Evaluation Report

Evaluation of the United Nations Office for Outer Space Affairs

08 March 2019

Assignment No: IED-19-003

Inspection and Evaluation Division

Office of Internal Oversight Services

INSPECTION AND EVALUATION DIVISION

Function

"The Office shall evaluate the efficiency and effectiveness of the implementation of the programmes and legislative mandates of the Organisation. It shall conduct programme evaluations with the purpose of establishing analytical and critical evaluations of the implementation of programmes and legislative mandates, examining whether changes therein require review of the methods of delivery, the continued relevance of administrative procedures and whether the activities correspond to the mandates as they may be reflected in the approved budgets and the medium-term plan of the Organisation;" (General Assembly Resolution 48/218 B).

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Executive Summary

The United Nations Office for Outer Space Affairs (UNOOSA) was established in 1958 to service the Committee for the Peaceful Uses of Outer Space (COPUOS). In the present evaluation report, the Office of Internal Oversight Services (OIOS) assessed the relevance, efficiency and effectiveness of UNOOSA in its promotion of international cooperation in the exploration and peaceful uses of outer space for economic, social and scientific development, in particular for the benefit of developing countries.

UNOOSA is a small office with a unique mandate covering the full range of peaceful uses of outer space. Its secretariat services to COPUOS and provision of technical advice and capacity building to emerging- and non-space-faring nations were regarded positively by stakeholders. As interest in the benefits of space science, technology and applications increased, demand for the Office's technical services outpaced its supply. UNOOSA sought to modernize and reinforce its mandate and structure through an intergovernmental process for a "Space2030" agenda, but this reinforcement did not materialize. Nevertheless, its broad internal strategy to promote "access to space for all" continued to address a widening gap between space-faring and non-space faring nations.

UNOOSA expanded its partnerships, strengthened existing relationships and collaborated with private sector entities to create innovative opportunities for countries aspiring to have their own outer space programme. With some key entities in the field of earth observation and geospatial information, however, few joint projects or synchronized activities were implemented. Efforts by UNOOSA to promote space accessibility were well received by Member States, with benefits accruing to a few countries, yet they lacked a strategy to achieve broader coverage. Similarly, support was sought by countries to build capacity in disaster-risk reduction, but the programme had yet to result in systematic benefit for Member States, with few linkages to United Nations entities whose ground presence could promote the integration of space technologies into socio-economic development activities. UNOOSA also supported six United Nations Affiliated Regional Centres for Space Science and Technology Education around the world. These remained unevenly resourced and under-monitored, however, limiting their effectiveness.

UNOOSA benefited from an engaged staff with wide-ranging expertise across space science, applications, law, and policy. These diverse skills helped UNOOSA implement or co-organize an extensive number of conferences, workshops, trainings and other activities, including UNISPACE+50 in 2018, the fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space. Despite its varied achievements, UNOOSA lacked internal mechanisms to better focus on the most value-adding activities and use a cross-functional approach to address demands in a more coherent manner. Some gaps in project management, reporting and monitoring were also present, with a substantial surplus in the extrabudgetary Trust Fund.

Overall, UNOOSA remained relevant and essential: first, to service an evolving international legal framework encompassing rapidly-developing scenarios in outer space affairs; second, to address the needs of Members States in developing their legal and technical capacity to harness the benefits of space for humankind; and third, to help close the gap between space-faring and non-space-faring countries amidst rapid political, technical and commercial changes.

OIOS makes six important recommendations to UNOOSA:

(A) UNOOSA should review and modernize its registration processes and capacity to maintain a high registration rate for objects launched into outer space;

(B) UNOOSA should augment programmes and reprioritize resources to address the space capacity needs of Member States, including for disaster management;

(C) In the case of UN-SPIDER, UNOOSA should develop and implement action plans to foster more targeted and sustainable capacity building in the use of space technologies for disaster management;

(D) UNOOSA should develop partnerships with United Nations entities with extensive in-country presence to enhance integration of space applications with broader national development processes;

(E) UNOOSA should monitor and strengthen its existing networks with a view to increasing opportunities for engagement between members and across networks;

(F) UNOOSA should enhance internal cross-sectional collaboration and strengthen its project management capacity.

Table of Contents

I. Introduction

1. The Inspection and Evaluation Division of the Office of Internal Oversight Services (OIOS-IED) undertook an evaluation of the United Nations Office for Outer Space Affairs (UNOOSA), following an OIOS risk assessment to identify Secretariat programme evaluation priorities for 2018-2019.

2. The general frame of reference for OIOS is provided in General Assembly (GA) resolutions 48/218B, 54/244 and 59/272, and in Secretary-General's bulletin ST/SGB/273, by which OIOS is authorized to initiate, carry out and report on any action that it considers necessary to fulfil its responsibilities. OIOS evaluation is provided for in the Regulations and Rules Governing Programme Planning, the Programme Aspects of the Budget, the Monitoring of Implementation and the Methods of Evaluation.[1]

3. The overall objective of the evaluation was to determine, as systematically and objectively as possible, the relevance, effectiveness and efficiency of UNOOSA in its efforts to promote international cooperation in the exploration and peaceful uses of outer space. The evaluation was conducted in conformity with norms and standards for evaluation in the United Nations System.[2]

4. UNOOSA management comments were sought on the draft report and taken into account in the final report. The formal UNOOSA response is included in the annex.

II. Background

History, Mandate and Governance

5. UNOOSA was created in 1958 as a small expert unit within the United Nations Secretariat to service the ad hoc Committee on the Peaceful Uses of Outer Space and subsequently the Committee on the Peaceful Uses of Outer Space (COPUOS).[3] In 1992, the Division became the Office for Outer Space Affairs ("the Office") within the Department of Political Affairs and in 1993 was relocated to the United Nations Office at Vienna (UNOV).[4] COPUOS reports to the Fourth Committee of the GA, which adopts an annual resolution on international cooperation in the peaceful uses of outer space.

6. The Office promotes international cooperation in the exploration and peaceful uses of outer space for economic, social and scientific development, in particular for the benefit of developing countries. Its main responsibilities are:[5]

a) Provision of substantive secretariat services to COPUOS and its subsidiary bodies;

b) Discharging of the responsibilities of the Secretary-General (S-G) under United Nations treaties and principles on outer space and related GA resolutions;[6]

[1] ST/SGB/2018/3, Regulation 7.1.
[2] Norms and Standards for Evaluation, United Nations Evaluation Group (UNEG) 2016.
[3] A/RES/1472(XIV); Current membership: 92 members.
[4] In 1962, the unit was moved to the Department of Political and Security Council Affairs and in 1968, was transformed into the Outer Space Affairs Division in the same Department.
[5] A/71/6/Rev.1(prog. 5).
[6] A/RES/1721(XVI), A/RES/2222(XXI), A/RES/2345(XXII), A/RES/3235(XXIX), A/RES/47/68, A/RES/59/115 and A/RES/62/101

c) Coordination of space-related activities within the United Nations system through the Inter-Agency Meeting on Outer Space Activities (UN-Space);[7]

d) Maintaining the Register of Objects Launched into Outer Space;[8]

e) Implementing of the Programme on Space Applications;[9]

f) Implementing of the programme of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER);[10]

g) Serving as the executive secretariat of the International Committee on Global Navigation Satellite Systems (ICG) and its Providers' Forum;[11]

h) Supporting United Nations Affiliated Regional Centres for Space Science and Technology Education (Regional Centres);[12] and

i) Implementing additional mandates received from other GA resolutions.[13]

Structure

7. UNOOSA is part of the United Nations Secretariat and is led by a Director at the D2 level reporting to the Under-Secretary-General of UNOV.[14] Its proposed programme budget is presented under Section 6, Part II: Political Affairs.

8. UNOOSA has three sections:

a) The Office of the Director is responsible for the overall strategic direction of the Office, some financial management, preparation for flagship events, engagement with stakeholders, and implementation of select initiatives.

b) The Committee, Policy and Legal Affairs Section (CPLA) provides substantive secretariat services to COPUOS, its Scientific and Technical Subcommittee and Legal Subcommittee, and related working groups. CPLA convenes and services the sessions of UN-Space and provides advice and distributes reports on international space law.

c) The Space Applications Section (SAS) promotes the use of space research and technology for development. It implements the Programme on Space Applications, raising awareness and providing training on the practical applications of space technology;[15] supports six Regional Centres; manages UN-SPIDER, which provides access to and builds capacity in

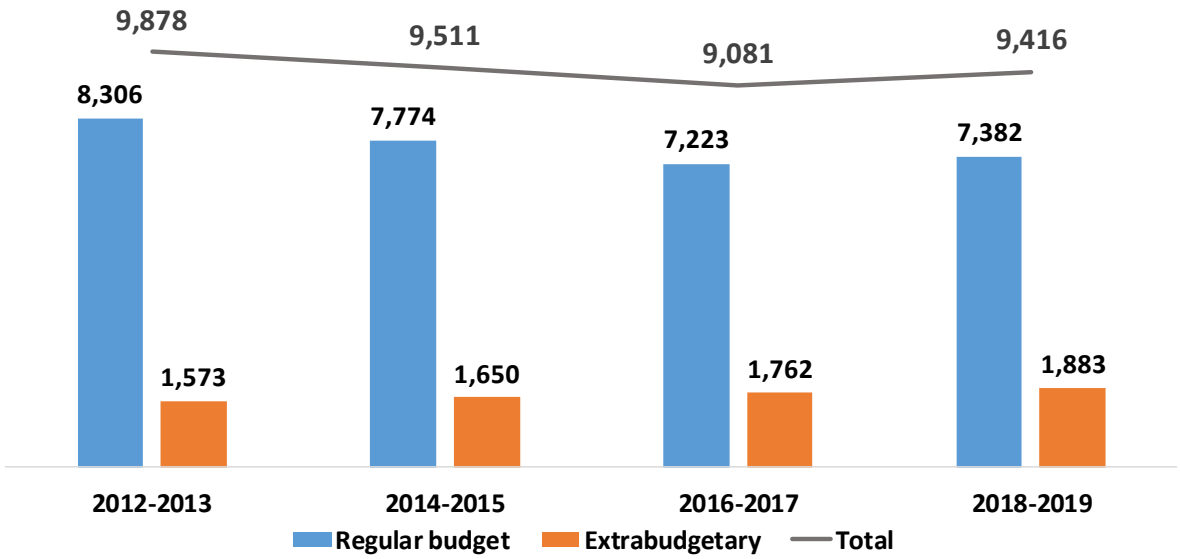
[7] A/RES/2601(XXIV); A/RES/3234(XXIX).
[8] A/RES/1721(XVI); A/RES/3235(XXIX).
[9] A/RES/2601(XXIV); A/RES/37/90; Recommendations of UNISPACE I and II.
[10] A/RES/61/110; Recommendation of UNISPACE III.
[11] A/RES/61/111; A/RES/64/86); Recommendation of UNISPACE III.
[12] A/RES/45/72; A/RES/50/27; Recommendation of UNISPACE II.
[13] E.g. transparency and confidence-building measures in outer space activities (resolutions 68/50, 69/38, 70/53 and 71/42), the International Asteroid Warning Network (IAWN) and Space Mission Planning Advisory Group (SMPAG).
[14] ST/SGB/2004/5. UNOOSA also reports directly to S-G as appropriate.
[15] Space technologies have an impact on almost all aspects of development as well as on humanitarian assistance and international peace and security. See http://www.unoosa.org/oosa/en/benefits-of-space/benefits.html.

the use of space-based data to support the full disaster management cycle;[16] and administers the ICG, which promotes voluntary cooperation on civil satellite-based positioning and navigation.

Resources

9. The proposed Regular Budget (RB) for UNOOSA for the 2018-2019 biennium was USD 7,382k (estimated), which was USD 924k (11.1 percent) less than its actual expenses for 2012-2013. UNOOSA received extrabudgetary resources in the form of cash and in-kind contributions (USD 1,883k estimated for 2018-2019), which were vital to the delivery of its mandate.

Figure 1: Regular and voluntary contributions (USD in '000)[17]

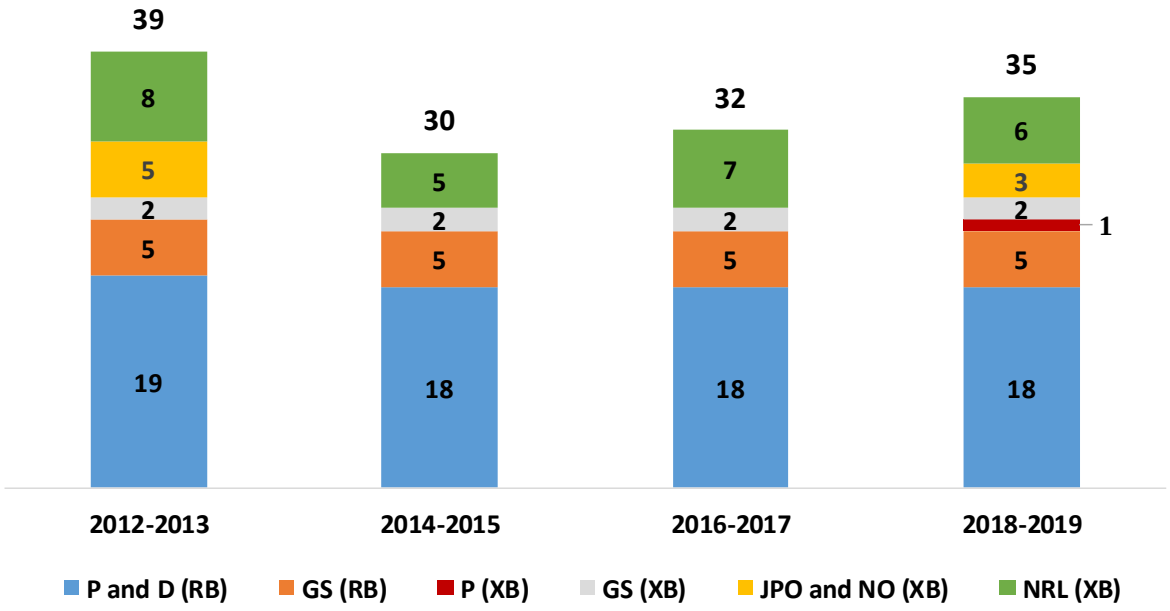


10. UNOOSA had a total of 35 staff in 2018, seven at the General Service category, 19 at the Professional category and higher, three Junior Professional Officers (JPOs), and six Non-Reimbursable Loans (NRLs).

[16] UN-SPIDER is managed from Vienna and has offices in Bonn and Beijing. The Bonn Office manages the Knowledge Portal and provides technical support to African and Latin American countries with support from the German Federal Ministry of Economic Affairs and Energy (BMWi) and the German Aerospace Centre (DLR). The Beijing Office works in the Asia-Pacific region with support from the Ministry of Emergency Management of the People's Republic of China.

[17] Extrabudgetary amounts exclude programme support costs.

Figure 2: Staff resources



III. Evaluation Framework: Scope and Methodology

Scope

11. A full programme evaluation was conducted of the relevance, effectiveness and efficiency of UNOOSA from 2012 through 2018, through an assessment of its (i) normative work as Secretariat of COPUOS and its subsidiary bodies, Secretariat of the ICG, and responsible agency for the Register; (ii) technical work in implementing the Programme on Space Applications and UN-SPIDER; and (iii) stewardship of UN-Space and support to UNISPACE+50, the fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

Methodology

12. The results are based on a triangulation of multiple data, collected through quantitative and qualitative methods:

a) Interviews with 166 UNOOSA staff and stakeholders;

b) Structured analysis of key documentation, including GA resolutions, COPUOS reports and UNOOSA strategic documents, workplans, financial records and donor reports;

c) Expert review of UN-SPIDER Technical Advisory Mission (TAM) reports, training materials and the UN-SPIDER Knowledge Portal;

d) Desk review of publicly available literature and documents;

e) Legal Review of the five Outer Space treaties, principles and norms, national legislation, GA resolutions and UN-Space reports;

f) Review and analysis of IMDIS and UMOJA data;[18] and

g) Attendance and observation at seven UNOOSA events in 2018, viz. UNISPACE+50, the Sixty-first session of COPUOS, the Bonn High Level Forum, the United Nations Conference on Space Law and Policy, a UN-Space meeting, a UN-SPIDER training and conference in Beijing, and an Advisory Committee meeting at a Regional Centre.

13. The evaluation was limited by difficulty in contacting UN-SPIDER stakeholders and a resulting low survey response rate, which rendered the data unusable.[19]

IV. Evaluation Results

A. OPERATING WITH A SMALL STAFF AND DECLINING RESOURCES, UNOOSA IMPLEMENTED HIGHLY RELEVANT ACTIVITIES, EFFECTIVELY MEETING MANY OF THE NEEDS, REQUIREMENTS AND PRIORITIES OF MEMBER STATES

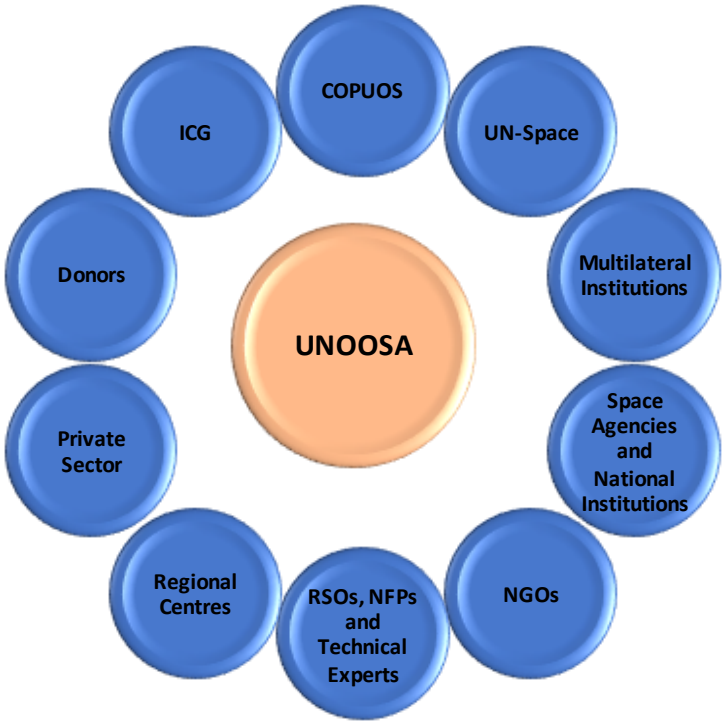
UNOOSA was consistently appreciated by a diverse cross-section of stakeholders for its accomplishments and expansive networks

14. A wide spectrum of UNOOSA stakeholders provided overwhelmingly positive feedback about the Office's accomplishments despite a small budget. No other entity within or outside the United Nations possesses a comparable mandate covering the full breadth of political, legal and scientific affairs related to the peaceful uses of outer space.

15. UNOOSA linked to multiple networks at the national and global/inter-governmental levels. It effectively leveraged its position within the United Nations, which was considered by stakeholders as a key advantage. Stakeholders described the Office's key comparative advantage as being, inter alia, a platform, bridge-builder, facilitator, broker, door-opener, and democratizer with a unique mandate. Throughout its activities, UNOOSA maintained a high regard for the diversity of its stakeholders, ensuring the inclusion of diverse backgrounds, viewpoints, industries and actors.

[18] Primarily from the *Who is Where?* Report for the period December 2015 to November 2018.
[19] In-depth interviews were conducted instead.

Figure 3: Stakeholders



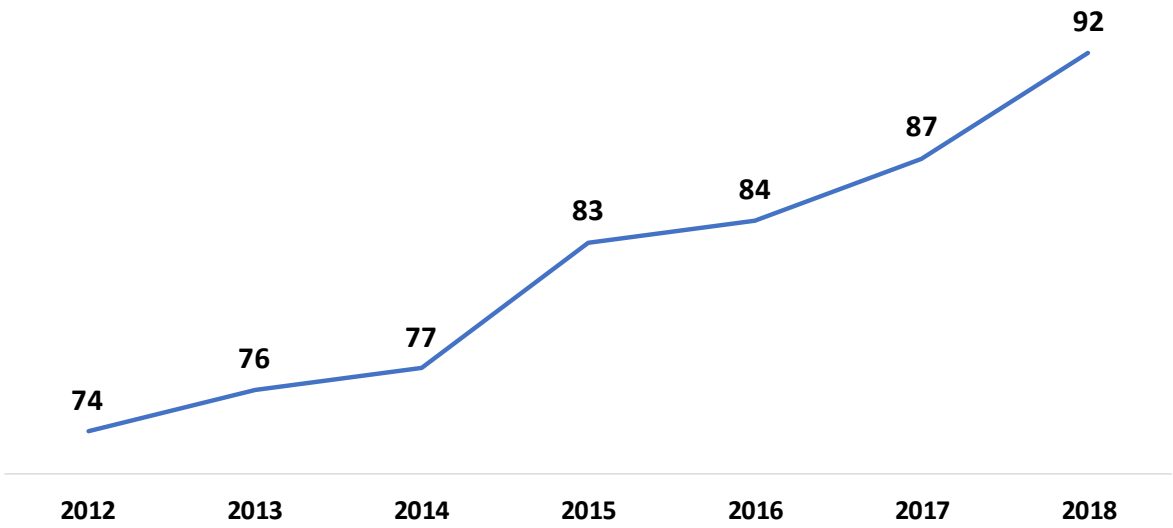
16. Member States encouraged UNOOSA to seek additional voluntary contributions primarily through its Multi-Donor Trust Fund,[20] which held a surplus of USD 5.98 million (4.4m cash and 1.6m receivable) at the end of 2017 (see Result E).[21] UNOOSA also benefitted from traditional financing models including NRLs, co-hosting arrangements, in-kind support, and UN-SPIDER financing.

The Committee, Policy and Legal Affairs Section, under close supervision of the Director and with support from the Space Applications Section, effectively and efficiently responded to Member States' growing membership in COPUOS and interest in outer space affairs

17. All Member States interviewed expressed a high degree of satisfaction with the work of UNOOSA in servicing COPUOS, its two subcommittees and seven working groups.[22] The Office's proactive advocacy coincided with and further encouraged increased interest among non-members in joining COPUOS. Membership grew by 24% between 2012 and 2018 (from 74 to 92[23]), versus 10% growth in preceding 6-year periods. The number of countries who ratified or signed the space law treaties increased more modestly than COPUOS membership, with the latest binding regulation passed in 1982.[24]

[20] A/RES/61/110 para 7,
[21] UNOOSA Trust Fund 2017 Financial Statement.
[22] The Working Group on the "Space2030" agenda and Working Group on Space and Global Health were established in 2018.
[23] A/73/471
[24] In addition, COPUOS working groups produced non-binding guidelines, the latest in 2018. See http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/status/index.html.

Figure 4: COPUOS membership[25]



The work of the Space Applications Section was very well received, with recipient Member States seeking more sustained capacity-building in space science, technology and applications [see Result D]

18. A wide variety of stakeholders spoke favourably of the Office's capacity-building activities, including global and regional workshops, for their content and networking opportunities. UNOOSA facilitated the sponsorship of 110 long-term, international fellowships in space science and technology during the evaluation period.[26]

19. UN-SPIDER provided advisory and capacity-building services through 113 missions and related activities since 2008 (see Result D). Drawing on the efforts of a small programme staff, the Office implemented these activities with local institutions, United Nations agencies and earth observation and disaster risk reduction (DRR) experts. Recipients acknowledged the programme's significant contributions to national capacity building, especially in Latin America and Asia-Pacific, and demanded more sustained support across all regions. Germany renewed its support to UN-SPIDER through a longer-term commitment focusing on Africa; China renewed its partnership for the third time to support UN-SPIDER in the Asia-Pacific region; and UNOOSA held discussions with Austria to restore its support to the programme.

20. As a Cooperating Body of the International Charter Space and Major Disasters, UNOOSA increased access to and awareness of the Charter. Since 2015, UNOOSA requested activation of the Charter for 13 natural disasters and supported eight countries, mostly in Latin America and Asia-Pacific, in becoming authorized users.[27] As part of its broader capacity-building goals, UNOOSA advocated for all countries to be able to activate the Charter without United Nations intervention.

[25] Source: http://www.unoosa.org/oosa/en/ourwork/copuos/members/evolution.html.
[26] Source: IMDIS.
[27] UNOOSA Report on the Coordination of the "International Charter Space and Major Disasters" for the period of 13 September 2017 to 30 September 2018.

21. UNOOSA organized partnerships under its "access to space for all" umbrella, including with the KiboCUBE programme of the Japanese Space Agency (JAXA), and the Sierra Nevada Corporation (SNC), both of which saw high demand from non-space-faring countries to conduct research in outer space.[28]

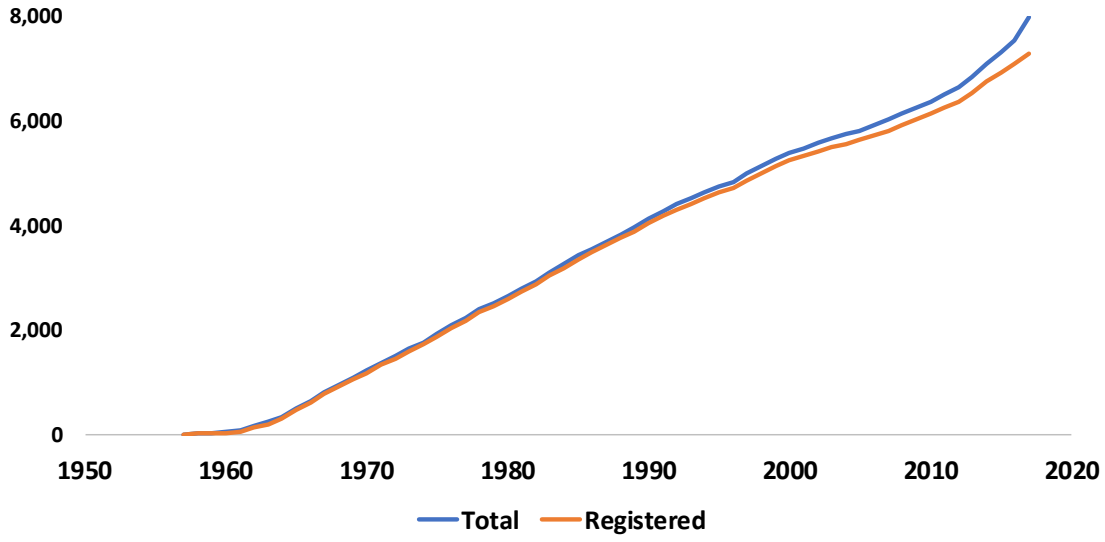
22. As a reflection of the Office's mandate and strengths in DRR, space applications and capacity building, COPUOS identified UNOOSA as the mechanism for Thematic Priorities Six (International cooperation towards low-emission and resilient societies) and Seven (Capacity-building for the twenty-first century) in preparing for the UNISPACE+50 process.[29]

The Office successfully served as Executive Secretariat of the International Committee on Global Navigation Satellite Systems and maintained the Register of Objects launched into Outer Space

23. Supported by UNOOSA, ICG successfully made compatible and inter-operable the four global, space-based navigation systems originating in four different countries. UNOOSA further supported ICG in its ongoing efforts to achieve compatibility and inter-operability for the more challenging high-altitude applications of Global Navigation Satellite Systems (GNSS).[30]

24. UNOOSA continued to maintain the Space Objects Register as the only database of its kind, registering through Note Verbale over 91% (over 7,000) of all objects launched into Earth or beyond since 1957.[31] The Office achieved this high rate in a complex and changing environment, with objects launched by more than 50 countries and two international organizations over the last six decades. The Office bolstered its registration efforts through international conferences, targeted initiatives and publications. However, with only one dedicated staff member, UNOOSA faced constraints in maintaining precise records. In the last ten years, the number of objects launched into space grew by more than 20%, with growth forecast to accelerate exponentially.

Figure 5: Functional objects launched into space[32]

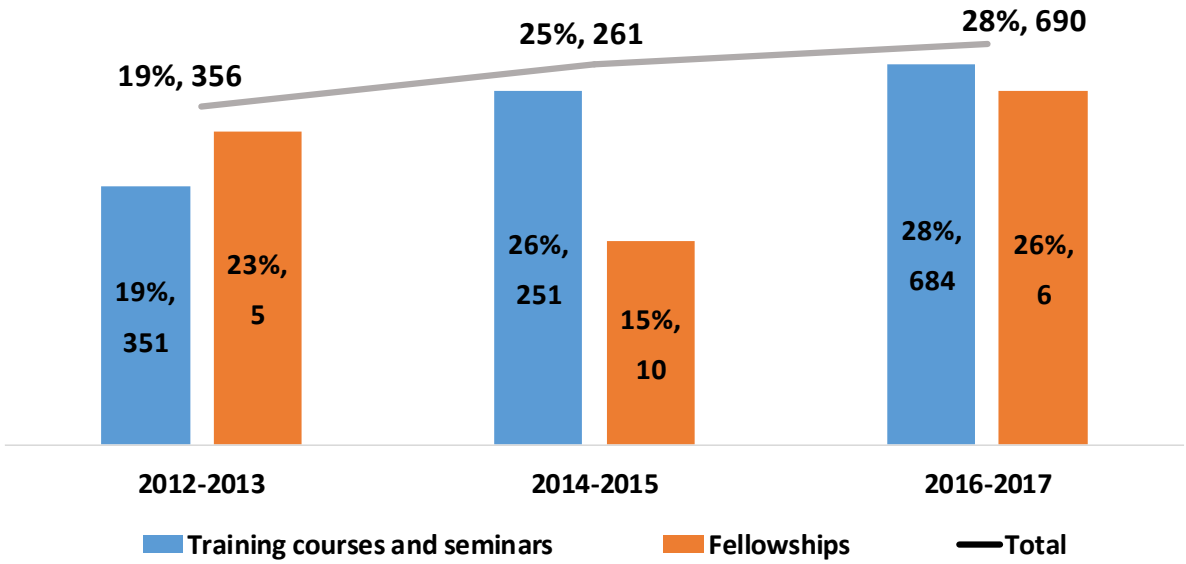


[28] http://www.unoosa.org/oosa/en/ourwork/psa/hsti/orbital-opportunities.html. At the time of publication, the DreamChaser project was awaiting funding to advance to the next phase.
[29] A/71/20 para 296. Report on thematic priority six: A/AC.105/1173; Report on thematic priority seven: A/AC.105/1174. The implementation plan for these and the other five thematic priorities will depend on the outcome of the Working Group on the Space2030 agenda.
[30] 3,000 km to 36,000 km from Earth's surface.
[31] Mandated by the Convention on Registration of Objects Launched into Outer Space and A/RES/62/101.
[32] Source: UNOOSA Annual Report 2017

The Office championed increased opportunities for women in outer space affairs and space-related education and careers

25. As part of its Space for Women programme, jointly launched with UN-Women, UNOOSA organized an Expert Meeting and generated funding of USD 35,000 from three partners, with finalization of the programme's business plan pending. The Office also supported the launch of the International Gender Champions Initiative in Vienna in 2017. The proportion of women participating in UNOOSA conferences and fellowships increased by nine percentage points from 19% (2013) to 28% (2017). UN-SPIDER technical advisory teams often, but not always, included women.

Figure 6: Participation of women[33]



B. WITH THE GAP BETWEEN SPACE-FARING AND NON-SPACE-FARING COUNTRIES WIDENING, UNOOSA SOUGHT TO MODERNIZE AND REINFORCE ITS MANDATE AND STRUCTURE, BUT ITS APPROACH WAS NOT ENTIRELY EFFECTIVE

UNOOSA drew on the UNISPACE+50 and "Space2030" processes to modernize and reinforce its mandate amidst the growing complexity of outer space affairs

26. Participation in outer space affairs of traditional and non-traditional entities, including commercial actors, proliferated during the period under review, as evidenced by growth in COPUOS membership and in private sector ventures in all aspects of space science and technology, including exploration and extraction. In this context, some COPUOS delegations expressed the need to ensure that such outer space activities benefit all States through inclusive development and equal access to outer space.[34] Under new leadership since 2014, UNOOSA made space accessibility a priority for the Office.

27. At its fifty-eighth session in June 2015, COPUOS endorsed a plan of work for UNISPACE+50 to be undertaken by UNOOSA, the Committee and its subsidiary bodies, which accorded a variety of preparatory responsibilities to UNOOSA.[35] In the same year, three significant intergovernmental

[33] Source: IMDIS

[34] A/66/20 para 43; A/70/20 para 47.

[35] COPUOS endorsement: A/70/20 para 351; Plan of work: A/AC.105/L.297; GA endorsement: A/RES/70/82 para 14, 26.

processes were concluded, viz. the Sustainable Development Goals, the Sendai Framework for Disaster Risk Reduction and the Paris Agreement on Climate Change, which shaped the normative framework within which UNOOSA set its future vision and work plans.

28. In 2017, COPUOS mandated UNOOSA to prepare a first version of a draft resolution on UNISPACE+50 to be recommended for adoption by the GA and a report on a "Space2030" agenda and its implementation plan.[36] In total, UNOOSA prepared 27 documents, including the definitive report on "The "Space2030" agenda and the global governance of outer space activities".[37] Among a range of strategic objectives and plans for implementation drawn from international events, this Report underlined the breadth and uniqueness of the Office's mandate and recommended its modernization and reinforcement.[38] It proposed several innovative approaches and tools to raise awareness among non-space-faring and emerging-space-faring nations and promote their access to space. UNOOSA expected COPUOS to endorse and adopt the "Space2030" agenda and implementation plan at UNISPACE+50.[39]

29. Anticipating that 2018 would pave the way for the future of the Office,[40] UNOOSA engaged in activities to define and implement a new set of priorities, including conducting an internal strategic review, publishing policy papers, and taking steps to obtain a Secretary General's Bulletin to further establish its independent identity.[41] The Office held 14 events including and related to UNISPACE+50 and the "Space2030" agenda (Figure 7)[42] and dedicated travel resources to related initiatives (Figure 8). Among all trips taken between 2016 and 2018, 30% were related to activities or goals of the "Space2030" and UNISPACE+50 processes.[43]

[36] COPUOS mandate: A/72/20, draft resolution: para 324(d), "Space2030" agenda: para 328; GA endorsement: A/RES/72/79 para 2, 4.
[37] A/AC.105/1166.
[38] *Ibid* para 46-55.
[39] A/RES/72/79.
[40] A/71/6/Rev.1(prog.5), para 5.8.
[41] The effort to obtain an S-G's Bulletin, however, was yet to reach fruition.
[42] These include UNISPACE+50, three related High-Level Fora (HLF) and four events related to "access to space for all".
[43] Based on OIOS Categorization, including UNISPACE+50 and High-Level Fora (6%), partnership development (7%), science and technical outreach (14%) and other travel (3%).

Figure 7: Activity mapping, 2017-2018[44]

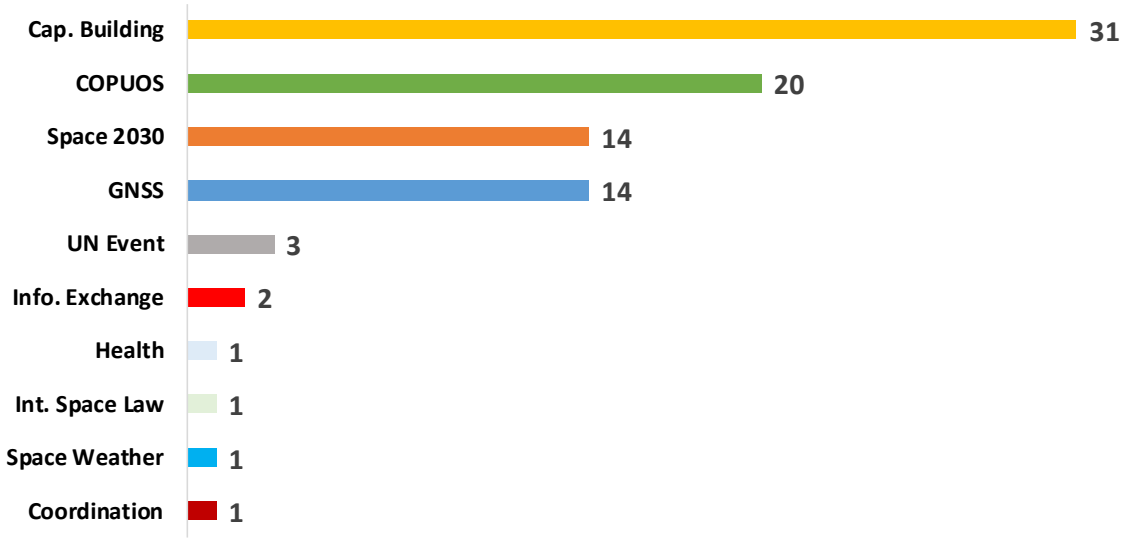
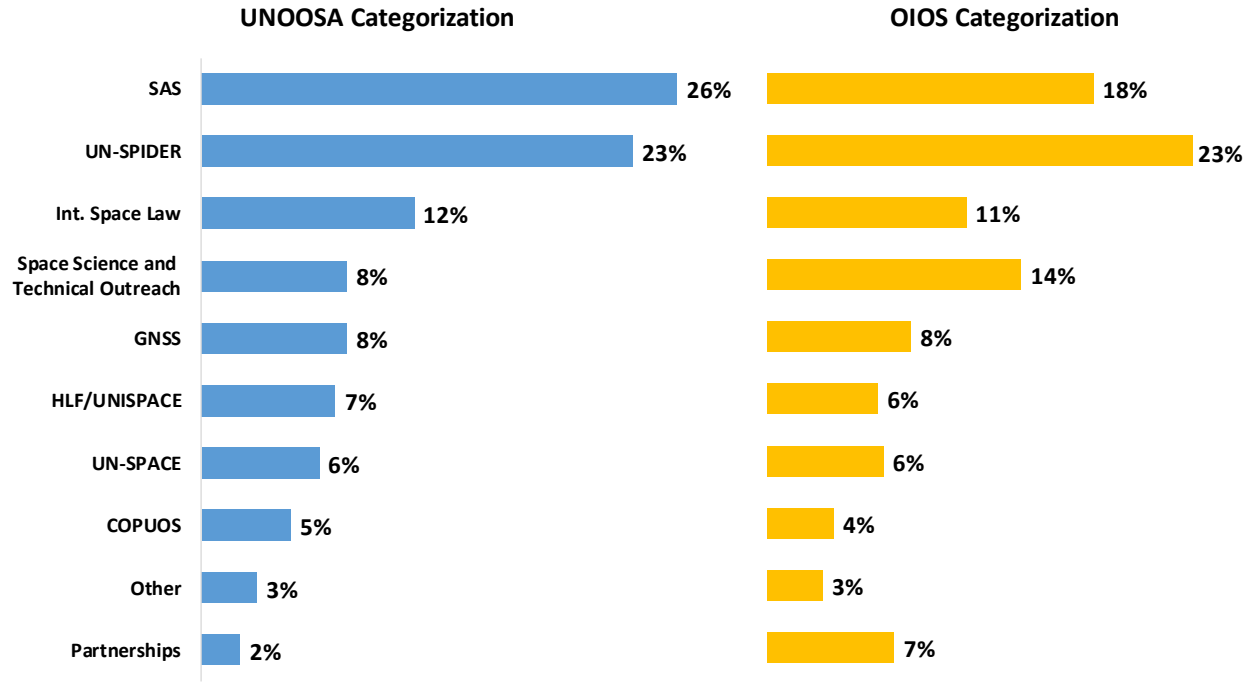


Figure 8: Travel categorization (number of trips)[45]



[44] Source: UNOOSA activity reports.

[45] OIOS categorization of travel based on descriptions provided in Umoja. For the following areas, compiled using the following rationale:

Int. Space Law: space law and policy;

SAS: Programme on Space Applications;

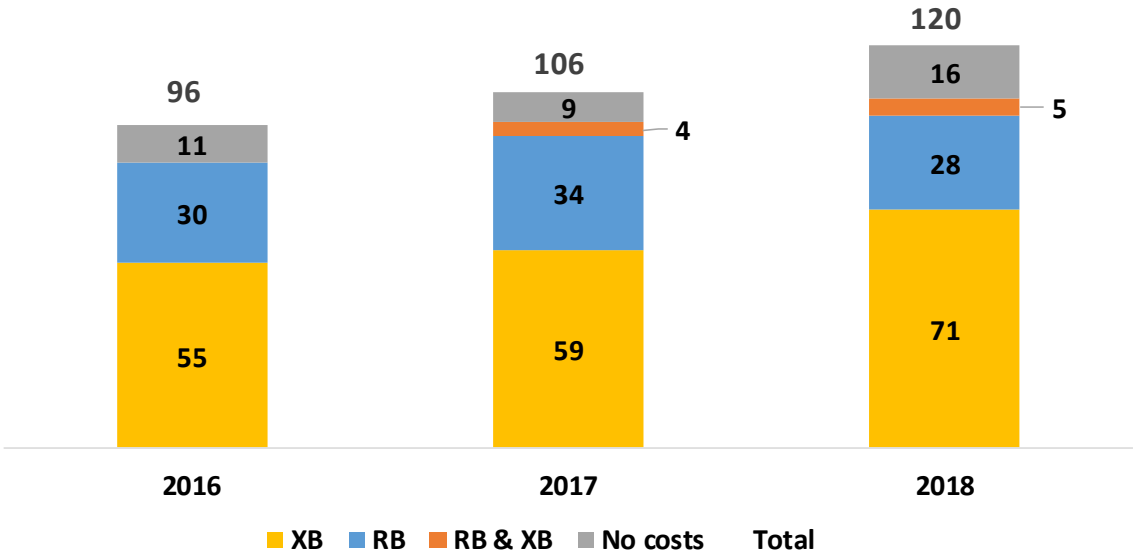
GNSS: ICG;

HLF / UNISPACE: UNISPACE and HLF;

Partnership: to pursue partnerships and sign partnership agreements;

Space Science and Technical Outreach: meetings/events not solely or co-organized by UNOOSA.

Figure 9: Number of trips/year, 2016-2018[46]



Despite the dedicated preparatory efforts of UNOOSA in accordance with the GA's mandate, the process did not lead to a reinforced mandate or additional resources for UNOOSA

30. COPUOS neither endorsed the Office's draft resolution on UNISPACE+50[47] nor agreed to a "Space2030" agenda, resulting in lost time and effort for both UNOOSA and Member States. Instead, the Committee prepared a new draft resolution[48] and established a new Working Group on the "'Space2030' agenda", to remain on its agenda until 2020.[49]

31. The UNISPACE+50 process thus did not lead to a reinforced mandate or additional resources for UNOOSA.[50] With declining RB resources, UNOOSA could fund only some of its foreseen strategies, supplemented through extrabudgetary contributions. The Office's strategic plan (2015-2019) was quite broad, reflecting a hope for greater future resources. Despite strong staff engagement (see Result E), this exposed the Office and its staff to risk of over-extension without procedures to identify, filter and select the most relevant and value-adding initiatives where it had a comparative advantage and could deliver strong results. Rather, some staff and some key external stakeholders expressed concern that the Office had spread itself too thin.[51]

32. Notwithstanding the above outcome, the substantial efforts of UNOOSA in the lead-up to UNISPACE+50 were appreciated by Member States, as evidenced by: official statements;[52] emphasis on the Office's responsibility for thematic priorities six and seven; endorsement by COPUOS and the GA for UNOOSA to pursue greater engagement with industry and private sector entities;[53] recognition

[46] Source: Umoja "Who is where?" report.
[47] A/AC.105/C.1/L.364.
[48] A/AC.105/1167 Annex I, para 9; Draft resolution: A/AC.105/L.313; final resolution: A/RES/73/6 (para 2).
[49] A/AC.105/1177 para 12; A/73/20 para 358-364.
[50] While previous UNISPACE Conferences resulted in new mandates and resources for UNOOSA through the establishment of COPUOS Working Groups, it took at least six years for these to materialize (ICG in 2005 and UN-SPIDER in 2006 following the 1999 UNISPACE III).
[51] In December 2018, UNOOSA began to update its strategic plan with a staff retreat emphasizing change management, with finalization pending outcomes of the "Space2030" agenda process.
[52] As per statements made at meetings of COPUOS and its subcommittees in 2018.
[53] A/RES/72/77 para 33.

by the GA of the preparatory work of the Office, including A/AC.105/1166;[54] and reaffirmation of the supporting role of the Office in the "Space2030 agenda" process.[55] The GA also recognized the link between space and sustainable development and the central role of UNOOSA therein.[56]

33. Furthermore, UNOOSA was appreciated by traditional and non-traditional stakeholders alike for its efforts to ensure diversity and inclusiveness in its activities. Multiple stakeholders, including Member States, recognized the political challenges that UNOOSA faced amidst disagreements over the definition and role of governance in outer space affairs. Some Member States established a Group of Friends in November 2017 in New York, facilitating briefings to Member States, supporting the organization of high-level events, and enabling the Office to reach out to delegations without a permanent mission in Vienna and to Member States who were not members of COPUOS.

C. UNOOSA EFFECTIVELY EXPANDED ITS PARTNERSHIPS, INCLUDING WITH UNITED NATIONS ENTITIES AND PRIVATE COMPANIES, AND STRENGTHENED EXISTING RELATIONSHIPS, WHILE TENSIONS WITH KEY ENTITIES REMAINED UNRESOLVED

As part of its proactive approach to revisiting its relevance, and with endorsement from Member States, UNOOSA focused on partnerships and cooperation as key strategic priorities

34. UNOOSA undertook several initiatives as part of a strategic focus on partnerships, including organizing the 2018 UN-Space meeting on the theme of partnerships, producing a "Strategy and Policy on Partnerships with Industry and the Private Sector and Guidelines for Implementation",[57] holding joint events, and allocating 24% of its trips to partnership development, outreach and other travel (see para 29).[58] Objective 1.1 of the report on the "Space2030" agenda prepared by UNOOSA proposed the establishment of a global space partnership in which the Office would function as the authoritative facilitator between space and the sustainable development goals (SDGs), and as the gateway to space in the United Nations.[59]

35. In line with strategic emphasis at the United Nations on forging partnerships, especially with non-traditional entities,[60] UNOOSA significantly increased its partnerships. These included three formalized agreements for long-term cooperation with private companies, a first for the Office.[61] In 2018, UNOOSA held 22 agreements with private, public, international and United Nations entities, up from four in 2015 (Figure 10).[62] Many of the agreements shared a strategic focus on increasing the visibility of and access to space science and technology (see para 21). Most were with Member States/Space Agencies, followed by Non-Governmental Organizations and International Non-Governmental Organizations and private companies (Figure 11). The office pursued other partnerships as well, including within the Secretariat, where such formalized arrangements were not necessary (see para 41).

[54] A/RES/73/6 p. 3.
[55] A/AC.105/C.1/L.372 para 15.
[56] A/RES/70/082, A/RES/71/90, A/RES/72/77, A/RES/73/91.
[57] http://www.unoosa.org/oosa/en/informationfor/industryandprivatesector/index.html.
[58] Based on OIOS Categorization.
[59] A/AC.105/1166 para 61; HLF 2017 "Global Space Partnership for SDGs", p. 26.
[60] SDG 17.
[61] For non-space-faring countries to obtain access to high resolution satellite imagery, and to conduct micro-gravity experiments in the International Space Station.
[62] In addition to the Office's formal partnership agreements or expressions of support with 23 UN-SPIDER Regional Support Offices across six continents.

Figure 10: Cumulative growth in partnerships[63]

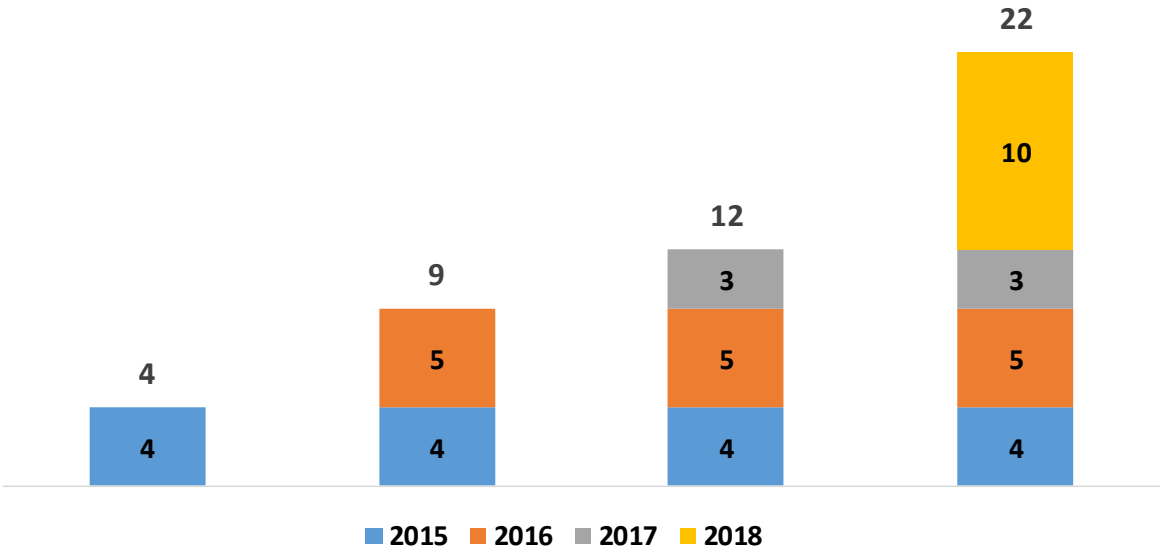
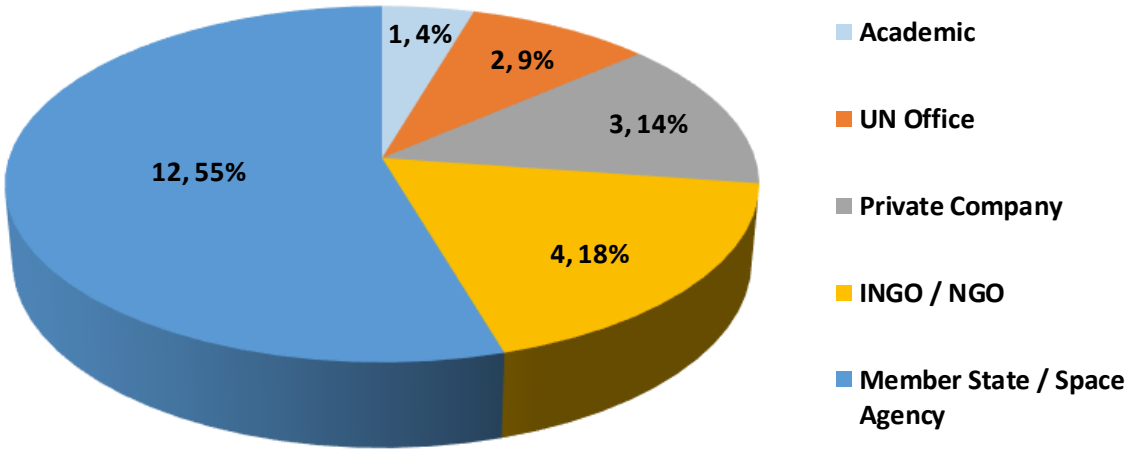


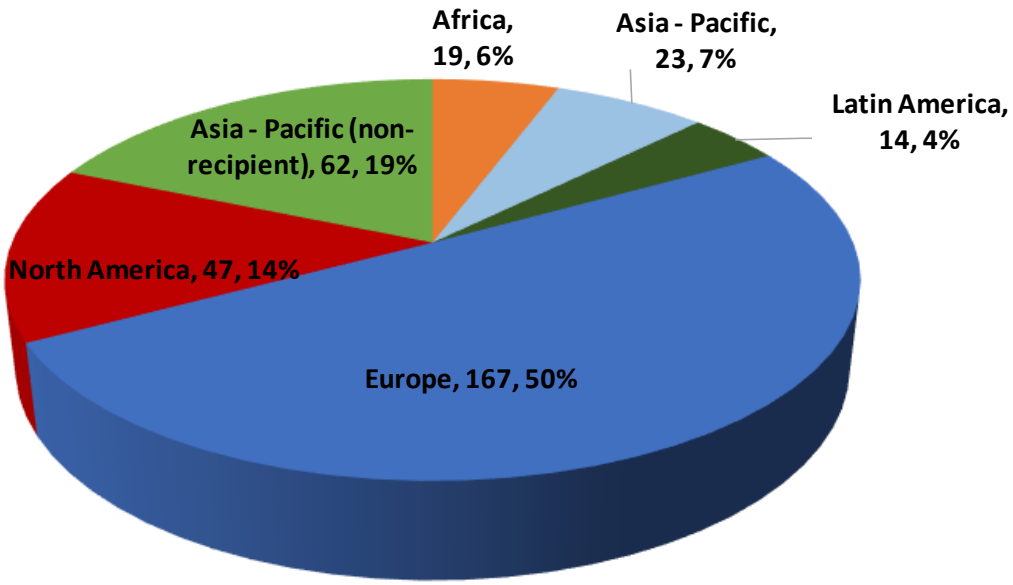
Figure 11: Formal partnerships by sector 2015-2018[64]



36. The "access to space for all" strategy was launched in 2018, however the type of access promoted by such initiatives was limited and ad hoc at the time of publication. They generated strong Member State interest, but had only benefitted a small number of countries, with no clear strategy for scaling up, sustaining or systematizing access to all emerging- and non-space-faring countries. A broader trend of the Office in conducting activities more often in developed countries was noted, with only 17% of trips between 2016 and 2018 taken to beneficiary countries in need of technical assistance and capacity building (Figure 12). The Office's workshops and conferences, however, did benefit a broad cross-section of stakeholders, including from developing countries (see para 15, 33).

[63] Source: UNOOSA.
[64] Source: UNOOSA.

Figure 12: Regional split of travel destinations[65]



Tensions persisted with key entities focusing on earth observation and wider geospatial information activities

37. There was some perceived overlap between the mandate of UNOOSA to implement UN-SPIDER and those of other international and multilateral organizations conducting earth observation and other geospatial information activities, particularly in the areas of DRR and humanitarian response. Geospatial information is a well-established field with well-resourced and networked entities, many based in Geneva. It was the one area related to space technology specifically cited in the S-G's 2030 Agenda.[66] Several entities in this field also established frameworks articulating a link between earth observation and the 2030 Agenda, the Sendai Framework and the Paris Agreement.[67]

38. UN-SPIDER was established as a "gateway", "bridge" and "facilitator" to connect disaster management and space communities and to build capacity in developing countries by providing access to space-based data and services.[68] Its founding resolution referred specifically to existing international initiatives aimed at utilizing space-based disaster information and services and requested UN-SPIDER to work closely with them to avoid duplication.[69] It also referred to the possibility of establishing a liaison office in Geneva.[70] In 2011, however, OIOS noted a high risk of duplication and called for more cooperation and coordination between UNOOSA and related entities.[71]

39. As of 2018, however, these organizations had not worked together on large projects or synchronized their activities. Despite their participation in events organized by UNOOSA, there were consistent perceptions that the Office had not leveraged its networks and events to make these

[65] Source: UMOJA "Who is where?" report.
[66] A/RES/66/288 para 187, 274.
[67] See, for example, "Earth Observations: in support of the 2030 Agenda for Sustainable Development," GEO, 2017: https://www.earthobservations.org/documents/publications/201703_geo_eo_for_2030_agenda.pdf.
[68] A/RES/61/110 para 6.
[69] A/RES/61/110 para 3, 12.
[70] A/RES/61/110 para 9.
[71] OIOS, 2011, Assignment No. AE2010/325/01.

relevant entities more visible and accessible in the service of Member States. The risk of duplication remained, although it could not be attributed to any single organization or office.

40. UNOOSA sought to establish more positive working relationships with these entities, including through Memoranda of Understanding (MoU) and short-term joint activities. But one MoU expired in 2017 and a key UNOOSA conference report on Space for Sustainable Development Goals[72] did not refer to the work of other entities in linking earth observations to the delivery of the SDGs. Exploratory initiatives to establish a UN-SPIDER Liaison Office in Geneva were unsuccessful, although renewed efforts were underway at the end of 2018. Several stakeholders noted that relations had improved in recent years, citing initiatives like the abovementioned MoUs and joint activities. Earth observation experts also contributed to UN-SPIDER TAMs.

UNOOSA supported and developed productive bilateral partnerships with United Nations entities, but was less effective in its stewardship of UN-Space as a coordination mechanism

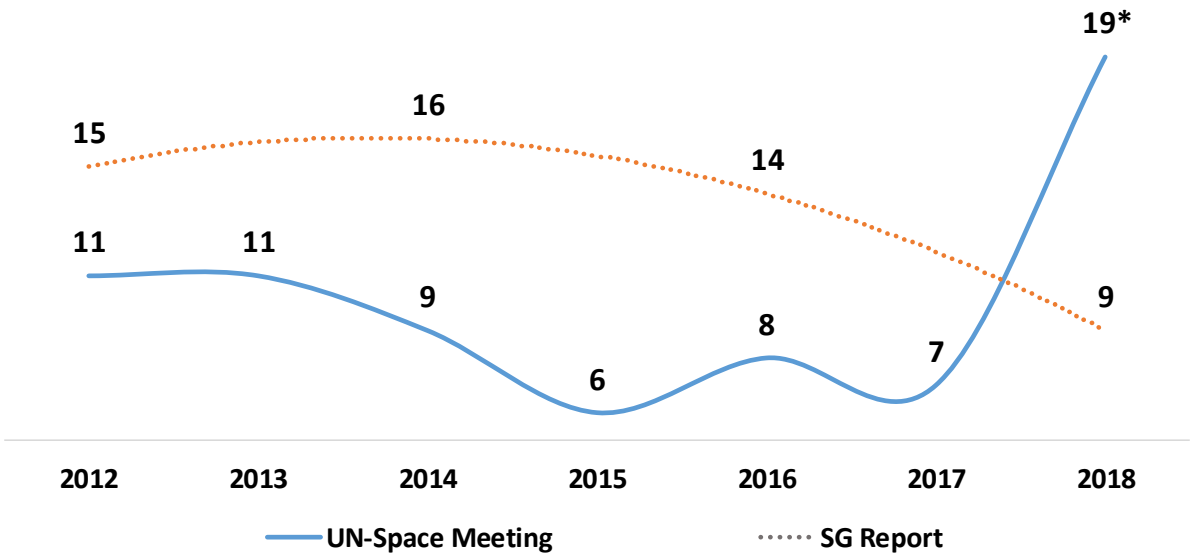
41. UNOOSA strengthened its bilateral relationships with several United Nations entities. For example, the Office signed an MoU with the United Nations Development Programme (UNDP) for cooperation in the use of geospatial and space-based technologies, although their coordination had yet to cascade to the country-level. UNOOSA also supported the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) in developing the Asia-Pacific Plan of Action on Space Applications for Sustainable Development. Additionally, UNOOSA engaged effectively with the United Nations Office for Disarmament Affairs (UNODA) around Transparency and Confidence-Building Measures (TCBMs).[73]

42. UNOOSA also took advantage of high-level events to promote UN-Space, including a panel discussion at the UNISPACE+50 of several senior United Nations representatives. UN-Space issued a joint statement highlighting the common aspiration of participating entities to strengthen the capacities of Member States for sustainable development through increased integration of space science, technology, law and policy in national development strategies.[74]

43. Most UN-Space participants viewed the forum as valuable for information exchange and reporting, but less so for coordination, despite its mandate as a coordination mechanism.[75] Participation in UN-Space meetings had been trending downward until 2018, when UNOOSA invited several new entities to attend a workshop on partnerships (Figure 13). Report contributions also trended downward slightly from 2012. These are not straightforward indicators of members' interest in the forum, as both the location of the meetings and the theme under discussion can impact attendance, which is not mandatory. However, when combined with the relatively low frequency at which entities returned to the meetings or submitted contributions to reports (Figures 14, 15), and the difficulty of maintaining a current roster of active UN-Space focal points, the data suggested overall low levels of engagement from all but a few members.

[72] A/AC.105/1196.
[73] See A/68/189; A/RES/70/53 para 8; A/AC.105/1116; A/72/65.
[74] http://www.unoosa.org/documents/pdf/copuos/2018/hls/un-space-jointstatement.pdf.
[75] A/RES/2601(XXIV); A/RES/3234(XXIX).

Figure 13: UN-Space participation in meetings and reports[76]



** Excludes UNODC, CTBTO, UNIDO and UNDP who participated only in open informal session*

[76] Source: UN-Space reports.

Figure 14: Participation in UN-Space meetings, 2012-2018[77]

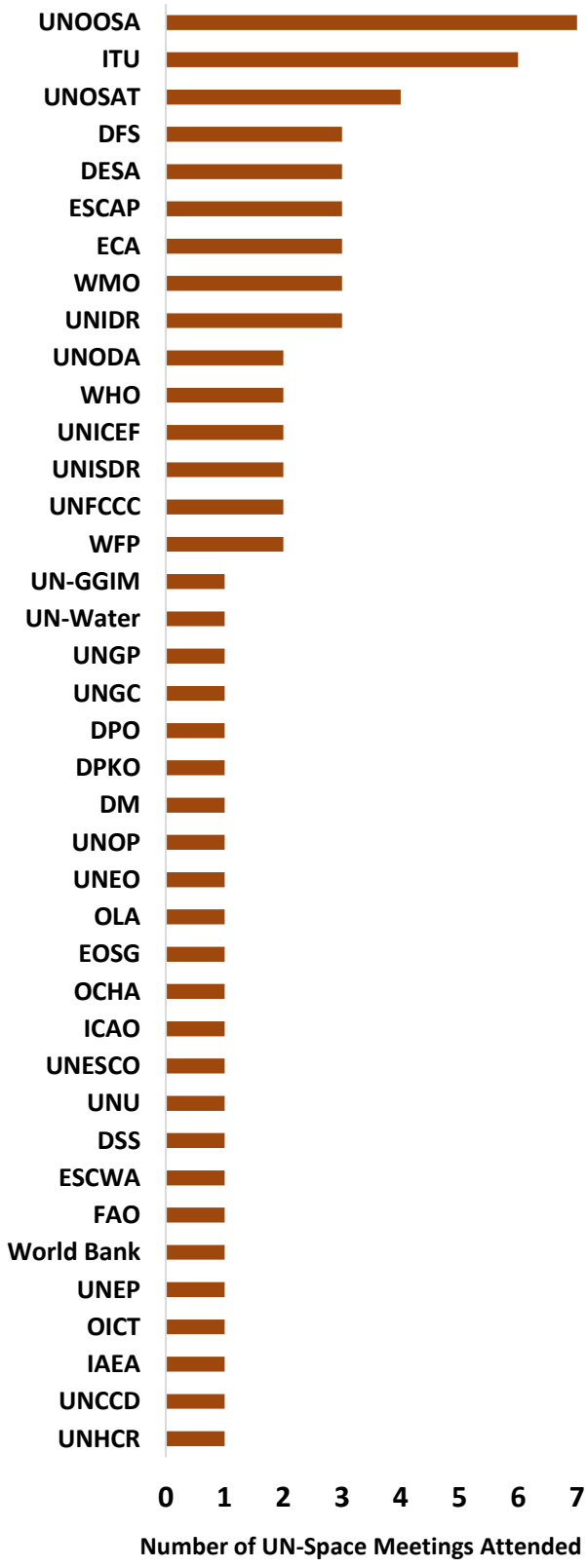
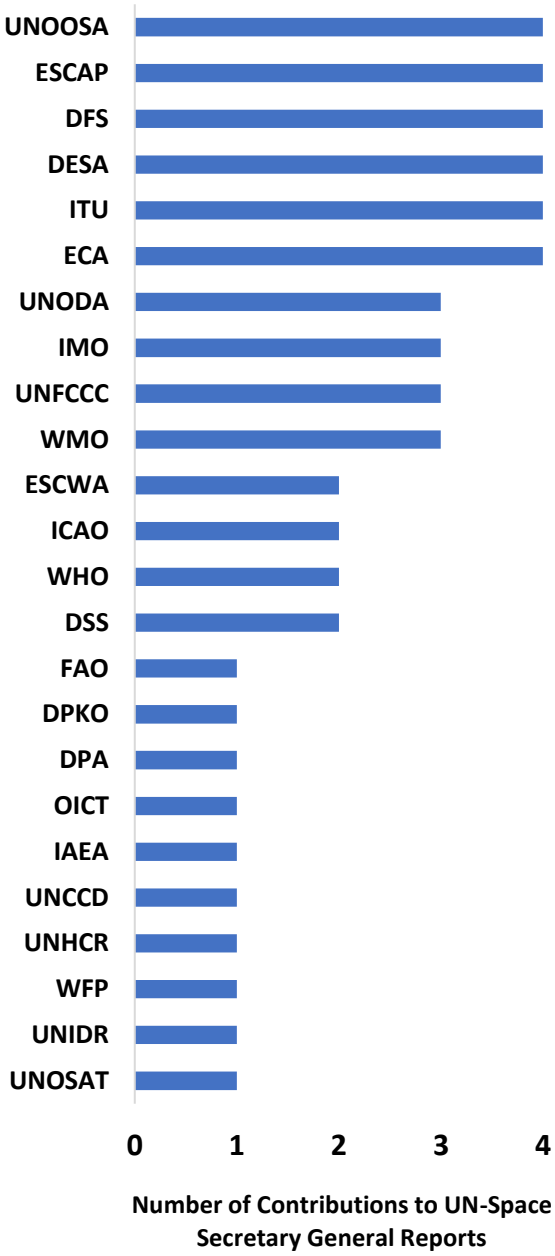


Figure 15: Contribution to S-G reports, 2012-2018



44. With the exception of the abovementioned 36th Session in 2016, hosted by UNODA and focused on TCBMs, questions remained as to the transparency of and the broader strategy behind the selection of the themes of UN-Space meetings and reports. Furthermore, UN-Space had no formal link to senior decision-making bodies at the United Nations, having lost its position as a subcommittee to the Administrative Committee on Coordination (ACC) and with no link to the Chief Executives Board for Coordination (CEB), which replaced the ACC in 1999. This diminished the ability of UNOOSA to inform the Secretary-General and decision-makers about matters pertinent to outer space, particularly in light of the increase in COPUOS membership by 51% since 1994.

45. The link between the UN-Space network and related networks, especially with the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM), remained to be determined at the working level. At the senior level, however, efforts were made to establish a more formalized partnership.

D. THE UN-SPIDER PROGRAMME AND REGIONAL CENTRES FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION EFFECTIVELY PROVIDED CAPACITY BUILDING SUPPORT, BUT WERE LIMITED IN SCALE AND NOT STRATEGICALLY IMPLEMENTED, MAKING THEM LESS EFFECTIVE IN PROMOTING SYSTEMATIC CHANGE

46. UNOOSA and its stakeholders repeatedly cited both UN-SPIDER and the Regional Centres as potential models for space capacity building moving forward. The Office advocated for strengthening the Regional Centres and UN-SPIDER Regional Support Offices (RSO), citing their broad networks and strong ties to actors at the regional, national and sub-national levels.[78] Stakeholders from the Regional Centres and RSOs noted that UNOOSA could support them by facilitating better coordination and assisting in fund-raising campaigns.

Following growth in UN-SPIDER activity in its early years, activities plateaued since 2012

47. Following the launch of UN-SPIDER activities in 2008 by a small staff, TAMs reached a peak in 2009 and remained relatively stable through 2014, despite strong and growing demand from Member States and interest from donors. Meanwhile, the number of post-TAM follow-up activities (fTAM) and other UN-SPIDER activities (workshops, conferences, and trainings not related to TAMs) both increased, with the overall number of UN-SPIDER activities remaining constant since 2012 (Figure 16). Africa and Latin America received fewer activities compared to Asia-Pacific (Figure 17).

[77] Source: UN-Space reports.

[78] A/AC.105/1166 paras. 136-140, 163-165; A/AC.105/1174 para 20(c)(iii); A/AC.105/1196 para 78b.

Figure 16: UN-SPIDER activities by type[79]

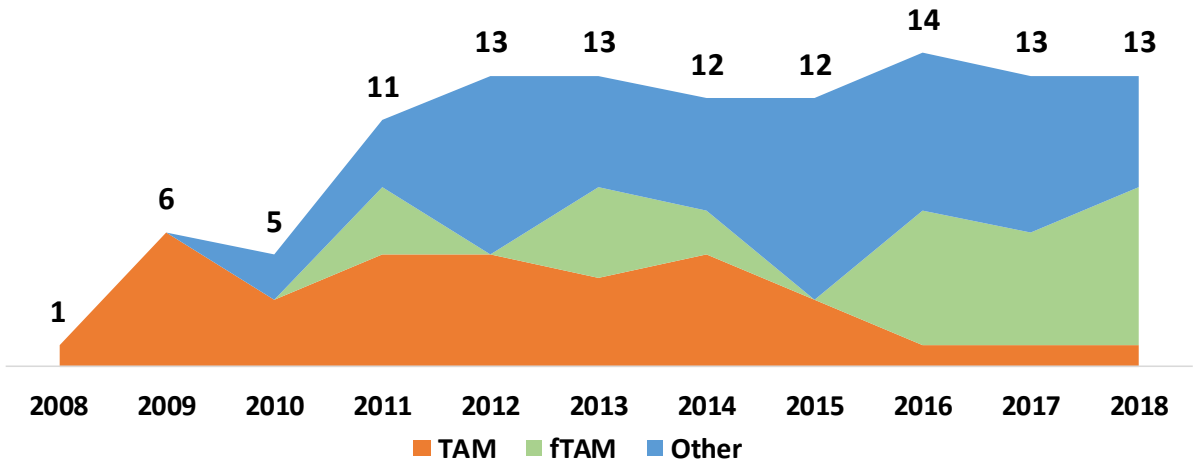
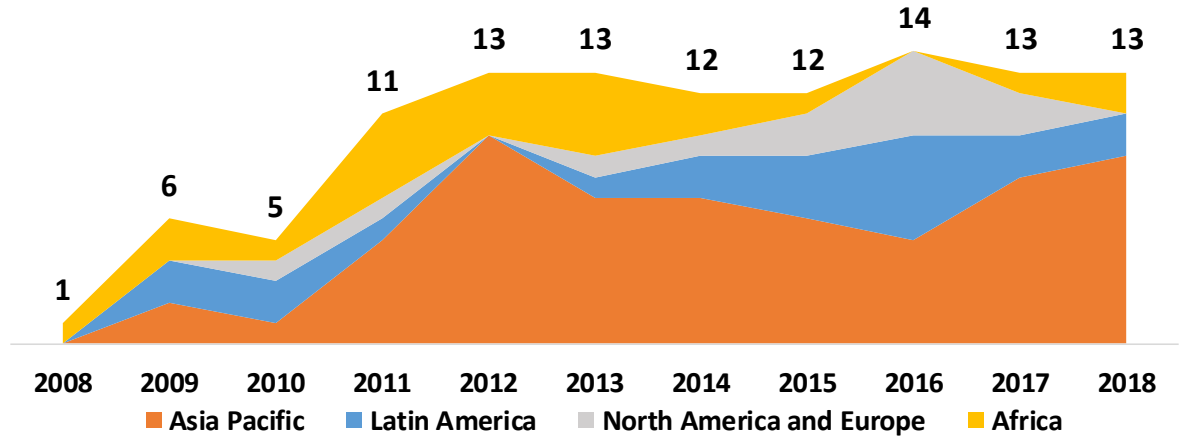


Figure 17: UN-SPIDER activities by region



48. The UN-SPIDER Knowledge Portal and international training courses were recognized by stakeholders for their useful content, but their use of step-by-step guides was less current vis-à-vis external DRR training resources, which incorporated technologies like video, webinars, Massive Open Online Courses, software coding and batch processing. In addition, some Knowledge Portal web links to relevant external sites with training opportunities were not current or were missing. UNOOSA staff also mentioned new technologies like cloud computing and interactive trainings to be adopted, subject to funding availability.

UN-SPIDER was limited not only by resources, but also by decisions both within and outside the control of UNOOSA

[79] Source: UN-SPIDER. Activities are shown since 2008 to represent whole lifespan of UN-SPIDER program.

49. For over two years, two senior UN-SPIDER posts were filled by temporary appointments, with the Head of the UN-SPIDER Beijing Office (P4) remaining vacant following repeated unsuccessful recruitment campaigns. This limited the Beijing Office in fully delivering its mandated activities. At the midpoint of its 2017-20 workplan, several planned activities had not commenced. As of December 2017, furthermore, the Office's Trust Fund held a surplus of USD 1.6 million earmarked for UN-SPIDER (851k cash, 719k receivable), of which USD 1.1 million was provided by China (406k cash, 707k receivable).[80] Despite interest from the donor for increased activity and presence in the Asia-Pacific region, the activity levels did not return to their 2012 high.

50. The Austrian Government withdrew its 2012-2013 funding to the UN-SPIDER Vienna office for activities in Africa. In 2015, it renewed its funding to the Office of the Director to support preparations for UNISPACE+50, as well as for some UN-SPIDER activities. Consequently, UN-SPIDER activity in Africa reached a peak in 2013 and then declined. With the renewal of the funding agreement by the German government in 2018 and renewed interest from Austria in supporting UN-SPIDER, an increase was anticipated by the Office from 2019 onwards (see para 19).

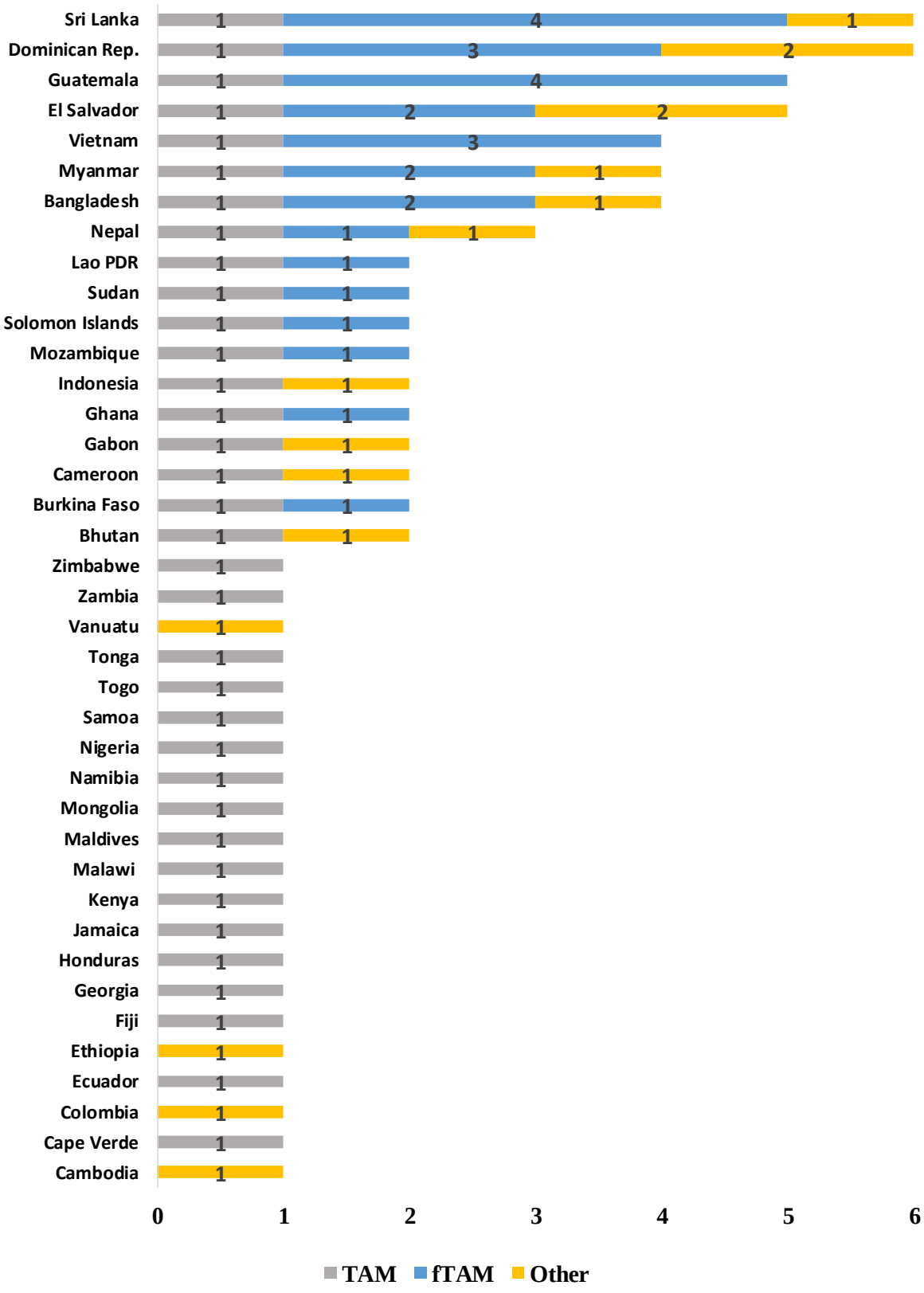
51. The UN-SPIDER offices had little cross-regional collaboration and standardization, with limited contributions to the Knowledge Portal outside of the Bonn office. TAM reports from different regions, while focusing on similar themes and areas, followed different structures, which rendered cross-regional analysis of their findings and recommendations difficult. For example, only some included short-, medium-, and long-term goals. UN-SPIDER activities also did not generally involve CPLA staff, even though several TAM reports referred to the need for legal frameworks related to the use of space applications for DRR.

52. Despite an expansive network of national and regional focal points and organizations, the Office did not keep up-to-date records of National Focal Points (NFPs) or RSO representatives. With isolated exceptions and some valuable success stories where the Office was able to pay more sustained attention, there was also limited systematic coordination between UN-SPIDER and United Nations entities with significant field presence for the programme's post-TAM follow-up. The MoU with UNDP represented a step in the right direction, but it remained unclear how this mostly headquarters-level coordination would cascade to the country teams. This limited the programme's ability to monitor progress, ensure implementation of recommendations and foster sustained institutional linkages.

53. UN-SPIDER activities placed greater focus on maximizing the number of events held and missions conducted than on the realization of a longer-term strategy of sustainable impact. The programme focused on eight countries in Latin America and the Asia-Pacific region since 2008 (Figure 18). Out of 35 countries which received TAMs, 14 received at least one follow-up, of which eight benefitted from more than one activity. The funding agreement with Germany, however, referred to the need for longer-term institutionalization. The Office was also pursuing the establishment a Regional Liaison Office in Bangkok to expand its presence in the Region while also supporting UN-SPIDER activities. Funding, however, had not yet been secured.

[80] Source: UNOOSA.

Figure 18: UN-SPIDER activities in recipient countries, 2008-2018[81]

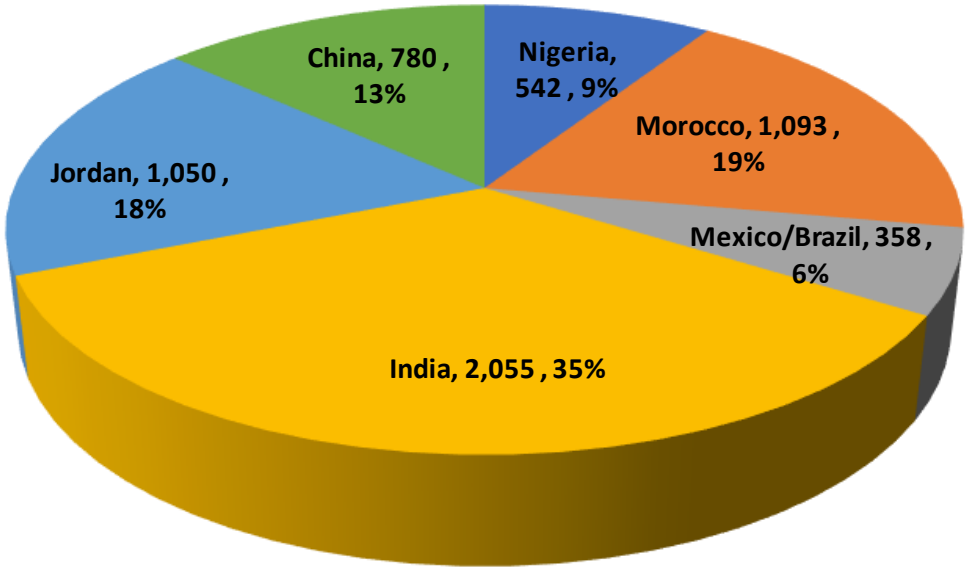


[81] Source: UNOOSA.

The Regional Centres demonstrated notable success in the development of indigenous capability in space science and technology at the local level, but remained unevenly resourced and under-monitored

54. From their creation in 1995, through 2017, the six Regional Centres trained 5,878 people through short- and long-term courses, including postgraduate and doctoral programs (Figure 19). Despite UNOOSA advocating for their strengthening (see para 46), the Regional Centres remained an under-monitored and under-utilized resource, with no systematic coordination by the Office. This limited the Office's ability to carry out its strategy toward strengthening capacity-building for the twenty-first century.[82] There was also evidence of uneven coverage, funding and performance across the Centres. The curricula for technical courses were updated in 2018, ten years since their last update, while the space law curriculum was last updated in 2014, with no cross-referencing between them. Despite the recent initiative by the Centres to create an Alliance of Regional Centres, collaboration between them remained limited.

Figure 19: Regional distribution of trainees (short- and long-term courses)[83]



E. UNOOSA BENEFITTED FROM AN ENGAGED STAFF WITH WIDE-RANGING EXPERTISE ACROSS SPACE SCIENCE, APPLICATIONS, LAW, AND POLICY, BUT GAPS IN PROJECT MANAGEMENT AND MONITORING LIMITED ITS PERFORMANCE

UNOOSA relied on its expert staff to carry out a multitude of high profile events, programs, and activities, but did not fully utilize opportunities for intra- and inter-sectional collaboration

55. UNOOSA relied consistently on a small staff with diverse skills and backgrounds, augmented where necessary through short-term arrangements. Overall, staff were actively engaged in the mandate of the Office, agreeing on its potential and significance. In 2017-2018, UNOOSA organized or co-organized 68 symposia, workshops, trainings, conference and other activities, and serviced an additional 20 COPUOS meetings and activities, notable results for such a small Office. UNISPACE+50

[82] A/AC.105/1174, para 4, para 20(C)(iii).
[83] Source: 2017 Status Report of Regional Centres, Alliance of Regional Centres (ARC).

drew 842 participants from 93 delegations and 395 public participants, for a total of 1,237 conference participants, featuring 42 exhibitors from the public, private and not-for-profit sectors.

56. The Office experimented with a "project team approach", introduced by the new leadership, involving staff from different sections in joint projects to utilize diverse skills and rationalize project management. It was an effective strategy for the Office and was appreciated by staff, yet it remained underutilized. Much of the Office's work was segmented between its legal/policy and space applications streams, despite acknowledgement of opportunities to provide more holistic support to Member States. As further evidence of segmentation, stakeholders expressed varying levels of awareness of the Office, with some having heard of UN-SPIDER or UNOOSA but not both.

Gaps in project management posed risks to the Office's effectiveness and efficiency

57. Pressured by its preparations for UNISPACE+50 in addition to the spectrum of its existing mandates, UNOOSA had difficulty in meeting some project management obligations. The Office missed project deadlines and reporting obligations, which resulted in delayed or lost contributions for these projects. The Office's Multi-Donor Trust Fund cash surplus (USD 4.4 million at the end of 2017, of which USD 1.1 million was unearmarked) indicated insufficient utilization of extra-budgetary funding.

58. The Office, including its UN-SPIDER activities, lacked a clear strategy for monitoring and evaluating the outcomes and impacts of its work at numerous levels. Its predominant "workshop model" limited the extent to which UNOOSA could achieve and measure sustainable, longer-term change. The Office had started collecting feedback from workshop and conference participants to evaluate its activities. Under its "access to space for all" initiative, furthermore, UNOOSA envisioned moving away from the traditional workshop model towards a new capacity-building approach.

V. Conclusion

59. *Relevance:* Overall, the activities and outputs of UNOOSA were relevant and consistently aligned with its overall objectives, goals and mandates, evidenced by a high level of stakeholder satisfaction. As a Secretariat to COPUOS, the Office met the needs and requirements of Member States, servicing the committee and its subsidiary bodies and facilitating new memberships. While acknowledging the Office's preparatory work for the UNISPACE+50 and "Space2030" processes, COPUOS set up a working group to bring the process to fruition by 2020, assigning a supporting role for UNOOSA. Through its provision of technical support and capacity building, UNOOSA responded the needs of some countries through missions, fellowships, workshops, and trainings, though its activities did not keep pace with demand.

60. *Effectiveness:* UNOOSA successfully served as Secretariat to ICG and maintained the Register of objects launched into outer space. The Office sought partnerships with non-traditional entities, secured or renewed funding from its traditional donor base, and elaborated a strong new vision of space solutions and capacity building and the role of the Office therein. But UNOOSA was not entirely successful in gaining Member State support of its vision of a modernized and reinforced mandate. Its partnerships, furthermore, had yet to result in widescale benefit to Member States, with limited linkages to United Nations country teams, unresolved tensions with key entities, and untapped potential across the UN-SPIDER network and Regional Centres. UN-SPIDER activities were well-regarded, but they plateaued while resources remained unspent. The Office organized and participated in an extensive number of conferences and workshops, which benefited a broad range of participants from diverse countries, but its own travel to countries in need of technical assistance constituted a minority of all trips. Participation in UN-Space increased sharply in 2018, though the forum remained more of a reporting than a coordination mechanism.

61. *Efficiency:* UNOOSA was consistently noted by stakeholders for significant accomplishments despite a small staff. However, staff were over-extended, and the Office was sometimes unable to fulfil its project management responsibilities. Work streams remained largely segregated across the Office's sections, with promising experience from the recently-introduced project team approach. A significant portion of the extrabudgetary Trust Fund remained unspent, suggesting gaps in the Office's capacity to fully implement its mandated activities.

62. Key stakeholder support, including from Member States, did not materialize into a modernized mandate. However, UNOOSA remained relevant and essential: first, to service an evolving international legal framework encompassing rapidly-developing scenarios in outer space affairs; second, to address the needs of Members States in developing their legal and technical capacity to harness the benefits of space for humankind; and third, to help close the gap between space-faring and non-space-faring countries amidst rapid political, technical and commercial changes in outer space.

VI. Recommendations

A. In anticipation of growth in the number of objects launched into outer space in the near future, UNOOSA should review and modernize its registration processes and capacity to maintain a high registration rate.

Indicators of achievement:

(1) Evidence of modernized process and enhanced capacity to meet growth in number of objects launched

(2) Maintenance of current high registration rate

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, UNOOSA should augment programmes and reprioritize resources to address the space capacity needs of Member States, including for disaster management.

Indicators of achievement:

(1) Needs assessment completed

(2) Systematic mapping of available programmes and entities working in the field of space science and technology to identify the comparative advantage of UNOOSA

(3) Evidence of augmented programmes and reprioritization of resources and activities in UNOOSA strategic plan (2020-2024)

C. In the case of UN-SPIDER, UNOOSA 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.

Indicators of achievement

(1) Evidence of a streamlined approach to reports, country selection, outreach, follow-up and other operational matters

(2) Use of new technologies and modalities in online and in-person trainings, including linkages to external resources and expertise

(3) Utilization rate of extra-budgetary funding for UN-SPIDER

(4) Evidence from self-evaluation report of implementation rate and effectiveness

D. UNOOSA 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.

Indicators of achievement:

(1) Evidence of integration of space applications into national development processes
(2) Evidence of outreach to Resident Coordinators and United Nations country teams of targeted countries identified through a needs assessment
(3) Monitoring and evaluation framework to capture results achieved at country level

E. UNOOSA 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.

Indicators of achievement:

(1) Clear and fundable strategies to improve coordination with entities in earth observation and other geospatial fields, including Geneva-based organizations, at the operational level
(2) Evidence of cross-collaborations and joint activities amongst UN-Space members
(3) Monitoring tools to better leverage and support the Regional Centres for Space Science and Technology
(4) Evidence of collaboration mechanisms for UN-SPIDER RSOs and NFPs

F. UNOOSA should enhance cross-sectional collaboration and strengthen its project management capacity.

Indicators of achievement:

(1) Evidence of enhanced use of project team approach
(2) Evidence of systems to track project implementation, monitor and evaluate project outcomes and learn from past experiences
(3) Better reporting on systematic metrics and trend analysis of the Office's activities and outputs in annual reports
(4) Evidence of adequate consideration of project management skills in recruitment decisions
(5) Evidence of cross-functional (legal/technical) approaches in TAMs, where appropriate, and curriculum updates
(6) Evidence of a review of organizational structure to identify opportunities to enhance collaboration and reinforce project management capacity

Annex I – UNOOSA Formal Management Response

UNOOSA would like to thank OIOS for its effort in conducting this review, considering that in order to successfully complete the task, it had to deal with the nuances of a specialized field of expertise, filled with complex policy, law, and technology related knowledge.

UNOOSA appreciates the conclusion by OIOS that the despite 'operating with a small staff and declining resources, the Office implemented highly relevant activities, effectively meeting many of the needs, requirements and priorities of Member States'.

UNOOSA also takes the opportunity to comment on the recommendations made by OIOS, as follows:

UNOOSA welcomes recommendation A and is prepared to initiate the relevant work, with the assistance of Member States, in order to fulfil the indicators of achievement as outlined in the report.

In document A/AC.105/1170 issued on 15 November 2017, UNOOSA clearly already identified the measures to be taken within the limits of the current mandate to upgrade the register. However, no action can be taken until there is an allocation of additional resources to cope with, inter alia, the anticipated growth of volume of registrations, allowing UNOOSA to fulfil its obligations in discharging the Secretary-General's responsibilities under international space law.

UNOOSA would be ready to engage on re-prioritising the use of its resources as indicated in recommendation B, but this would imply a longer-term engagement by UNOOSA with a smaller number of Member States, unless more resources are made available. It is UNOOSA's view that, however, it would be better not to re-prioritize its resources but instead to seek additional voluntary contributions that would enable the implementation of additional tools, such as the Space for Development Profile and the Space Solutions Compendium, thereby enabling the Office to better meet the demand for services by an increasing number of Member States on a more stable basis.

UNOOSA values recommendation C because it underlines the need of a reinforcement of the operational key elements of the UN-SPIDER program, which has a unique mandate that is not fully implementable to date due to lack of human and financial resources. We intend to start providing full services and also address any non-natural disaster as indicated in operative paragraph 6 of the General Assembly Resolution 61/110, pending a successful fund-raising campaign to this end.

UNOOSA welcomes recommendation D and is fully convinced that it will be naturally fulfilled through the implementation of the UN reform. To this extent, UNOOSA wishes to recall that the lack of a dedicated Secretary-General Bulletin, as underlined in the OIOS report, and its exclusion from the UN Secretariat's organigramme, are inter alia factors which limits the Office's ability to raise awareness within the system of the importance of space activities for the Organization, as well as to connect in a comprehensive manner with the local UN stakeholders for coordinated actions across the system.

In reference to recommendation E, UNOOSA welcomes the recognition by OIOS of the work done in particular on the Access to Space for All initiative. UNOOSA also appreciates the fresh look at the partnership challenge provided by OIOS, and wishes to underline that numerous agreements and alliances have been successfully concluded with dozens of parties in recent years, with the view to increase opportunities for Member States.

UNOOSA considers recommendation F as an incentive to reinforce internal cross-collaboration and strengthen its reporting capacity, which however needs, in order to be implemented, a new organizational structure and additional human and financial resources. With regards in particular to references to the UNOOSA trust fund surplus, such remark should be read in the context of the fact that the vast majority of the trust fund resources is hard earmarked for the implementation of existing activities. In addition, the timeframe referenced by the OIOS report is inclusive of 25% figure in contributions yet to be received.

The actions UNOOSA is able to undertake with respect to the recommendations is elaborated in the UNOOSA Recommendation Action Plan prepared and finalized in line with OIOS' request as part of the evaluation process.

In concluding, the Office appreciated the recording by OIOS in the report of the following: 'a wide spectrum of UNOOSA stakeholders provided overwhelmingly positive feedback about the Office's accomplishments despite a small budget. No other entity within or outside the United Nations possesses a comparable mandate covering the full breadth of political, legal and scientific affairs related to the peaceful uses of outer space'.

Annex II – Recommendation Action Pan

Report of the Office of Internal Oversight Services on the Evaluation of the Office for Outer Space Affairs (OOSA)

IED-19-003

IED Recommendation	Anticipated Actions	Responsible Entity(ies)	Target date for completion
Recommendation A In anticipation of growth in the number of objects launched into outer space in the near future, UNOOSA should review and modernize its registration processes and capacity to maintain a high registration rate. Indicators of achievement: (1) Evidence of modernized process and enhanced capacity to meet growth in number of objects launched (2) Maintenance of current high registration rate	The Office has already undertaken the review of the registration process, including on the present and future trends of space activities and made recommendations in this regard, as documented in A/AC.105/1170 issued on 30 November 2017. In anticipation of an increase in demand, the measures, to be undertaken with the assistance of Member States, requires significant additional resources, especially in the long-term. However, the Office will continue to ensure the maintenance of the current registration rate, inter alia through advocacy and awareness raising within existing resources.	UNOOSA	December 2022

IED Recommendation	Anticipated Actions	Responsible Entity(ies)	Target date for completion
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, UNOOSA should augment programmes and reprioritize resources to address the space capacity needs of Member States, including for disaster management. Indicators of achievement: (1) Needs assessment completed (2) Systematic mapping of available programmes and entities working in the field of space science and technology to identify the comparative advantage of UNOOSA (3) Evidence of augmented programmes and reprioritization of resources and activities in UNOOSA strategic plan (2020-2024)	In the context of any reprioritization of the use of its resources UNOOSA is of the view that this would imply a longer-term engagement by UNOOSA with a smaller number of Member States, unless more resources are made available. With respect to demonstrating its comparative advantage, the Office has launched in 2018 the 'Access to Space for All' initiative, as reflected in the Office's Strategic Framework for 2020. At the same time, COPUOS is expected to finalize, by June 2020 with an expected decision by the GA end of 2020, a Space 2030 agenda and an implementation plan that will influence the work of the Office, and possibly its resources, beyond 2020. Following the adoption by the General Assembly of the agenda and related plan by the end of 2020, the Office will undertake a further analysis of the implications of those decisions.	UNOOSA	December 2021

IED Recommendation	Anticipated Actions	Responsible Entity(ies)	Target date for completion
Recommendation C In the case of UN-SPIDER, UNOOSA 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. Indicators of achievement: (1) Evidence of a streamlined approach to reports, country selection, outreach, follow-up and other operational matters (2) Use of new technologies and modalities in online and in-person trainings, including linkages to external resources and expertise (3) Utilization rate of extra-budgetary funding for UN-SPIDER (4) Evidence from self-evaluation report of implementation rate and effectiveness	The Office reviews, on an annual basis, with its main donors the plan of work under the UN-SPIDER programme. The Office will continue to work with the donors under this programme to improve reporting and establishing appropriate means of measuring the implementation rate of the programme. A proposal to strengthen the organizational structure of the programme has been submitted as part of the 2020 budget process. The Office also intends to start providing full services and also address any non-natural disaster as indicated in operative paragraph 6 of the General Assembly Resolution 61/110, pending a successful fund-raising campaign to this end.	UNOOSA	December 2020

IED Recommendation	Anticipated Actions	Responsible Entity(ies)	Target date for completion
Recommendation D UNOOSA 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. Indicators of achievement: (1) Evidence of integration of space applications into national development processes (2) Evidence of outreach to Resident Coordinators and United Nations country teams of targeted countries identified through a needs assessment (3) Monitoring and evaluation framework to capture results achieved at country level	The Office has, within existing means, established partnerships with United Nations entities with extensive in-country presence. This is evidenced by the contributions made to the Office's training and capacity-building activities and for technical advisory services, by these entities. The Office will continue to work on overcoming the factors that limit its ability to raise awareness within the system and will actively explore the opportunities that may arise through the UN reform process to expand its scope of engagement.	UNOOSA	December 2023

IED Recommendation	Anticipated Actions	Responsible Entity(ies)	Target date for completion
Recommendation E UNOOSA 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. Indicators of achievement: (1) Clear and fundable strategies to improve coordination with entities in earth observation and other geospatial fields, including Geneva-based organizations, at the operational level (2) Evidence of cross-collaborations and joint activities amongst UN-Space members (3) Monitoring tools to better leverage and support the Regional Centres for Space Science and Technology (4) Evidence of collaboration mechanisms for UN-SPIDER RSOs and NFPs	The Office's partnership network, as underlined by the numerous agreements and alliances it has in place is wide-ranging and, as the Office's comparative advantage, the network is key to its ability to promote the peaceful uses of outer space. The Office already leverages on those partnerships to deliver on its extensive mandate which includes space law and policy, transparency and confidence building measures in outer space activities, earth observation, satellite communications, space exploration, space science, space technology, space weather and global navigation and timing in areas such as disaster management, climate change and global health. The Office's ability to enhance its network is limited by the resources at its disposal and thus impacts the range of opportunities it can make available.	UNOOSA	December 2020

IED Recommendation	Anticipated Actions	Responsible Entity(ies)	Target date for completion
Recommendation F UNOOSA should enhance cross-sectional collaboration and strengthen its project management capacity. Indicators of achievement: (1) Evidence of enhanced use of project team approach (2) Evidence of systems to track project implementation, monitor and evaluate project outcomes and learn from past experiences (3) Better reporting on systematic metrics and trend analysis of the Office's activities and outputs in annual reports (4) Evidence of adequate consideration of project management skills in recruitment decisions (5) Evidence of cross-functional (legal/technical) approaches in TAMs, where appropriate, and curriculum updates (6) Evidence of a review of organizational structure to identify opportunities to enhance collaboration and reinforce project management capacity	The Office already leverages on cross-sectional collaboration to deliver on its programme of work. The collaboration takes place through various means, including through the project team approach which the Office will enhance. The Office will undertake a review of its existing processes and workflows, including those relating to performance tracking, reporting and evaluation, for which the Office anticipates the need of additional resources.	UNOOSA	December 2020