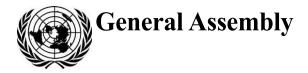
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Report on the United Nations/Portugal Conference on the Management and Sustainability of Outer Space Activities

(Lisbon, 14 and 15 May 2024)

I. Introduction

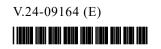
1. Since the advent of space activities, humans have become increasingly dependent on space technology. This was recognized by the General Assembly and led it to establish the Committee on the Peaceful Uses of Outer Space in 1958. Today, our way of life is unimaginable without the use of space data and information.

2. The Committee, owing to its mandate and position at the centre of international cooperation in the peaceful uses of outer space, and the global governance of outer space activities, consistent with international law, played a key role in organizing the first three United Nations conferences on the exploration and peaceful uses of outer space, held in 1968, 1982 and 1999.

3. The General Assembly, in its resolution 73/6 of 26 October 2018, noted with appreciation that the preparatory process and the high-level segment of the fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50) had resulted in documents aimed at articulating a comprehensive, inclusive and strategically oriented vision on strengthening international cooperation in the exploration and peaceful uses of outer space. In that context, space was recognized as a major driver and contributor to the achievement of the Sustainable Development Goals for the benefit of all countries. As a result of the UNISPACE+50 process, the General Assembly adopted resolution 76/3, entitled "The 'Space2030' Agenda: space as a driver of sustainable development". Based on the four pillars of space economy, space society, space accessibility and space diplomacy, the "Space2030" Agenda establishes the following overarching objectives:

1. Enhance space-derived economic benefits and strengthen the role of the space sector as a major driver of sustainable development;

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- 2. Harness the potential of space to solve everyday challenges and leverage space-related innovation to improve the quality of life;
- 3. Improve access to space for all and ensure that all countries can benefit socioeconomically from space science and technology applications and space-based data, information and products, thereby supporting the achievement of the Sustainable Development Goals;
- 4. Build partnerships and strengthen international cooperation in the peaceful uses of outer space and in the global governance of outer space activities.

4. These overarching objectives, in particular objectives 1 and 4, underline the importance of the long-term sustainability of outer space activities, owing to its significance in current and emerging space endeavours. The Guidelines for the Long-term Sustainability of Outer Space Activities (A/74/20, annex II), adopted in 2019, constitute a compendium of internationally recognized measures and commitments aimed at ensuring the long-term sustainability of outer space activities, with a particular focus on the safety of space operations.

II. Background and objectives

5. The Office for Outer Space Affairs and the Portuguese Space Agency, on behalf of the Government of Portugal, jointly hosted the United Nations/Portugal Conference on the Management and Sustainability of Outer Space Activities, held in Lisbon on 14 and 15 May 2024. The Conference resulted in the outcome document entitled "Lisbon Declaration on Outer Space", which is contained in the annex to the present report.

6. On the occasion of the seventy-fifth anniversary of the United Nations, the General Assembly adopted resolution 75/1, entitled "Declaration on the commemoration of the seventy-fifth anniversary of the United Nations", in which Member States requested the Secretary-General to report with recommendations to respond to current and future challenges. In the declaration, Governments called for reinvigorated multilateralism, and committed to working together with partners to strengthen global governance for the common future of present and coming generations.

7. In response to that call, the Secretary-General, in his report entitled "Our Common Agenda" (A/75/982), devoted significant attention to the governance of outer space activities. In the report, the importance of the space sector was emphasized, and reflected the commitment made by Member States, in the above-mentioned resolution, to promote peace and prevent conflicts (see A/75/982, paras. 90 and 91). In that report, the Secretary-General stated the following:

A combination of binding and non-binding norms is needed, building on existing frameworks and drawing in the full range of actors now involved in space exploration and use. Immediate actions could include the development of a global regime to coordinate space traffic and the elaboration of new instruments to prevent weaponization of outer space. To that end, consideration could be given to a multi-stakeholder dialogue on outer space as part of a Summit of the Future bringing together Governments and other leading space actors. The dialogue could seek high-level political agreement on the peaceful, secure and sustainable use of outer space, move towards a global regime to coordinate space traffic and agree on principles for the future governance of outer space activities.

8. In accordance with the recommendation of the Secretary-General, the Summit of the Future should be preceded by preparatory events and consultations, as part of the high-level track leading to the multi-stakeholder dialogue on outer space of the Summit.

9. In 2022, the General Assembly adopted resolution 76/307, entitled "Modalities for the Summit of the Future", in which it encouraged stakeholders and Member

States to engage in the preparatory process of the Summit of the Future. The Summit will bring together Heads of State and ministers to adopt an outcome document entitled "A Pact for the Future", to consolidate collective agreements and demonstrate global solidarity for present and future generations; and it is hoped that the sustainability of outer space activities will be addressed in the document.

10. It would be useful to include consideration of space-related issues in the preparatory process, and the process should bring together relevant stakeholders to discuss and contribute ideas and proposals for the Summit, with a view to ensuring that the benefits of space are available to the widest variety of possible users in all countries around the world in a long-term and sustainable manner.

11. In resolution 76/307, the General Assembly decided that the Summit of the Future would be held on 22 and 23 September 2024, in New York, preceded by a preparatory ministerial meeting.

12. To ensure that the Summit of the Future and the high-level political forum on sustainable development convened under the auspices of the General Assembly (Sustainable Development Goals Summit) would be well coordinated, the Sustainable Development Goals Summit was held on 18 and 19 September 2023. In that connection, the High-level Dialogue on Financing for Development was held on 20 September 2023. The preparatory ministerial meeting for the Summit of the Future was held on 21 September 2023.

In follow-up to his report entitled "Our Common Agenda" and in preparation 13. for the Summit of the Future in 2024, the Secretary-General published a series of policy briefs to further expand on the analyses and recommendations contained in the report. In May 2023, the Secretary-General issued policy brief 7, entitled "For all humanity - the future of outer space governance", in which he elaborated on his proposals to Member States. The policy brief contains an examination of the extraordinary changes under way in outer space and an assessment of the sustainability, safety and security impacts of those changes on present and future governance. In addition, the brief contains an outline of major trends that are impacting space sustainability and the positive impact that those trends could have on achieving the Sustainable Development Goals. It also contains an outline of major trends affecting the security of outer space activities and the risks to humanity that could materialize if those challenges are not solved. Lastly, to support Member States in their preparation for the Summit of the Future, the policy brief provides a set of governance recommendations for maximizing the opportunities of outer space while minimizing short- and long-term risks.

14. At its core, the United Nations promotes multilateral dialogue, cooperation and inclusiveness. Since the 1950s, it has taken advantage of its convening power to bring together Member States to discuss the peaceful uses of outer space. Through the Committee on the Peaceful Uses of Outer Space, diplomatic and scientific experts have shepherded the development of an agreement on five United Nations treaties on outer space and other instruments. In his policy brief, the Secretary-General acknowledged that the Committee and its two subcommittees were actively engaged in several areas to foster the safety and sustainability of outer space activities. He also highlighted that further action was needed to support the Committee in its governance role.

15. As addressing these matters is first and foremost the prerogative of Member States, taken together, the process of follow-up to "Our Common Agenda" and the Summit of the Future offer a platform for engagement on these vital issues.

16. In that connection, the Portuguese Space Agency proposed organizing, together with the Office for Outer Space Affairs, a series of events aimed at contributing to the road map for the Summit of the Future, including the United Nations/Portugal Conference on the Management and Sustainability of Space Activities.

17. The goal of the Conference, as an integral part of the high-level track on the outer space dialogue, was to provide contributions that could form an input to the

Summit of the Future. To achieve that goal, a series of preparatory events were held to consult with Member States in a collaborative and multi-stakeholder effort.

18. The Conference provided an opportunity for representatives of the space community to discuss current and future activities, with a focus on the Summit of the Future in 2024.

19. The Conference was preceded by two preparatory virtual symposiums. The first virtual symposium, which addressed technical issues related to sustainability in outer space activities, was held from 27 to 29 November 2023 (see A/AC.105/C.1/2024/CRP.34). The second virtual symposium, comprising sessions on the policy and legal aspects of sustainable space activities, was held from 11 to 15 March 2024 (see A/AC.105/C.2/2024/CRP.33). Those preparatory symposiums fed into the final in-person conference in Lisbon, which addressed the topics considered in the virtual symposiums, as well as the governance of outer space activities.

20. The present report describes the background, objectives and programme of the Conference. Further details on the Conference and the preparatory symposiums can be found at www.unportugal.ptspace.pt. All session recordings, including those of the preparatory symposiums, can be found on the Conference website or on YouTube.

III. Attendance

21. The Conference brought together participants from national, regional and international public and private organizations and institutions, including decision makers from government agencies, high-ranking officials from regional and international agencies, representatives and experts from United Nations agencies, experts from the space community, experts from academic communities, policymakers, experts from international centres of excellence, researchers involved in the use of space technologies, representatives from both the space-related and non-space-related fields of the private sector and civil society leaders.

22. A total of 260 individual participants, 38.17 per cent of whom were women, and 61.83 per cent were men, participated in person.

23. Representatives of the following 54 Member States had registered to participate: Algeria, Australia, Austria, Bahrain, Bangladesh, Belgium, Brazil, Cambodia, Canada, China, Colombia, Costa Rica, Czechia, Djibouti, Ecuador, Egypt, El Salvador, Fiji, France, Germany, Ghana, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kazakhstan, Kenya, Luxembourg, Mali, Mexico, Morocco, Netherlands (Kingdom of the), Nigeria, Pakistan, Panama, Paraguay, Portugal, Russian Federation, Rwanda, Saudi Arabia, Senegal, Serbia, South Africa, Spain, Sweden, Switzerland, Tajikistan, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania and United States of America. Of those, 38 were present on the second day and 33 made statements.

IV. Programme

24. The Conference commenced with an opening session, followed by comprehensive discussions on space traffic management and space sustainability. In subsequent sessions, participants examined critical topics, including space debris and space resources, highlighting the challenges and opportunities within those areas. Special attention was given to the role of youth and civil society in space governance, and the importance of inclusive and multi-stakeholder engagement was emphasized.

25. The second day featured an opening ceremony and keynote addresses, setting the stage for the presentation of the Lisbon Declaration on Outer Space. Representatives of Member States then made interventions, contributing their perspectives on and commitments to sustainable space governance. The programme concluded with a session focused on the road to the Summit of the Future, culminating in a closing ceremony in which participants underscored their collective resolve to advance sustainable and peaceful uses of outer space.

26. During the Conference, interventions were also made by the Under-Secretary-General for Policy, Guy Ryder, and by the representative of Germany, in its role as co-facilitator for the Pact for the Future.

V. Summary of the panel discussions

A. Opening session

27. At the opening session, speakers highlighted the indispensable role of space technology in essential global services such as communication, navigation, weather forecasting, Internet access and health care. The critical challenge of managing and developing sustainable outer space activities, which necessitated collective global action, was highlighted.

28. The moderator expressed appreciation for the visionary leadership of the Secretary-General in advancing global discourse on space. She noted that the Conference, supporting that vision, was aimed at facilitating dynamic debates, the sharing of insights and collaboration on strategies for sustainable space activities, and at addressing topics such as orbital debris mitigation, space resource utilization and space traffic coordination. Effective multilateral governance was crucial to ensuring that space data and services supported the Sustainable Development Goals, and was vital for achieving the 2030 Agenda for Sustainable Development.

29. It was highlighted that the Conference was a culmination of extensive efforts since 2021 and was aimed at ensuring a sustainable and inclusive future for space activities. It fostered multi-stakeholder dialogue among researchers, industry, agencies, policymakers and civil society. Two virtual symposiums focusing on technical and policy aspects had involved the participation of more than 80 speakers from 22 countries, and the discussions during the symposiums had provided guidance for future space activities and reports published in the context of the subcommittees of the Committee.

30. It was noted that advancing outer space governance was essential for sustainable development. The vision set out in "Our Common Agenda" ensured the contribution of the space sector to sustainable development. The Lisbon Declaration on Outer Space was aimed at summarizing both the conclusions reached at the symposiums and the Conference discussions.

31. The significance of constructive discussions to build the future of space governance was highlighted. The importance of fostering international cooperation, engaging diverse stakeholders and ensuring effective space governance was reiterated. Collective leadership and dedication were vital to securing a sustainable space environment for all, and in that regard collaboration and shared responsibility with a view to preserving outer space as a realm of peace, discovery and shared human heritage was emphasized.

B. Space traffic management and space sustainability

32. Key points highlighted in the session on space traffic management and space sustainability included the challenges of avoiding collisions, managing space debris and the impact on business operations. Emphasis was placed on the importance of designing new satellites with rapid deorbiting mechanisms to ensure space sustainability. Opportunities in space traffic management, such as partnerships for debris tracking sensors, and potential insurance premium reductions through improved practices, were discussed.

33. The fragmented regulatory landscape and the need for standardized mechanisms for information exchange and coordination among operators were emphasized. The importance of providing conjunction assessment services using validated operational data was noted, as was the importance of standardized space traffic management systems, interoperability and data-sharing among different operators, both public and private. The leveraging of existing mechanisms for data-sharing between public and private operators was highlighted as a valuable means to specifically implement guidelines B1 to B4 of the Guidelines for the Long-term Sustainability of Outer Space Activities. Member States were encouraged to support initiatives in that regard and to facilitate a "system of systems" approach among all existing mechanisms to ensure greater safety in space operations.

34. The need for better observability of the space environment, in particular with regard to small objects that posed significant risks to satellites, was noted. Efforts to map the space environment using satellites equipped with space-based sensors were described, and speakers advocated for transparency and real-time data-sharing to improve space operations and avoid potential conflicts.

35. The importance of educating the public and involving them in space sustainability efforts, with an emphasis on transparency and data-sharing to raise awareness and gain support, was discussed. The complexity of data-sharing among operators and the need for standardized systems were highlighted. Cooperation between the civil, governmental and military sectors in managing space traffic was also discussed. The blurred lines between the military and civilian uses of space assets were acknowledged, and in that regard, the need for transparency and cooperation to avoid conflicts and ensure the safe use of outer space was emphasized.

36. Proposals for the Summit of the Future related to an agreement on a minimum level of regulation at the United Nations level, a shared understanding of space sustainability and its implementation, and the importance of multi-stakeholder, multilateral and interdisciplinary forums to advance space sustainability. Addressing artificial barriers to entry into regulated markets and ensuring fair competition were also stressed. Participants advocated for international engagement and collaboration with a view to exchanging information and addressing major space issues collectively.

37. The session concluded with a call for effective dialogue among space actors, and participants highlighted the crucial role of the United Nations in fostering multilateral cooperation, capacity-building and the implementation of appropriate regulations. The importance of addressing space sustainability as a collective responsibility, with a focus on ensuring the sustainable use of space for future generations, was underscored.

C. Space debris

38. The proliferation of space debris was highlighted as a significant threat to the orbital environment. Discussions included the topics of space debris models, active debris removal, in-orbit servicing and debris mitigation, and the essential role of satellites in society and the risks posed by the increasing amount of debris were highlighted.

39. Surveillance and tracking were identified as fundamental for the safe and sustainable use of outer space. Emphasis was placed on comprehensive data-sharing and improved tracking and cataloguing of space objects.

40. A global effort in tracking space debris and enhancing international capabilities for object tracking, prediction and standardization was called for. The increase in commercial space situational awareness activities and the integration of those activities with governmental efforts were recognized as necessary.

41. Panellists identified the prevention of the creation of new debris as a primary focus. Improved end-of-life management of satellites, post-mission disposal and active debris removal were emphasized as crucial measures.

42. Participants advocated for increased investment in technologies such as those used for active debris removal and in-orbit servicing, and recognized the urgent need to scale up active debris removal solutions and enabling regulations. Challenges in technology development and the need to demonstrate capabilities in orbit were acknowledged.

43. Moving towards a circular space economy, with an emphasis on the life extension, refuelling, refurbishing, assembly, manufacture and recycling of satellites, was suggested. Comprehensive measures, including debris removal and tracking, were deemed necessary.

44. A harmonized regulatory framework for the mitigation, disposal and removal of debris was called for. The importance of international coordination and the role of the United Nations and the Committee on the Peaceful Uses of Outer Space in ensuring compliance with guidelines were highlighted.

45. The need for continued national and international efforts to enforce space debris mitigation measures was emphasized. Progress in space sustainability efforts and the importance of incorporating such mitigation measures into future policy frameworks were recognized.

46. Panellists shared insights on the technical, policy and economic challenges of space debris management, stressing the need for international collaboration, the development of new technologies and the implementation of sustainable practices in space operations.

47. The session concluded with a call for holistic, collaborative and actionable approaches to ensure the sustainable use of outer space for future generations.

48. Participants highlighted the challenges of managing space debris and the impact on business operations. Emphasis was placed on the need to design new satellites with rapid deorbiting mechanisms to ensure space sustainability. The fragmented regulatory landscape and the need for standardized mechanisms for information exchange and coordination among operators were also noted. The importance of conducting space operations in a cooperative and transparent manner to ensure the safety and sustainability of the outer space environment was emphasized.

D. Space resources

49. In the session on space resources, participants underscored concerns about the absence of an international framework for space resource exploration, exploitation and utilization. They encouraged the development of a comprehensive framework, incorporating both binding and non-binding elements, to ensure sustainable space resource activities.

50. Outcomes from the preparatory symposiums had highlighted the need for a regulatory framework for in situ resource utilization, and three main types of space resources had been identified: (a) special locations (e.g. lunar poles); (b) solar energy; and (c) planetary materials (e.g. oxygen). The utilization of such resources could enhance human activities on celestial bodies by reducing mission mass and costs and increasing crew safety.

51. Participants outlined four steps for in situ resource utilization: (a) development; (b) prospecting; (c) testing and validation; and (d) implementation – which were focused on producing water, oxygen and propellant, and long-term goals such as manufacture.

52. The technological aspects of extracting resources such as oxygen from lunar rocks were discussed, and it was noted that evaluations of site requirements needed to take into account the availability of power, as well as terrain features other than those relating to the availability of resources.

53. Participants made reference to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, and the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, noting that there were gaps in addressing in situ resource utilization. The need for a comprehensive international legal framework to prevent fragmentation and ensure coherent governance was stressed.

54. Panellists noted the need of private sector actors for a legal framework to engender confidence in their investments, and in that regard emphasized the role of States in overseeing private sector activities and ensuring compliance with international principles.

55. The use of benefit-sharing mechanisms, including international funds, scientific benefit-sharing mechanisms and broader participation in missions, was suggested. Focus was placed on using space resources in situ rather than transporting them back to Earth, taking into account economic and technical feasibility.

56. A time frame of 10 to 20 years was projected for the emergence of large-scale space resource activities, which would depend critically on technology, funding and regulation. Emphasis was placed on creating legal certainty and foundational principles to guide the development of a comprehensive regulatory framework.

57. Panellists shared insights on the multidisciplinary nature of space resource activities, the importance of regulatory frameworks and the need for international cooperation. They also discussed how the scientific benefits of space resources could increase scientific knowledge.

58. In the discussions, participants underscored the importance of balancing technological advancements, economic viability and regulatory measures. The active participation of multiple stakeholders, including States, the private sector and civil society, was essential to achieving such a balance. The session concluded with a call for continued cooperation and collaboration efforts among space actors to advance the governance of space resources, which would ensure benefits for all humanity.

E. Youth and civil society

59. The final panel discussion was focused on the role of future generations and civil society in ensuring the responsible management and sustainable development of outer space activities. Participants highlighted that the decisions made by current leaders would directly impact the future, making it essential to consider their perspectives on building a sustainable future.

60. The importance of including youth and civil society in dialogues about the future of space activities was emphasized. It was noted that multi-stakeholder participation had been integral since the declaration on the commemoration of the seventy-fifth anniversary of the United Nations, in which Member States committed to boosting partnerships across sectors. Effective multilateralism required the United Nations to adapt to global challenges through inclusive approaches, as highlighted in "Our Common Agenda".

61. The establishment of a dedicated United Nations Youth Office and the issuance of a policy brief on youth engagement had underscored the importance of youth in the Summit of the Future process.

62. Key recommendations included facilitating the participation of commercial actors, civil society and other stakeholders in space-related intergovernmental processes.

63. The session concluded with a call for action, in which the need for effective governance, multi-stakeholder engagement, and investment in education and capacity-building was emphasized. Panellists highlighted the importance of taking an inclusive and collaborative approach to ensure a sustainable future for space activities.

VI. Summary of the exchanges

64. The Under-Secretary-General for Policy stressed the urgent need for progress in space governance, especially considering the rapidly evolving dynamics of use of the low Earth orbit. He highlighted the exponential growth in space objects and actors over the past decade, acknowledging both opportunities and risks, and emphasized the vital role of space technology in advancing the Sustainable Development Goals, including by facilitating and supporting Internet connectivity, climate action and disaster management, while also noting escalating risks such as accidental collisions, and uncertainties surrounding the utilization of space resources. He also emphasized the collective responsibility to ensure that governance structures evolved alongside technology, with a view to ensuring the safe and sustainable future use of outer space.

65. The Under-Secretary-General for Policy commended the ongoing efforts of experts in Vienna who had been crafting new governance frameworks and policies for nearly a decade, focusing in particular on the Guidelines for the Long-term Sustainability of Outer Space Activities. He made reference to recent debates on pressing space issues such as space traffic management and frameworks for sustainable lunar activity. He urged those involved to aim for ambitious outcomes from the present conference in Lisbon and the intergovernmental meetings in Vienna, noting the significance of those events and their outcomes for the upcoming Summit of the Future in New York. He proposed the organization of a United Nations space summit to unite all stakeholders and establish a global framework for space safety and sustainability, leveraging the momentum generated by the Summit of the Future.

66. The representative of Germany, in its capacity as co-facilitator for the Pact for the Future, provided an update on the Summit of the Future process and stressed the importance of achieving an action-oriented and ambitious outcome. Significant contributions from Member States and civil society, indicating widespread engagement and a shared aspiration for robust multilateralism, were highlighted. The steps of the negotiation process, including the presentation of texts and subsequent coordination among groups, were outlined. The representative encouraged collaboration with regional and thematic groups in the preparation of documents relating to outer space governance to be submitted for consideration at upcoming meetings, to ensure that the documents contained ambitious language regarding outer space governance. The necessity of inclusive and equitable global governance to address the evolving landscape of space activities was emphasized.

67. The representative highlighted that the proposal to establish a unified regime for space sustainability underscored the urgent need for inclusive and equitable global governance. The areas that such a regime should cover, including space traffic management, space debris removal and space resource activities, were delineated. Emphasis was placed on engaging relevant stakeholders, such as the private sector and civil society, in developing frameworks for the governance of outer space activities. The representative expressed gratitude for the confidence in and support for the negotiation process, highlighting that the Summit of the Future would provide a unique opportunity to address issues relating to emerging technologies and to fulfil the commitments made in the declaration on the commemoration of the seventy-fifth anniversary of the United Nations.

68. The Conference garnered widespread support for the Lisbon Declaration on Outer Space and underlined the need for a comprehensive approach to space sustainability. Speakers showcased the commitment of their countries with respect to various international frameworks and highlighted national space legislation and substantial investments in research and development. Expressing gratitude for the Conference, they emphasized their dedication to the peaceful exploration and the global governance of outer space, voicing in particular their concerns regarding military confrontation in space and space debris.

69. Acknowledging the vital role of space-based technologies in achieving the Sustainable Development Goals and combating climate change, representatives of

Member States advocated for international collaboration and recognized challenges such as space debris. Efforts to ensure the stable, safe and sustainable use of outer space were shared, and international cooperation to prevent conflicts and promote safety and sustainability was called for. Many participants echoed the sentiment that outcomes from the Conference, in particular the Lisbon Declaration on Outer Space, could inform future discussions within the United Nations.

70. Participants offered nuanced perspectives on space governance, stressing the importance of addressing challenges such as space debris, space traffic coordination and space resource utilization. They underscored the importance of international cooperation and capacity-building. Emphasizing the significance of international law, the Sustainable Development Goals, equitable access to space and inclusive participation in space governance, participants highlighted the need for adherence to international law and collective action to ensure the peaceful and sustainable use of outer space.

71. Several representatives of Member States proactively supported the Lisbon Declaration on Outer Space, underscoring the necessity for a comprehensive approach and the implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities. They reaffirmed their commitment to efforts undertaken within the framework of the Committee on the Peaceful Uses of Outer Space.

72. The significance of the peaceful uses of outer space was underscored, and participants expressed their support for the Outer Space Treaty. They also raised concerns regarding military confrontation in space and space debris, highlighting the importance of maintaining a safe and sustainable space environment. Efforts to ensure the stable, safe and sustainable use of outer space, including initiatives on space traffic management, space situational awareness and on-orbit servicing, were discussed.

73. The need for transparency and international coordination to prevent conflicts and promote safety and sustainability in space activities was emphasized. The value of a multi-stakeholder approach to space governance was highlighted, and discussions were focused on priorities such as space traffic management, space debris and space resources. Representatives of Member States advocated for stronger governance within the framework of the United Nations and support for the Pact for the Future, hoping that the outcomes of the Conference would inform and inspire discussions within the United Nations.

74. The importance of the involvement of youth in the space sector and of capacity-building in space law were underscored. Representatives of Member States reaffirmed their States' commitment to the peaceful uses of outer space and international cooperation, emphasizing the need for inclusive and cooperative space activities. Challenges such as space debris, space traffic management and space resource utilization were acknowledged, and the responsible management of space activities, capacity-building and technical assistance for developing space nations were called for.

75. The role of the Committee on the Peaceful Uses of Outer Space in promoting international cooperation in space activities was recognized, and support for the Office for Outer Space Affairs and capacity-building efforts in support of developing space nations were called for. Speakers expressed support for multilateral cooperation and the inclusion of new voices in relevant discussions with a view to ensuring the peaceful and sustainable use of outer space. The need for frameworks for the sustainable exploration, exploitation and utilization of space resources was emphasized.

76. Representatives of Member States advocated for international cooperation and equitable access to space resources. The importance of addressing challenges such as space debris and space traffic through international collaboration was highlighted, and gratitude was expressed to the Government of Portugal and the Office for Outer Space Affairs for organizing the Conference. The need to integrate space sustainability into the broader context of global governance was emphasized.

77. Representatives of Member States highlighted that space sustainability was not only a technical issue but also a political and socioeconomic challenge that required cohesive and coordinated international efforts. Achieving space sustainability was crucial for maintaining the benefits that space-based technologies provided to society, including in relation to communication, navigation, weather forecasting and disaster management. Particular focus was placed on protecting the space environment for future generations, a discussion which reinforced the concept of space as a global commons.

78. Participants called for responsible behaviour in outer space and stewardship of outer space activities, underscoring the importance of avoiding an arms race in outer space, which could jeopardize international peace and security. The role of emerging technologies in enhancing space sustainability was another topic of focus. Participants highlighted the potential of artificial intelligence, machine learning and advanced materials to improve space debris tracking and collision avoidance and increase the longevity of space assets.

79. Participants advocated for increased investment in research and development to harness those technologies for sustainable space operations. Emphasis was placed on the importance of education and public awareness-raising in promoting space sustainability, including initiatives to educate the public, in particular young people, about the importance of space and its impact on daily life. Efforts to inspire the next generation of space scientists, engineers and policymakers through educational programmes and outreach activities were highlighted.

80. The critical role of international legal frameworks in supporting space sustainability was discussed. Representatives of Member States called for the development of new legal instruments and the strengthening of existing ones to address the evolving challenges in space governance. International law should provide a clear and stable foundation for the sustainable use of outer space, ensuring that activities are conducted safely, responsibly and for the benefit of all humankind.

81. The Conference concluded with a call for action urging effective governance, multi-stakeholder engagement, and investment in education and capacity-building. Participants emphasized the importance of international collaboration and the development of a global regime to coordinate space traffic and ensure the sustainable use of outer space. The Conference was aimed at contributing to a common understanding of space sustainability as a shared responsibility for the benefit of all humanity.

VII. Conclusions

82. The United Nations/Portugal Conference on the Management and Sustainability of Outer Space Activities emphasized the critical role of space technology in global services and the necessity of collective global action for sustainable development in space. The Conference, supported by the visionary leadership of the Secretary-General, was aimed at facilitating dynamic debates, the sharing of insights and the development of collaborative strategies for sustainable space activities. The culmination of efforts undertaken since 2021, the Conference fostered multi-stakeholder dialogue among researchers, industry, agencies, policymakers and civil society.

83. The Lisbon Declaration on Outer Space, which was presented at the Conference, summarized the conclusions reached at the preparatory symposiums, and the discussions held during the Conference, which was aimed at advancing outer space governance in support of sustainable development. Emphasis was placed on fostering international cooperation, engaging diverse stakeholders and ensuring effective space governance with a view to securing a sustainable space environment for all. The Conference underscored the importance of standardizing mechanisms for information exchange, coordination among operators and the role of non-governmental

organizations in implementing the Guidelines for the Long-term Sustainability of Outer Space Activities.

84. Significant challenges in managing space debris were highlighted, and discussions were focused on space debris models, active debris removal, in-orbit servicing and debris mitigation. Surveillance and tracking were identified as fundamental for the safe and sustainable use of outer space. The need for a global effort in tracking space debris, enhancing international capabilities and integrating commercial space situational awareness activities with governmental efforts was emphasized. Participants advocated for investment in technologies for active debris removal and in-orbit servicing, and called for a harmonized regulatory framework for debris mitigation and removal.

85. It was noted that the time frame within which space resource activities could become a reality would depend on constraints relating to technology, funding and regulation. The absence of an international framework for the exploration, exploitation and utilization of space resources was underscored, and there were active calls for developing a comprehensive framework incorporating both binding and non-binding elements. Technological aspects of extracting and using space resources, and the need for an international legal framework to ensure coherent governance were discussed. Participants discussed benefit-sharing mechanisms, issues relating to ownership and deconfliction and a projected time frame for the emergence of large-scale space resource activities, focusing on the need for legal certainty in the short- to medium-term and for foundational legal principles that could evolve into a more comprehensive regulatory framework.

86. The importance of including youth and civil society in dialogues about the future of space activities was emphasized, and recommendations were made for facilitating the participation of commercial actors, civil society and other stakeholders in space-related intergovernmental processes. In addition, participants called for effective governance, multi-stakeholder engagement and investment in education and capacity-building.

87. The Conference concluded with the expression of widespread support for the Lisbon Declaration on Outer Space, which was viewed as a potentially important contribution to the discussions at the Summit of the Future and to the Pact for the Future, and participants underlined the importance of taking a comprehensive approach to space sustainability and of the crucial role played by all stakeholders in implementing the Guidelines for the Long-term Sustainability of Outer Space Activities. The importance of international cooperation, capacity-building, adherence to international law and ensuring the peaceful and sustainable use of outer space was reaffirmed by all.

Annex

Lisbon Declaration on Outer Space

This declaration was prepared by the Portuguese Space Agency in the context of the Management and Sustainability of Outer Space Activities Conference, held on 14 and 15 May 2024, co-organized with the United Nations Office for Outer Space Affairs. Contributors to the declaration include the Committee on the Peaceful Uses of Outer Space, Member States, civil society and youth organizations, industry and academia. It is a non-consensualized summary of the discussions which took place during the preparatory events.

On the seventy-fifth anniversary of the establishment of the United Nations, Member States requested the Secretary-General to report with recommendations to respond to current and future challenges.¹ In the declaration on the seventy-fifth anniversary of the United Nations, Governments called for reinvigorated multilateralism and for strengthened global governance for present and future generations.

In response to that declaration, the Secretary-General released the report entitled "Our Common Agenda", which included a section on identifying and addressing the challenges and benefits of the exploration and use of outer space, as well as a section on outer space governance. The third commitment, entitled "Promote peace and prevent conflicts", highlights the importance of the space sector to everyday life. It also recommends the organization of a high-level multi-stakeholder "Summit of the Future" to advance ideas for governance arrangements, which would be preceded by preparatory events and consultations, to, among other topics, seek high-level political agreement on the peaceful, secure and sustainable use of outer space, move towards a global regime to coordinate space traffic and agree on principles for the future governance of outer space activities.

The initiative builds on General Assembly resolution 76/3, entitled "The 'Space2030' Agenda: space as a driver of sustainable development", adopted by the Assembly on 25 October 2021. In that resolution, the Assembly acknowledged the positive impact that space activities had on life on Earth and emphasized that space tools were highly relevant for sustainable development, including by providing essential data for the indicators used to monitor the progress towards achieving the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction 2015–2030 and the commitments by States parties to the Paris Agreement.

On 29 May 2023, the Secretary-General published policy brief 7, entitled "For all humanity – the future of outer space governance", in which he underscored the need to understand and address the emerging challenges posed to the security and sustainability of outer space and highlighted the need for an agile and multi-stakeholder response by the international community. The policy brief identified space debris, space traffic management and space resource activities as the most pressing challenges pertaining to space sustainability.

The United Nations/Portugal Conference on the Management and Sustainability of Outer Space Activities provided the opportunity for Member States, the private sector and civil society to actively contribute to the process of, and lead-up to, the Summit of the Future by offering a platform for engagement on these vital issues.

The Conference and its two preparatory virtual events were aimed at discussing these challenges and fostering collaboration among the diverse stakeholders involved in outer space activities, and at collecting valuable information from academia, industry, policymakers and Member States.

The present document builds upon the extensive, open and independent debates that took place during the Conference and its preparatory events, as reported to the

¹ General Assembly resolution 75/1.

subcommittees of the Committee on the Peaceful Uses of Outer Space in documents A/AC.105/C.1/2024/CRP.34 and A/AC.105/C.2/2024/CRP.33.

Many participants in the Lisbon Conference underlined the importance of ensuring that outer space remains a safe, sustainable and inclusive domain for generations to come, and on the basis of the series of transparent, multi-stakeholder dialogues organized by the Government of Portugal and the Office for Outer Space Affairs, the present declaration identifies:

1. That the Committee on the Peaceful Uses of Outer Space and its subcommittees retain a principal role as the appropriate forum to discuss current and emerging challenges to the safe and sustainable use of space and to reach consensus on effective and practical international cooperation in the peaceful exploration and use of outer space that may lead to internationally recognized governance regimes, particularly regimes concerning space debris, space traffic coordination and space resources, including through the development of voluntary, non-legally binding principles and guidelines;

2. That the advancing of multilateral efforts for the peaceful, safe and sustainable use of outer space and the need for government and multi-stakeholder cooperation to establish guidance for sustainable space activities are of paramount importance;

3. That the benefits of multisectoral and meaningful multi-stakeholder participation, with respect to the development of norms, rules and principles for space activities, for a comprehensive approach to space governance, should be enabled, for example, through a dedicated platform within the Committee;

4. That there is a need for international coordination to foster the transparency, clarity and consistency of relevant policies and regulations across the various existing forums and initiatives, in order to effectively address and promote the safety and sustainability of space activities at large and in a manner that space operators, both public and private, can abide by;

5. The importance of expanding and strengthening youth participation in national and international space activities and United Nations-led decision-making processes through dedicated avenues that include the viewpoint of youth, as well as through intergenerational dialogues, with a view to preserving the sustainable and peaceful exploration and use of space for generations to come;

6. The Summit of the Future and the Pact for the Future as key initiatives for fostering greater cooperation and coordination in outer space exploration and utilization, including the role of the Office for Outer Space Affairs in those initiatives and in capacity-building efforts for the benefit of developing space nations.

Lisbon, 15 May 2024