology and related applications, especially with regard to achieving sustainable development;

(d) Enhanced cooperation and greater compatibility and interoperability of global navigation satellite systems;

(e) Greater understanding, access and capacity to use all types of space-based information and services to support disaster risk reduction and emergency response;

(f) Strengthened cooperative relationships and the forging of new partnerships to maximize the effective use of resources, and identify new ways and means to make space capabilities more readily available to all users.

External factors for 2022

6.12 With regard to the external factors, the overall plan for 2022 is based on the planning assumption that stakeholders are able and willing to continue supporting the Office for Outer Space Affairs in implementing the programme, including the execution of the activities in the anticipated framework, and in responding to the needs arising from the rapidly changing structure and content of space activities.

6.13 With regard to the COVID-19 pandemic, the programme plan is based on the assumption that the proposed deliverables and activities for 2022 will be feasible to implement. However, if the pandemic were to continue to have an impact on the planned deliverables and activities, they would be adjusted during 2022 within the scope of the overall objectives, strategies and mandates. Any such adjustments would be reported as part of the programme performance information.

6.14 With regard to cooperation with other entities at the global, regional, national and local levels, the Office will, in line with its mandate, continue to leverage its established partnerships with governmental, intergovernmental and non-governmental organizations, including space agencies, industry, academia, institutions and other space-related entities, to explore avenues and pursue new opportunities to increase its capability to meet the growing demand for support to strengthen the capacity of countries, in particular developing countries, in using space science and technology and their applications. The Office will also pursue cooperative relationships, including with the private sector, to identify new mechanisms for providing access to space and bringing the benefits of space to everyone.

6.15 With regard to inter-agency coordination and liaison, the Office will continue to lead the Inter-Agency Meeting on Outer Space Activities (UN-Space), which promotes coordination and cooperation among the participating entities. Through that mechanism, the Office will work to increase coherence and synergies in the space-related work of entities of the United Nations system, including through the establishment of bilateral engagements on specific topics of mutual interest.

6.16 The Office integrates a gender perspective in its operational activities, deliverables and results, as appropriate, as demonstrated by the launch in 2020, on the occasion of the International Day of Women and Girls in Science, of the Space4Women platform, a dedicated website to promote women's empowerment in space and advocate for greater awareness and the importance of science, technology, engineering and mathematics (STEM) education. The platform also includes a mentorship programme where professionals of diverse backgrounds and geographic regions who work in the space sector can work with mentees to inspire, guide and encourage women and girls to pursue STEM careers. The Office also instituted a set of guidelines for its staff to apply to increase the participation of women in its events and activities, which will continue to be mainstreamed in future events and activities.

6.17 The Office will further seek to integrate disability inclusion in its programme of activities, and work with specialized associations and agencies, including by engaging decision makers, to facilitate and assist initiatives that target inclusivity in space science and enhance the prospects of careers in STEM for disabled persons.

Evaluation activities

6.18 No self-evaluations were completed in 2020. The self-evaluation of the Beijing Office of UN-SPIDER was initiated in the latter half of 2020 and will be completed in 2021, and the findings are expected to be integrated into the annual workplan and strategy of the Beijing Office for the period 2021–2024.

6.19 A self-evaluation of the information technology and communications needs of the Office aimed towards consolidating its websites, databases and portals to ensure alignment with the United Nations policies and guidelines on website rationalization and compliance is planned for 2022.

Programme performance in 2020

6.20 Programme performance in 2020 includes the below result that emerged during 2020, as well as programme performance presented under results 1 and 2 below.

Greater access to capacity development during the pandemic

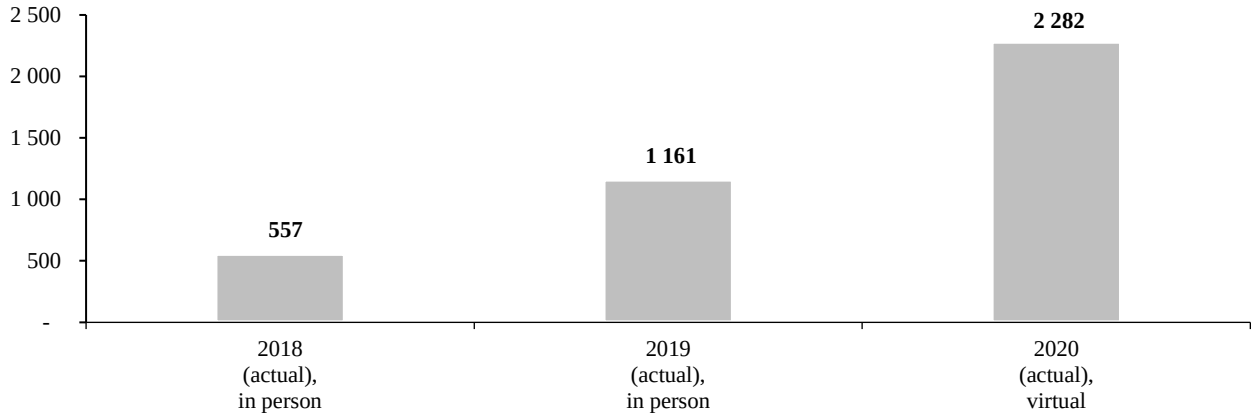
6.21 Among the core functions of the Office is the annual delivery of a number of activities, services and initiatives to assist Member States, particularly developing countries, in developing greater capacity in space science and technology and their applications. The Office, confronted with the unexpected and significant disruption to well-established working methods and operations brought on by the COVID-19 pandemic, adapted and sought executable solutions to deliver on its commitments. This included shifting selected activities into an online format, such as the series on space law and policy, the workshop on the use of space applications for climate action and the World Space Forum, which served to foster dialogue and an exchange of good practices and strengthened partnerships and inter-agency collaboration. Virtual modalities expanded the reach of the selected activities to a greater number of participants and facilitated more flexible delivery approaches to advance more tailored and specific opportunities for learning based on specific needs.

6.22 The Office also developed and implemented new activities that were delivered virtually, including a series of webinars on space economy, and a series of training meetings dedicated to supporting teams and participants from developing countries in applying for future opportunities under the Access to Space for All initiative. Furthermore, the Office worked with relevant stakeholders, including the Regional Centre for Space Science and Technology Education in India, to fast-track the development and launch of an online training course on the use of geospatial applications for disaster risk management.

Progress towards the attainment of the objective, and performance measure

6.23 The above-mentioned work contributed to the objective, as demonstrated by 2,282 participants in virtual events compared with 1,161 and 557 participants at in-person events held in 2019 and 2018, respectively (see figure 6.I).

Figure 6.I
Performance measure: annual number of participants in events



Impact of COVID-19 on programme delivery

6.24 During 2020, the COVID-19 pandemic had an impact on the planned deliverables and activities of the Office for Outer Space Affairs. The impact included: (a) the cancellation of the sessions of two intergovernmental bodies, namely the Legal Subcommittee and the Committee on the Peaceful Uses of Outer Space; (b) the postponement of the International Committee on Global Navigation Satellite Systems and its Providers' Forum; (c) the postponement of the Inter-Agency Meeting on Outer Space Activities (UN-Space) and the related open forum; and (d) in coordination with the host governments of the activities, the postponement (beyond 2020) of selected seminars, workshops, training events, fellowship opportunities and technical advisory missions that could not be provided using other means or delivered online. These included the postponement of two opportunities that had been prepared to support teams selected from two developing countries to undertake hyper- and microgravity research and experiments. Wherever practical, the Office reconfigured seminars, workshops and training events to allow for their delivery online and provided technical and legal advisory services through webinars and other online means. In addition, the Office developed national capacity in the use of space-based solutions for disaster risk reduction and emergency response by embedding two locally recruited experts in the disaster management institutions of their respective countries as an alternative to transporting a team of experts to those countries. The Office also delivered a series of webinars on space economy, conducted online meetings to support applicants from developing countries with the preparation of their applications for the opportunities available under the Access to Space for All initiative, and delivered massive open online courses on the use of geospatial applications for disaster risk management. These changes had an impact on the programme performance in 2020, as specified under result 2 below.

6.25 At the same time, however, the Office identified new opportunities and modified planned activities to support Member States on issues related to the COVID-19 pandemic, within the overall scope of the objective of the programme. The Office created a COVID-19 emergency response overview page on the UN-SPIDER knowledge portal to provide a one-stop platform that showcased examples of the contributions of space technologies to addressing COVID-19, published by government agencies, international and regional organizations, academia, civil society and the private sector. The collection of resources was complemented with a dedicated webinar on "Space4Health". The modified and new deliverables contributed to results in 2020, as specified in the emerging result above.

6.26 Reflecting the importance of continuous improvement and responding to the evolving needs of Member States, the programme will mainstream lessons learned and best practices related to the adjustments to and adaptation of its programme owing to the COVID-19 pandemic. Specific examples of its build back better model include the execution of workshops and training activities in selected subject areas by virtual means, such as the series implemented in 2020 on space economy.

Furthermore, the Office will develop, and host online, more training materials and other education media to extend such opportunities to a greater number of participants in a greater number of countries.

Planned results for 2022

6.27 The planned results for 2022 include results 1 and 2, which are updates of results presented in the preceding proposed programme plans and therefore show both the programme performance in 2020 and the proposed programme plan for 2022. Result 3 is a new planned result.

Result 1: access to space for all[1]

Programme performance in 2020

6.28 The Office has continued to support Member States in strengthening their capacity to use space science and technology and related applications, especially with regard to increasing their domestic satellite development capability. The Office, in partnership with the launch provider, identified the next team under the programme, constituting the first beneficiary selected from a regional intergovernmental organization, and provided continuous technical support to those Member States that are building their first small satellite prior to the satellite being handed over to the provider for launch. Furthermore, in 2020 the Office extended the partnership agreement, which allowed the opportunities under the programme to continue through 2024, and consequently published the announcement of one more opportunity for interested Member States to develop their first satellite under the auspices of the United Nations.

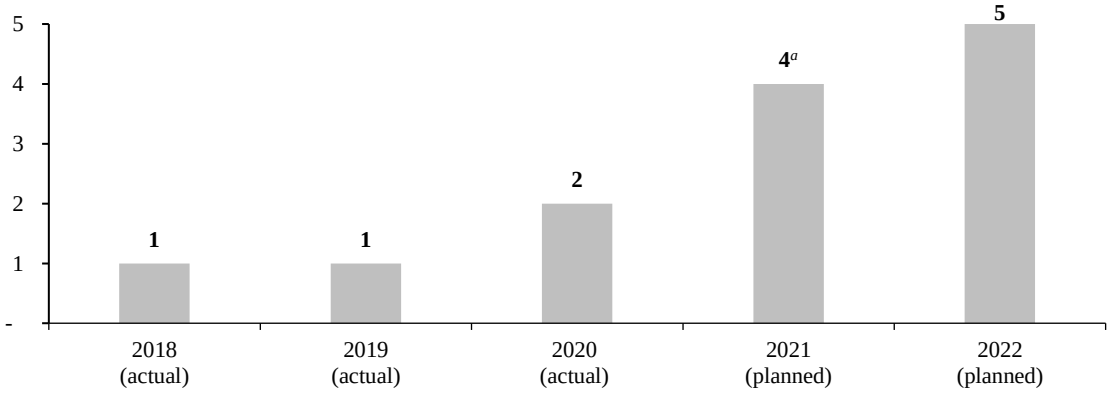
6.29 The above-mentioned work contributed to Guatemala successfully concluding the development of its first satellite in 2019 and placing it into Earth's orbit in 2020. The launch of the satellite brought the total number of developing countries acquiring domestic satellite development capability and launching their first satellite under this partnership to two, which did not meet the planned target of three reflected in the proposed programme budget for 2020. The planned 2020 target was not met owing to the need to identify a new launch window to allow for additional time to technically prepare the satellite.

Proposed programme plan for 2022

6.30 The Office will continue the work related to the planned result, in line with its mandate. To contribute to further progress towards the objective and in response to recent developments, the Office's work will evolve to take into account the need to provide more support to the teams that have been successful in securing an opportunity under the programme, and to allow for more time for testing and determining the technical readiness of the small satellites being developed in order to better align the handover period of the satellite to the provider in time for the identified launch period. The expected progress is presented in the updated performance measure below (see figure 6.II).

[1] As reflected in the proposed programme budget for 2020 (A/74/6 (Sect. 6)).

Figure 6.II
Performance measure: total cumulative number of developing countries to have launched their first satellite into outer space



[a] To maintain accountability for initial programme plans, the 2021 target is carried forward from the programme budget for 2021 and reflects best estimates at that point in time before the COVID-19 pandemic. Programme performance for 2021 will be reported in the proposed programme budget for 2023.

Result 2: increasing access to space[2]

Programme performance in 2020

6.31 The Office has continued efforts to increase access to space by offering opportunities to countries to develop the capacity to build and launch a small satellite, and to undertake hypergravity and microgravity experiments. The Office organized a series of online events dedicated to each of those opportunities to support interested participants and teams in the preparation of successful applications by providing technical advice and showcasing good practices from previous beneficiaries. Furthermore, the Office, together with its launch partner, announced the selection of three additional teams to fly their experiments in orbit, worked to establish and renew partnerships with stakeholders to expand services to Member States and undertook outreach and advocacy activities to ensure the responsible conduct of space activities and the registration of space objects launched into outer space, and to provide support on space law and policy for new space actors.

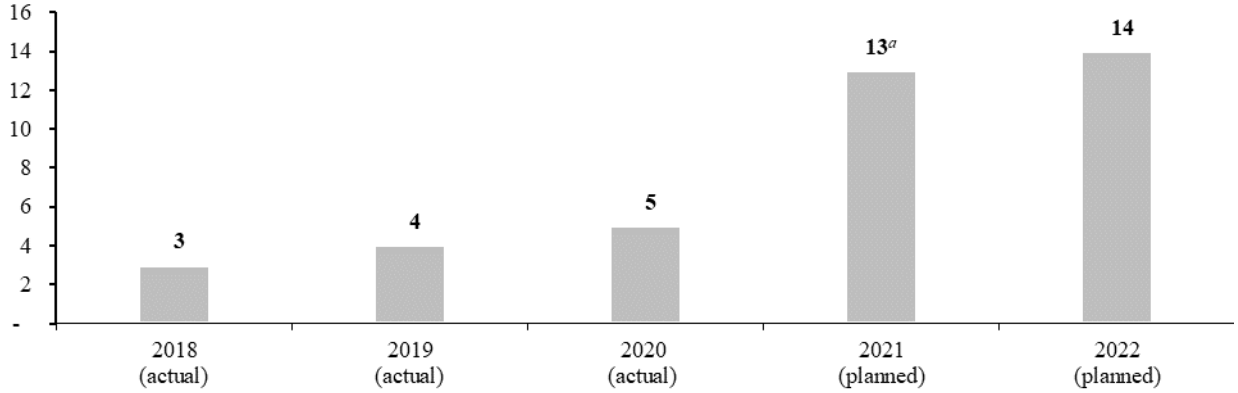
6.32 The above-mentioned work contributed to a total of five Member States gaining access to space by 2020, which did not meet the target of eight reflected in the programme budget for 2021. Owing to COVID-19 travel restrictions, two of the teams selected to undertake hypergravity and microgravity research could not take advantage of the available opportunities. The rescheduling of the launch of the first satellite built by Guatemala from 2019 to 2020 further affected the planned result.

Proposed programme plan for 2022

6.33 The Office will continue the work related to the planned result, in line with its mandate. To contribute to further progress towards the objective, the Office will continue working to expand the range of opportunities for developing countries to undertake cutting-edge research, including operating a payload on a space station or receiving telescopes and training to observe the universe. The expected progress is presented in the performance measure below (see figure 6.III).

[2] As reflected in the programme budget for 2021 (A/75/6/Add.1).

Figure 6.III
Performance measure: total cumulative number of Member States gaining access to space



[a] To maintain accountability for initial programme plans, the 2021 target is carried forward from the programme budget for 2021 and reflects best estimates at that point in time before the COVID-19 pandemic. Programme performance for 2021 will be reported in the proposed programme budget for 2023.

Result 3: a more secure global navigation satellite systems spectrum

Proposed programme plan for 2022

6.34 The advantages of satellite-based positioning, navigation and timing services are widespread, ranging from enabling precision agriculture to providing precise timing used for automated teller machine transactions and reliable navigation for the take-off and landing of aircraft. Global navigation satellite systems signals are, however, vulnerable to interference, including from television stations, mobile phone networks and jamming and spoofing devices, making prudent spectrum management (i.e., the management of frequencies) a priority to ensure that the services reliant on those signals continue to be seamlessly available. The Office, as executive secretariat to the International Committee on Global Navigation Satellite Systems, provides services and supports multilateral discussions and coordination on issues relating to global navigation satellite systems, and organizes regional workshops, training courses and technical seminars on the use of technologies related to those systems, including on the protection of the global navigation satellite system spectrum from harmful interference.

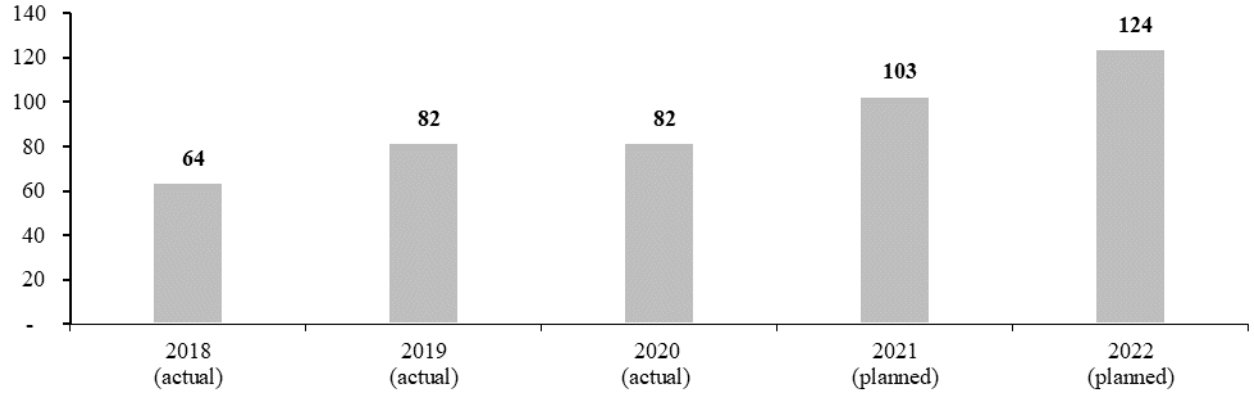
Lessons learned and planned change

6.35 The lesson for the Office was the need to support the International Committee on Global Navigation Satellite Systems in fostering greater awareness and understanding of the need to protect the spectrum, with action being required at both the international and national levels to minimize signal errors and maximize the performance of global navigation satellite system receivers for more reliable positioning and timing, which, together with Earth observation, contribute to the achievement of the Sustainable Development Goals. In applying the lesson, the Office will include in its portfolio of capacity-building activities a greater focus on spectrum protection, interference detection and mitigation in order to trigger and facilitate more discussion among experts and regulators, including from developing countries. The Office will further work to develop education materials and other information on the protection of global navigation satellite systems signals that can be disseminated broadly and integrated into the education curricula available to the United Nations-affiliated regional centres for space science and technology education.

Expected progress towards the attainment of the objective, and performance measure

6.36 This work is expected to contribute to the objective, as demonstrated by 124 specialists provided with access to training in global navigation satellite systems spectrum protection and interference detection and mitigation (see figure 6.IV).

Figure 6.IV
Performance measure: total cumulative number of specialists provided with access to training in global navigation satellite systems spectrum protection and interference detection and mitigation



Legislative mandates

6.37 The list below provides all mandates entrusted to the programme.

General Assembly resolutions

1472 A (XIV)	International cooperation in the peaceful uses of outer space
1721 B (XVI)	International cooperation in the peaceful uses of outer space
2222 (XXI)	Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies
2345 (XXII)	Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space
2453 (XXIII)	International cooperation in the peaceful uses of outer space
2601 (XXIV)	International cooperation in the peaceful uses of outer space
2777 (XXVI)	Convention on International Liability for Damage Caused by Space Objects
3234 (XXIX)	International cooperation in the peaceful uses of outer space
3235 (XXIX)	Convention on Registration of Objects Launched into Outer Space
34/68	Agreement Governing the Activities of States on the Moon and Other Celestial Bodies
37/90	Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space
37/92	Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting
41/65	Principles Relating to Remote Sensing of the Earth from Outer Space
47/68	Principles Relevant to the Use of Nuclear Power Sources in Outer Space
54/68	Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space
59/2	Review of the implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space
59/115	Application of the concept of the “launching State”
61/110	United Nations Platform for Space-based Information for Disaster Management and Emergency Response
61/111; 64/86; 71/90; 74/82	International cooperation in the peaceful uses of outer space

62/101	Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects	72/79	Consideration of the fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space
65/271	International Day of Human Space Flight	73/6	Fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space: space as a driver of sustainable development
68/50; 75/69	Transparency and confidence-building measures in outer space activities		
68/74	Recommendations on national legislation relevant to the peaceful exploration and use of outer space	74/115	International cooperation on humanitarian assistance in the field of natural disasters, from relief to development
69/283	Sendai Framework for Disaster Risk Reduction 2015–2030	75/36	Reducing space threats through norms, rules and principles of responsible behaviours
70/1	Transforming our world: the 2030 Agenda for Sustainable Development	75/92	Continuity of the work of the Committee on the Peaceful Uses of Outer Space and its subsidiary bodies
72/78	Declaration on the fiftieth anniversary of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies	75/233	Quadrennial comprehensive policy review of operational activities for development of the United Nations system

Conference of the Parties to the United Nations Framework Convention on Climate Change decisions

1/CP.21	Adoption of the Paris Agreement

Deliverables

6.38 Table 6.1 lists all deliverables, by category and subcategory, for the period 2020–2022 that contributed and are expected to contribute to the attainment of the objective stated above.

Table 6.1
Deliverables for the period 2020-2022, by category and subcategory

Category and subcategory	*2020 planned*	*2020 actual*	*2021 planned*	*2022 planned*
A. Facilitation of the intergovernmental process and expert bodies				
Parliamentary documentation (number of documents)	**95**	**66**	**90**	**90**
1. Reports to the Committee on the Peaceful Uses of Outer Space, including its Scientific and Technical and Legal Subcommittees	95	66	90	90
Substantive services for meetings (number of three-hour meetings)	**74**	**27**	**62**	**62**
2. Meetings of the Fifth Committee	1	1	1	1
3. Meetings of the Committee for Programme and Coordination	1	1	1	1
4. Meetings of the Advisory Committee on Administrative and Budgetary Questions	1	1	1	1
5. Meetings of the Fourth Committee and its Working Group of the Whole on the agenda item entitled “International cooperation in the peaceful uses of outer space”	3	3	3	3
6. Meetings of the Committee on the Peaceful Uses of Outer Space, including its Scientific and Technical and Legal Subcommittees	58	20	56	56
7. Intersessional consultations of the Working Group on the “Space2030” Agenda	10	–	–	–
8. Intersessional consultations on the Bureau for the Working Group on Long-term Sustainability of Outer Space Activities	–	1	–	–

Category and subcategory	*2020 planned*	*2020 actual*	*2021 planned*	*2022 planned*
Conference and secretariat services for meetings (number of three-hour meetings)	**14**	**4**	**14**	**14**
9. Executive secretariat services to the International Committee on Global Navigation Satellite Systems and its Providers' Forum	10	–	10	10
10. Secretariat services to the Space Mission Planning Advisory Group	4	4	4	4
B. Generation and transfer of knowledge				
Seminars, workshops and training events (number of days)	**42**	**40**	**54**	**76**
11. Workshops and technical advisory meetings on space law and policy and other legal aspects of space activities, including for new space actors	3	8	3	15
12. Seminars, workshops, training events and research opportunities on space science and technology and their applications	20	14	24	24
13. Training events and courses on the use of space technology in disaster management	11	11	19	30
14. World Space Forum	4	2	4	3
15. Panels and meetings on space for women	3	5	3	3
16. Open forum for Member States and United Nations entities on the use of space technology	1	–	1	1
Publications (number of publications)	**5**	**1**	**5**	**8**
17. Publications on the work and activities of the Office and the Committee on the Peaceful Uses of Outer Space	5	1	5	8
Technical materials (number of materials)	**39**	**55**	**54**	**59**
18. Information furnished in accordance with the United Nations treaties and principles on outer space	4	8	4	4
19. Information furnished in accordance with the Convention on Registration of Objects Launched into Outer Space and General Assembly resolution 1721 B (XVI)	35	47	50	55

C. Substantive deliverables

Consultation, advice and advocacy: normative support to Working Group C (on information dissemination and capacity-building) of the International Committee on Global Navigation Satellite Systems; expert advice, technical assistance and advisory support and services to Member States, at their request, on: (a) registration of more than 1,200 space objects launched into outer space; (b) space science and technology and their applications; (c) educational and operational activities of the six regional centres for space science and technology education affiliated with the United Nations; (d) the use of space-based information in disaster management plans and policies and in the implementation of disaster risk management activities in approximately four Member States; and (e) space-based information to end users to support emergency and humanitarian response in at least five developing countries; long-term fellowship opportunities in the field of space science and technology and related applications; massive online open courses; normative support to the Space4Women network, which has global reach and geographic diversity; and provision of secretariat services to the annual session (2 days) of UN-Space.

Databases and substantive digital materials: updating and maintenance of the following websites and databases: (a) Register of Objects Launched into Outer Space; (b) information furnished in accordance with United Nations treaties and principles on outer space; (c) Office for Outer Space Affairs website and related databases; (d) UN-SPIDER knowledge portal; (e) the International Committee on Global Navigation Satellite Systems portal; (f) the Space4Water portal; (g) the Space Solutions Compendium; (h) the Space4Women website; (i) the Space Sustainability website; and (j) the National Space Law collection.

D. Communication deliverables

Outreach programmes, special events and information materials: exhibits showcasing the benefits of space technology; presentations to Member States, intergovernmental organizations and non-governmental entities on the work of the United Nations in outer space activities; promotional, educational and information materials for public awareness-raising to showcase the work of the Committee of the Peaceful Uses of Outer Space, United Nations space activities and the Office; and celebrations of achievements and other anniversaries relating to outer space.

External and media relations: press releases and press conferences on work of the Office and the Committee on the Peaceful Uses of Outer Space and its subsidiary bodies and selected areas of the Office.

B. Proposed post and non-post resource requirements for 2022

Overview

6.39 The proposed regular budget resources for 2022, including the breakdown of resource changes, as applicable, are reflected in tables 6.2 to 6.4.

Table 6.2
Overall: evolution of financial resources by object of expenditure
(Thousands of United States dollars)

			Changes					
Object of expenditure	*2020 expenditure*[a]	*2021 appropriation*	*Technical adjustments*	*New/ expanded mandates*	*Other*	*Total*	*Percentage*	*2022 estimate (before recosting)*
Post	3 571.4	3 590.8	–	–	–	–	–	3 590.8
Other staff costs	24.8	95.2	–	–	–	–	–	95.2
Hospitality	–	0.8	–	–	–	–	–	0.8
Consultants	–	87.0	–	–	(6.4)	(6.4)	(7.4)	80.6
Experts	–	23.4	–	–	–	–	–	23.4
Travel of staff	0.1	98.6	–	–	(1.2)	(1.2)	(1.2)	97.4
Contractual services	44.0	136.3	–	–	37.6	37.6	27.6	173.9
General operating expenses	12.9	26.5	–	–	–	–	–	26.5
Supplies and materials	1.2	2.3	–	–	–	–	–	2.3
Furniture and equipment	6.9	11.8	–	–	–	–	–	11.8
Grants and contributions	215.0	420.9	–	–	(30.0)	(30.0)	(7.1)	390.9
Other	0.4	–	–	–	–	–	–	–
Total	**3 876.6**	**4 493.6**	–	**–**	**–**	–	–	**4 493.6**

[a] At the time of reporting, the expenditures presented in this table and subsequent tables are not final and may be subject to adjustments that could result in minor differences between the information contained in the present report and the financial statements to be published by 31 March 2021.

Table 6.3
Overall: proposed posts and post changes for 2022
(Number of posts)

	Number	*Level*
Approved for 2021	23	1 D-2, 1 D-1, 2 P-5, 7 P-4, 4 P-3, 3 P-2/1, 5 GS (OL)
Post changes	–	
Proposed for 2022	23	1 D-2, 1 D-1, 2 P-5, 7 P-4, 4 P-3, 3 P-2/1, 5 GS (OL)

Note: The following abbreviation is used in tables and figures: GS (OL), General Service (Other level).

Table 6.4
Overall: proposed posts by category and grade

Category	2021 approved	Changes				2022 proposed
		Technical adjustments	New/expanded mandates	Other	Total	
Professional and higher						
D-2	1	–	–	–	–	1
D-1	1	–	–	–	–	1
P-5	2	–	–	–	–	2
P-4	7	–	–	–	–	7
P-3	4	–	–	–	–	4
P-2/1	3	–	–	–	–	3
Subtotal	**18**	**–**	**–**	**–**	**–**	**18**
General Service and related						
General service (Other level)	5	–	–	–	–	5
Subtotal	**5**	**–**	**–**	**–**	**–**	**5**
Total	**23**	**–**	**–**	**–**	**–**	**23**

6.40 Additional details on the distribution of the proposed resources for 2022 are reflected in tables 6.5 to 6.7 and figure 6.V.

6.41 As reflected in tables 6.5 (1) and 6.6 (1), the overall resources proposed for 2022 amount to $4,493,600 before recosting, and reflect no change in the resource level compared with the appropriation for 2021. The proposed level of resources provides for the full, efficient and effective implementation of mandates.

Table 6.5
Overall: evolution of financial resources by source of funding and component
(Thousands of United States dollars)

(1) *Regular budget*

Component	2020 expenditure	2021 appropriation	Changes					2022 estimate (before recosting)
			Technical adjustments	New/ expanded mandates	Other	Total	Percentage	
Programme of work	3 876.6	4 493.6	–	–	–	–	–	4 493.6
Subtotal, 1	**3 876.6**	**4 493.6**	**–**	**–**	**–**	**–**	**–**	**4 493.6**

(2) *Extrabudgetary*

Component	*2020 expenditure*	*2021 estimate*	*Change*	*Percentage*	*2022 estimate*
Programme of work	1 089.3	1 139.7	305.5	26.8	1 445.2
Subtotal, 2	**1 089.3**	**1 139.7**	**305.5**	**26.8**	**1 445.2**
Total	**4 935.9**	**5 633.3**	**305.5**	**5.4**	**5 938.8**

Table 6.6
Overall: proposed posts for 2022 by source of funding and component
(Number of posts)

(1) *Regular budget*

		Changes				
Component	*2021 approved*	*Technical adjustments*	*New/expanded mandates*	*Other*	*Total*	*2022 proposed*
Programme of work	23	–	–	–	–	23
Subtotal, 1	**23**	**–**	**–**	**–**	**–**	**23**

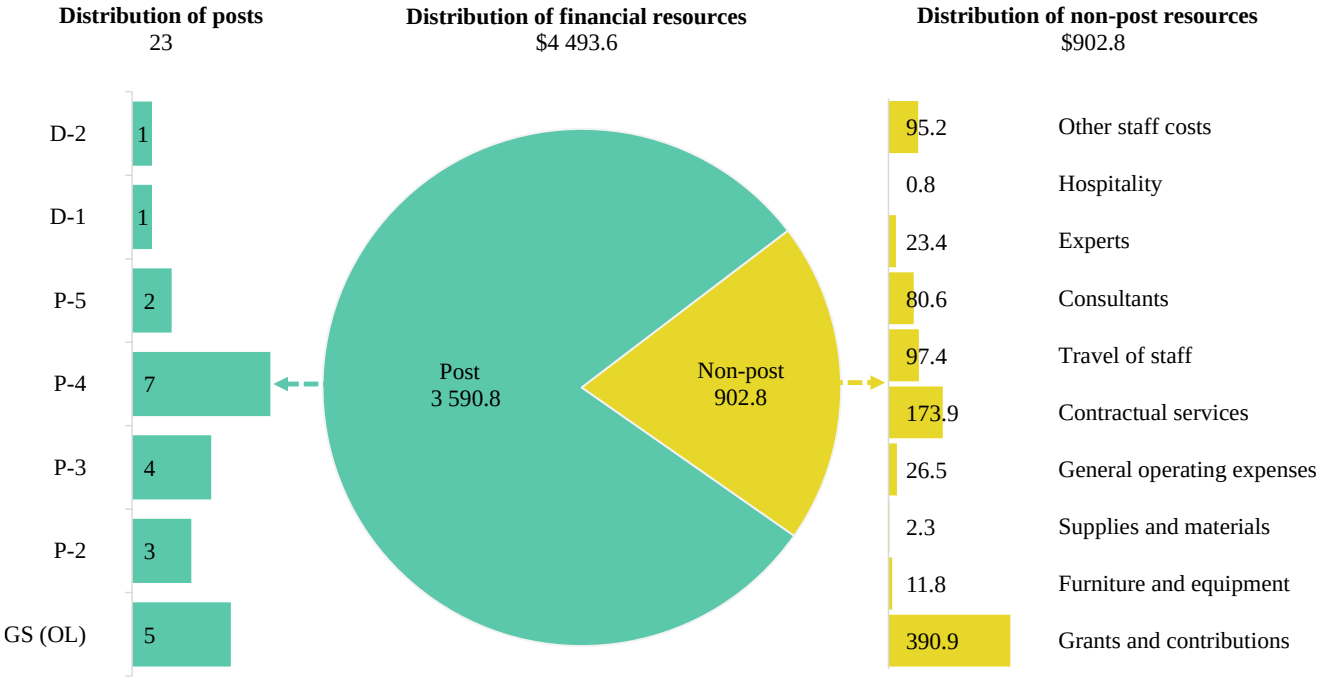
(2) *Extrabudgetary*

Component	*2021 estimate*	*2022 estimate*
Programme of work	7	7
Subtotal, 2	**7**	**7**
Total	**30**	**30**

Table 6.7
Overall: evolution of financial and post resources
(Thousands of United States dollars/number of posts)

			Changes					
	2020 expenditure	*2021 appropriation*	*Technical adjustments*	*New/ expanded mandates*	*Other*	*Total*	*Percentage*	*2022 estimate (before recosting)*
Financial resource by main category of expenditure								
Post	3 571.4	3 590.8	–	–	–	–	–	3 590.8
Non-post	305.3	902.8	–	–	–	–	–	902.8
Total	**3 876.6**	**4 493.6**	**–**	**–**	**–**	**–**	**–**	**4 493.6**
Post resources by category								
Professional and higher		18	–	–	–	–	–	18
General Service and related		5	–	–	–	–	–	5
Total		**23**	**–**	**–**	**–**	**–**	**–**	**23**

Figure 6.V
Distribution of proposed resources for 2022 (before recosting)
(Number of posts/thousands of United States dollars)



Extrabudgetary resources

6.42 As reflected in tables 6.5 (2) and 6.6 (2), the Office expects to continue to receive both cash and in-kind contributions, which would complement regular budget resources. In 2022, projected extrabudgetary resources of $1,445,200, including seven posts, would provide for capacity development activities and other services to Member States. Extrabudgetary resources represent 24 per cent of the total resources for this programme. The anticipated increase in extrabudgetary resources, amounting to $305,500, reflects mainly the planned resumption and on-site delivery of selected capacity-building, technical advisory and advocacy activities to Member States.

6.43 Anticipated in-kind contributions with an estimated value of $741,000 reflect staff provided to the Office on a non-reimbursable loan basis, and the value of the rental of conference facilities, meeting services, room and board for participants, transport and other contractual services provided on a no-cost basis for workshops, training courses, seminars and other activities organized by the Office.

6.44 The authority to oversee the use of extrabudgetary resources rests with the Office, in accordance with the delegation of authority from the Secretary-General.

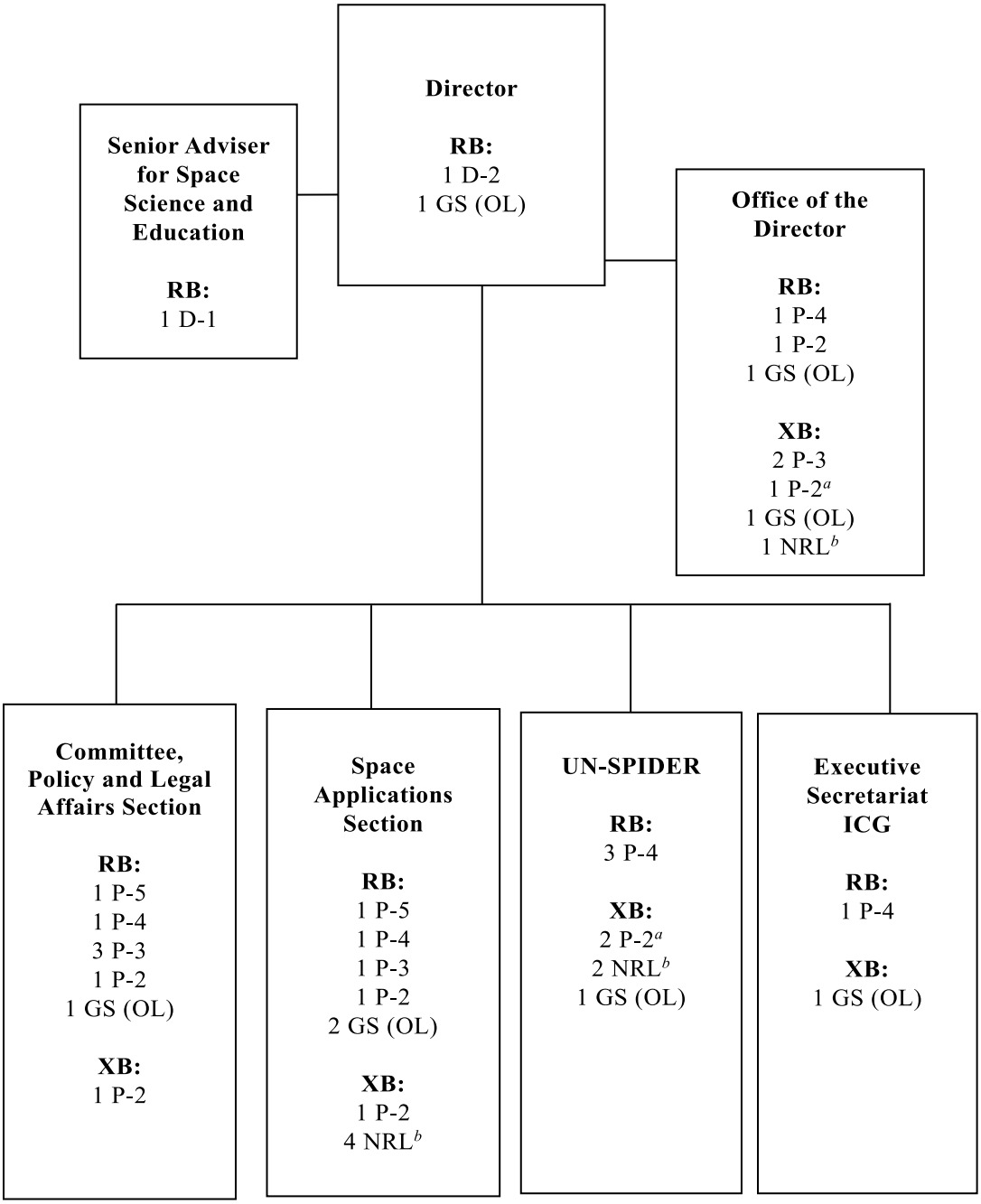
6.45 Information on compliance with regard to advance booking for air travel is reflected in table 6.8. The impact of COVID-19 and related restrictions on travel in 2020 limited the ability of the Office to comply with the requirement for advance booking for air travel, which resulted in a lower compliance rate of 62 per cent in 2020 compared with previous years, when the rate averaged 84 per cent. The efforts undertaken by the Office to enhance the rate of travel compliance include increasing the frequency of monitoring the level of its compliance with advance booking for air travel by examining the issue at its monthly management committee meetings to reduce the number of instances in which air travel was booked shortly prior to departure for reasons within the control of the Office.

Table 6.8
Compliance rate
(Percentage)

	Actual 2019	*Actual 2020*	*Planned 2021*	*Planned 2022*
Air tickets purchased at least 2 weeks before the commencement of travel	88	62	100	100

Annex I

Organizational structure and post distribution for 2022



Abbreviations: GS, General Service; OL, Other level; ICG, International Committee on Global Navigation Satellite Systems; NRL, non-reimbursable loan; RB, regular budget; UN-SPIDER, United Nations Platform for Space-based Information for Disaster Management and Emergency Response; XB, extrabudgetary.

[a] Junior Professional Officer.

[b] Positions on non-reimbursable loan basis from the Brazilian Air Force, the China Manned Space Agency, the China National Space Agency, the Japan Aerospace Exploration Agency, the Ministry of Civil Affairs of China and the United States Department of State.

Annex II

Summary of follow-up action taken to implement relevant recommendations of oversight bodies

Brief description of the recommendation	*Action taken to implement the recommendation*
Office of Internal Oversight Services (report No. IED-19-003)	
Recommendation A: In anticipation of growth in the number of objects launched into outer space in the near future, [the Office for Outer Space Affairs] should review and modernize its registration processes and capacity to maintain a high registration rate.	Implementation is under way. In 2021, the Office will initiate the work to elaborate the parameters and requirements for the development of an online platform and dashboard for the submission and processing of registration submissions; the development of the platform is anticipated for 2022.
Recommendation B: Based on an assessment of the needs of emerging- and non-space-faring countries for space capacity-building and a systematic analysis of its comparative advantage in the broader field of space science, technology and applications, [the Office] should augment programmes and reprioritize resources to address the space capacity needs of Member States, including for disaster management.	Implementation is under way. Assessment of the needs of emerging- and non-space-faring countries is integrated into the Office's planning and execution of it programmed activities, with deliverables and resource prioritization being defined and applied in line with Office's mandate, responsibilities and available budget. Target date for completion is December 2021.
Recommendation C: In the case of [the United Nations Platform for Space-based Information for Disaster Management and Emergency Response], [the Office] should, in consultation with its main donors, develop and implement action plans to foster more targeted and sustainable capacity-building in the use of space technologies for disaster management.	Implementation concluded successfully. With the support of Member States and donors, the Office developed new action plans to be implemented through 2023 that would assure more targeted and sustainable capacity development, including the introduction of new training methods.
Recommendation D: [The Office] should develop partnerships with United Nations entities with extensive in-country presence to enhance integration of space applications with broader national development processes, improve its monitoring and evaluation and ensure sustainability of its results.	Implementation is under way. The development of new opportunities for Member States, and leveraging and strengthening long-standing partnerships with stakeholders, including United Nations entities, that support the delivery of the Office's capacity-building, institution strengthening and training initiatives is standard in the Office's operational procedures. Suitable mechanisms for improving monitoring and evaluating the outcomes of those partnerships will be defined and implemented within the Office's available resources. Target date for completion is December 2023.
Recommendation E: [The Office] should monitor and strengthen its existing networks with a view to increasing opportunities for engagement between members and across networks, fostering synergies, and promoting awareness about the varied uses of space science, technologies, and applications across fields.	Implementation concluded successfully. In 2019 and 2020, the Office leveraged existing partnerships and networks and worked with Member States and space-related entities to increase the portfolio of opportunities available to Member States to develop capacity in, inter alia, small satellite development, micro- and zero-gravity research, space law and space economy.

Brief description of the recommendation	*Action taken to implement the recommendation*
Recommendation F: [The Office] should enhance cross-sectional collaboration and strengthen its project management capacity.	Implementation concluded successfully. In 2019 and 2020, the Office put in place a number of measures, including workflows and structural processes, to improve its project development processes, and strengthened its cross-sectional collaboration in delivering on a number of activities and deliverables, including on the use of space-based solutions for disaster management, Space4Women, the promotion of awareness on space debris, space law (for new space actors) and space sustainability.