

# The Space 2030 Agenda – a critical review by Space Renaissance International

Ver. 1.00 – 07 October 2024

With Resolution 73/6<sup>[1]</sup>, adopted by the General Assembly on 26 October 2018, following the outcomes of UNISPACE+50 (20-21 June 2018), the U.N. GA 73 authorized the Committee on the Peaceful Uses of Outer Space (COPUOS) to continue working to produce a Space 2030 Agenda.

The “Space 2030 Agenda, Space as a Driver of Sustainable Development”, was prepared by the U.N.COPUOS Space 2030 Agenda Working Group, and adopted by the U.N. General Assembly 76 on 25 October 2021 with Resolution 76/3.<sup>[2]</sup>

## 1 General considerations

The most relevant concern in the Agenda is comprehensive sustainability<sup>[3]</sup>, yet space is only conceived of as a tool to support sustainability on Earth’s surface. There’s no mention of outer space as a fully sustainable arena of possible expansion and development for human civilization. Space exploration<sup>[4]</sup> is a briefly mentioned concept for activities in outer space. This then is the biggest limitation of the Agenda. Exploration is the only considered activity in the vast domains of outer space. No mention is made of space settlement, nor of its fundamental contribution to solving the social and economic issues facing mankind.

The U.N. 2030 Agenda for Sustainable Development (the 17 SDGs) was prepared and delivered in 2015 when the evolution of reusable rockets took the first step toward becoming a leading reality. It is perhaps understandable that the relevance of a progressive and incremental space economy was greatly undervalued at that time, and that none of the 17 SDGs initially mentioned outer space.

The ensuing U.N. Space 2030 Agenda was brought forward in 2021, when the reusable rocket industry was already well underway, and had begun to lead out significant prospects for the global economy. It is therefore to be supposed as a significant shortcoming that the document does not mention space settlement and manned space activities to any extent. Such a lack of inclusion highlights a misunderstanding of the extreme need and urgency to kick off civilian development of outer space, for the achievement of the 17 SDGs to assure civilizations' growth and evolution during this critical historical phase, and for the mutable provision of equitable and progressive international relations.

In May 2023 Our Common Agenda (Policy Brief 7) entitled “For All Humanity The Future of Outer Space Governance”<sup>[5]</sup> laid out a short one-page description of space settlement under the heading “Return of Humans to Deep Space”.

Also in 2023, UNOOSA brought forward the Space4SDG draft<sup>[6]</sup> detailing the uses of near-earth orbit for development purposes, however, no mention of space settlement was made in this document.

Our proposed key amendment – in considering social, economic, and environmental concerns as primary criteria, in reshaping the Space 2030 Agenda – is to add an Overarching Objective 5, on civilian space development, space settlement, and space industrialization, as key factors of sustainable development. Several other amendments to the text are also submitted.

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<sup>1</sup> <https://documents.un.org/doc/undoc/gen/n18/343/85/pdf/n1834385.pdf>

<sup>2</sup> [https://www.unoosa.org/res/oosadoc/data/resolutions/2021/general\\_assembly\\_76th\\_session/ares763\\_html/A\\_RES\\_76\\_3\\_E.pdf](https://www.unoosa.org/res/oosadoc/data/resolutions/2021/general_assembly_76th_session/ares763_html/A_RES_76_3_E.pdf)

<sup>3</sup> The term “sustainable” occurs 34 times, “sustainability” 8 times. The concept of sustainability is the most recurring in the whole text.

<sup>4</sup> The term “exploration” occurs 17 times in the document, in the majority of the cases as part of the expression “exploration and use of outer space for peaceful purposes”

<sup>5</sup> [https://www.unoosa.org/res/oosadoc/data/documents/2023/a77/a77crp\\_1add\\_6\\_0\\_html/our-common-agenda-policy-brief-outer-space-en.pdf](https://www.unoosa.org/res/oosadoc/data/documents/2023/a77/a77crp_1add_6_0_html/our-common-agenda-policy-brief-outer-space-en.pdf)

<sup>6</sup> <https://www.unoosa.org/oosa/en/ourwork/space4sdgs/index.html>

We also note that the Agenda is much delayed even with respect to the real-time activities of the COPUOS Subcommittees, which have been working for several years, on the theme of space resource utilization, given the incoming cis-lunar economy.

## 2 Point-by-point comments and proposed amendments

Legenda:

- The paragraphs for which no amendments are proposed are omitted.
- The proposed new parts are in italics (except paragraph 2.34)
- COMMENTS are only intended to explain why the amendment is proposed, and are not intended to be added to the Space 2030 Agenda text

### 2.1 Paragraph 4

ORIGINAL TEXT: “4. 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 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 which space was seen as a major driver of and contributor to the achievement of the Sustainable Development Goals for the benefit of all countries.”

PROPOSED AMENDMENT: “4. 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 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 which space is recognized as *the* major driver of and contributor to the achievement of the Sustainable Development Goals for the benefit of all countries.”

### 2.2 Paragraph 6

ORIGINAL TEXT: “6. The “Space2030” Agenda and implementation plan is submitted by the Committee to the General Assembly as a forward-looking strategy for reaffirming and strengthening the contribution of space activities and space tools to the achievement of global agendas,<sup>2</sup> addressing long-term sustainable development concerns of humankind. It also contributes to charting the future contribution of the Committee to the framework for the global governance of outer space activities, consistent with international law.”

PROPOSED AMENDMENT: “6. The “Space2030” Agenda and implementation plan is submitted by the Committee to the General Assembly as a forward-looking strategy for reaffirming and strengthening the contribution of space activities, *space settlement*, and space tools to the achievement of global agendas, addressing long-term sustainable development concerns of humankind. It also contributes to charting the future contribution of the Committee to the framework for the global governance of outer space activities, consistent with international law.”

### 2.3 Paragraph 7

ORIGINAL TEXT: “7. We, the States Members of the United Nations, acknowledge that the exploration and peaceful uses of outer space have enriched our collective knowledge and revolutionized life on Earth. Space science and technology are now intrinsic to our daily lives and bring an abundance of unique and fundamental benefits to Earth. As the space community moves forward with its space exploration endeavours, space will continue to serve as a source of inspiration and innovation and to provide applications for the benefit of humankind.”

PROPOSED AMENDMENT: “7. We, the States Members of the United Nations, acknowledge that the exploration and peaceful uses of outer space have enriched our collective knowledge and revolutionized life on Earth. Space science and technology are now intrinsic to our daily lives and bring an abundance of unique and fundamental benefits to Earth. As the space community moves forward with its *space settlement and further exploration* endeavours, space will continue to serve as a source of inspiration and innovation and to provide applications for the benefit of humankind.”

## 2.4 Paragraph 8

ORIGINAL TEXT: “8. We emphasize that space tools are highly relevant for the attainment of the global development agendas, in particular the 2030 Agenda for Sustainable Development and its goals and targets, either directly, as enablers and drivers of sustainable development, or indirectly, by providing essential data for the indicators used to monitor the progress towards achieving the 2030 Agenda and the Sendai Framework for Disaster Risk Reduction 2015–2030 and the commitments by States parties to the Paris Agreement. The fulfillment of these global agendas requires improved access to space-based data and applications and space infrastructure, taking into account the particular needs of developing countries.”

PROPOSED AMENDMENT: “8. We emphasize that space tools are highly relevant for the attainment of the global development agendas, in particular the 2030 Agenda for Sustainable Development and its goals and targets, either directly, as enablers and drivers of sustainable development, or indirectly, by providing essential data for the indicators used to monitor the progress towards achieving the 2030 Agenda and the Sendai Framework for Disaster Risk Reduction 2015–2030 and the commitments by States parties to the Paris Agreement. The fulfillment of these global agendas requires improved access to space-based data and applications and space infrastructure, taking into account the particular needs of developing countries. *We also emphasize that Civilian Space Development is highly relevant for the attainment of the global development agendas, in particular, the 2030 Agenda for Sustainable Development and its socio-economic growth goals and targets (SDG 7, 8, 9). Civilian space development acts as an enabler and driver of sustainable development, enhancing guided industrial and economic productivity both in the industrialized world and in the developing countries. Industrial sectors will include, space vehicle production, space tourism, lunar and asteroid mining, and space infrastructure construction. Thereby creating new jobs in space and on the ground, and enhancing all collateral sectors, related industries, and services. Empowered education structures and capacity-building activities shall be considered as part of the innovative progressions.*”

## 2.5 Paragraph 9

ORIGINAL TEXT: “9. We acknowledge the distinguished historical record of the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee and Scientific and Technical Subcommittee in the establishment and further development of the international legal regime governing outer space activities. Under that regime, outer space activities of States, international intergovernmental organizations and non-governmental entities are flourishing, and as a result, space science and technology and their applications are contributing immeasurably to economic growth and improvements in the quality of life worldwide.”

COMMENT: The paragraph is inconsistent in several ways. The only binding “international legal regime governing outer space activities” is the 1967 Outer Space Treaty. Innovative private activities in space are perhaps flourishing owing to what the OST does not include rather than what is included. Secondly, it is true that “space science and technology and their application are contributing immeasurably to economic growth and improvement in the quality of life worldwide”, but space activities will become very much more than specific and identified applications to improve the quality of life on Earth. If this paragraph aims to discuss the necessary development of space law, it should mention the use of space resources and the themes of space infrastructure construction.

PROPOSED AMENDMENT: “9. We acknowledge the distinguished historical record of the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee and Scientific and Technical Subcommittee in the establishment and further development of the international legal regime governing outer space activities. Under that regime, outer space activities of States, international intergovernmental organizations and non-governmental entities are flourishing, and as a result, space science and technology and their applications are contributing immeasurably to economic growth and improvements in the quality of life worldwide. *Space science and technology are also providing an immense and essential contribution to the progressive expansion of civilization into outer space. The space legal regime shall make available clear and simple provisions for the extraction and usage of space resources, including provisions for space infrastructure construction.*”

## 2.6 Paragraph 12

ORIGINAL TEXT: “12. We encourage the Committee to continue to coordinate efforts to strengthen the implementation of the United Nations treaties and principles on outer space and to complement existing international space law, when appropriate, to respond to emerging issues. The Committee and its

subcommittees should continue to demonstrate their relevance and address current and emerging challenges and opportunities, such as the long-term sustainability of outer space activities.”

PROPOSED AMENDMENT: “12. We encourage the Committee to continue to coordinate efforts to strengthen the implementation of the United Nations treaties and principles on outer space and to complement existing international space law, when appropriate, to respond to emerging issues, *such as use of space resources, lunar and asteroid mining, space infrastructures construction, commercial activities, and space tourism*. The Committee and its subcommittees should continue to demonstrate their relevance and address current and emerging challenges and opportunities, such as the long-term sustainability of outer space activities, *space settlement, and industrialization*.”

## 2.7 Paragraph 15

ORIGINAL TEXT: “15. We aim to promote equal opportunities in the space sector by encouraging, in particular, young people and women to consider careers in science, technology, engineering and mathematics.”

PROPOSED AMENDMENT: “15. We aim to promote equal opportunities in the space sector by encouraging, in particular, young people and women to consider careers in science, technology, engineering, mathematics, *space philosophy and, diplomacy, and all humanistic disciplines addressing our planetary future in general terms*.”

## 2.8 Paragraph 17

ORIGINAL TEXT: “17. We emphasize that the seven thematic priorities developed by the Committee in the context of UNISPACE+50 constitute a comprehensive approach to addressing key areas and collectively serve to determine the core objectives of the future work of the Committee and its subcommittees and the Office for Outer Space Affairs in the areas of global partnership in space exploration and innovation (thematic priority 1), current and future perspectives of the legal regime of outer space and global governance (thematic priority 2), enhanced information exchange on space objects and events (thematic priority 3), an international framework for space weather services (thematic priority 4), strengthened space cooperation for global health (thematic priority 5), international cooperation towards low-emission and resilient societies (thematic priority 6) and capacity-building for the twenty-first century (thematic priority 7).”

COMMENT: TP 1, 2, and 7 are generic, missing samples, the other are arbitrary choices, cutting off many other priorities.

PROPOSED AMENDMENT:

“17. We emphasize that the seven thematic priorities developed by the Committee in the context of UNISPACE+50 constitute a comprehensive approach to addressing key areas and collectively serve to determine the core objectives of the future work of the Committee and its subcommittees and the Office for Outer Space Affairs. *To the seven thematic priorities identified by UNISPACE+50, eight more thematic priorities are added, and the whole list is resorted as follows:*

- *in the areas of global partnership in space settlement, innovation and further exploration (thematic priority 1),*
- *current and future perspectives of the legal regime of outer space and global governance (thematic priority 2),*
- *an international framework toward supporting research for life and health protection in space, i.e. protection from cosmic radiation, simulated gravity, green environment in space habitats (thematic priority 3),*
- *an international framework for supporting state members to adopt space-friendly policies, grants, financial aids, and fiscal discounts to the civilian space industry (thematic priority 4),*
- *enhanced information exchange on space objects and events (thematic priority 5),*
- *an international framework for orbital debris recovery and reuse (thematic priority 6),*
- *space resources utilization, financial and legal aspects (thematic priority 7),*
- *an international framework for space traffic management services (thematic priority 8),*
- *international cooperation toward fair and equitable coordination of the geo-lunar space industrialization initiatives (thematic priority 9),*
- *an international framework for space weather services (thematic priority 10),*
- *an international framework to coordinate the Cislunar communication network (thematic priority 11),*

- *an international framework to support and harmonize civilian space industry and commerce (thematic priority 12),*
- *strengthened space cooperation for global health (thematic priority 13),*
- *international cooperation towards low-emission and resilient societies (thematic priority 14),*
- *capacity-building for the twenty-first century (thematic priority 15)*

## 2.9 Paragraph 19

ORIGINAL TEXT: “19. We, the States Members of the United Nations, commit to pursuing, based on the above strategic vision, the following objectives. The actions described under each overarching objective could be taken by Member States to realize those objectives. The four overarching objectives are structured around the four pillars of space economy, space society, space accessibility and space diplomacy. Those four pillars are complementary and mutually reinforcing.”

COMMENT: The term “space society” here is ambiguous. Is this intended as the earthly space community? Does it include space agencies, U.N. space entities, space industry, universities, research centers, NGOs? Or does it designate the future space settler communities, living on the Moon, the Lagrange points, Mars, the Asteroid Belt, and beyond?

PROPOSED AMENDMENT: “19. We, the States Members of the United Nations, commit to pursuing, based on the above strategic vision, the following objectives. The actions described under each overarching objective could be taken by Member States to realize those objectives. The *five* overarching objectives are structured around the ~~four~~ pillars of space economy, space *societies (both terrestrial societies and space settlers)*, space accessibility, and space diplomacy. Those ~~four~~ pillars are durable, complementary and mutually reinforcing.”

## 2.10 Overarching objective 1

ORIGINAL TEXT: “Enhance space-derived economic benefits and strengthen the role of the space sector as a major driver of sustainable development”

PROPOSED AMENDMENT: “Enhance space-derived economic benefits and strengthen the role of the space sector as *the* major driver of sustainable development”

## 2.11 Overarching objective 1.1

ORIGINAL TEXT: “1.1. Raise awareness of the importance of space science and technology and their applications for the achievement of the Sustainable Development Goals.”

PROPOSED AMENDMENT: “1.1. Raise awareness *in the society at large* of the important role of space science technologies and applications, *on Earth and beyond, including space settlement and industrialization*, for the achievement of the Sustainable Development Goals.”

## 2.12 Overarching objective 1.2

ORIGINAL TEXT: “1.2. Facilitate and promote the integration of the space sector with other sectors, including energy, public health, the environment, climate change, the management of resources and information and communication technology, as well as the development of multi-stakeholder partnerships leading to innovative space-based solutions for social and economic development that can be integrated into mechanisms for implementing the Sustainable Development Goals.”

PROPOSED AMENDMENT: “1.2. Facilitate and promote the integration of the space sector with other sectors, including energy, public health, the environment, climate change, the management of resources and information and communication technology, as well as the development of multi-stakeholder partnerships leading to innovative space-based solutions for social and economic development that can be integrated into mechanisms for implementing the Sustainable Development Goals. *Also facilitate and promote the extension of traditional jobs and businesses – such as hotel, restoration, catering, maintenance, services, farming, and food production – into outer space infrastructures and facilities.*”

## 2.13 Overarching objective 1.3

ORIGINAL TEXT: “1.3. Address issues arising from commercial activities in outer space, including with a view to enabling space activities to better support the achievement of global development agendas and to ensuring the long-term sustainability of outer space activities.”

**PROPOSED AMENDMENT:** “1.3. Address issues arising from commercial activities in outer space, including with a view to enabling space activities to better support the achievement of global development agendas and to ensuring the long-term sustainability of outer space activities. *As an example, producing propellant from lunar and asteroid sources will greatly facilitate the cislunar enterprise and the extensive space travel. In order that humans might work and live in space for a lengthy or indefinite duration, to assure higher priority to research for protecting life and health from cosmic radiation, enable experimentation for simulated gravity, and research for suitable plant species harmonizing green environments in space habitats.*”

#### **2.14 Overarching objective 1.4**

**ORIGINAL TEXT:** “1.4. Promote the development of the space industry, with a particular focus on small and medium-sized enterprises, with a view to increasing investment in the space sector and creating high-quality jobs, and promote the spin-off benefits of space technologies to the non-space sector.”

**PROPOSED AMENDMENT:** “1.4. Promote the development of the space industry, with a particular focus on small and medium-sized enterprises, with a view to increasing investment in the space sector and creating high-quality jobs, and promote the spin-off benefits of space technologies to the non-space sector. *Also promote the inclusion of the non-space sector into space activities, with the purpose of introducing traditional civilian activities into the space environment.*”

#### **2.15 Overarching objective 1.5**

**ORIGINAL TEXT:** “1.5. Enable space activities for all, based on international law, by promoting an international framework that facilitates equal access to space for all, including non-spacefaring nations, and encourages safety and innovation.”

**PROPOSED AMENDMENT:** “1.5. Enable space activities for all, based on international law, by promoting an international framework that facilitates equal access to space for all, including non-spacefaring nations, and encourages safety and innovation. *The issue is not whether the non-spacefaring countries, will gain something from space development, but whether they receive fair share and opportunity<sup>7</sup>. Ensure that all the countries, including the not-yet-spacefaring ones, have access to the highest level of space opportunities and capacity building.*”

#### **2.16 Overarching objective 1.6**

**ORIGINAL TEXT:** “1.6. Promote the use of space-based solutions in global efforts to ensure sustainable forest and ocean economies.”

**PROPOSED AMENDMENT:** “1.6. Promote the use of space-based solutions in global efforts to ensure sustainable forest and ocean economies. *Also utilize the expertise held by populations with predominantly rural or marine economies, to farming, water culture, and plant environments in space.*”

#### **2.17 Overarching objective 1.7**

**ORIGINAL TEXT:** “1.7. Strengthen the contribution of space technologies and their applications to sustainable fisheries management, agriculture, food safety and security, and nutrition.”

**PROPOSED AMENDMENT:** “1.7. Strengthen the contribution of space technologies and their applications to sustainable fisheries management, agriculture, food safety and security, and nutrition. *Also utilize the expertise held by populations with a predominantly marine economy, to enable water culture, and water environments in space.*”

#### **2.18 Overarching objective 1.8**

**ORIGINAL TEXT:** “1.8. Promote and facilitate collaboration and partnership between the private and public sectors, academic institutions and research and development centres in the field of the utilization of space for achieving the Sustainable Development Goals, as well as in the area of the long-term sustainability of outer space activities.”

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<sup>7</sup> Amartya Sen on Globalization: “The question is not just whether the poor, too, gain something from globalization, but whether they get a fair share and a fair opportunity.”

PROPOSED AMENDMENT: “1.8. Promote and facilitate collaboration and partnership between the private and public sectors, academic institutions, and research and development centres in the field of the utilization of space *resources, with focus on civilian development in outer space*, for achieving the Sustainable Development Goals, as well as in the area of the long-term sustainability of outer space activities.”

### **2.19 Overarching objective 2**

ORIGINAL TEXT: “Overarching objective 2: Harness the potential of space to solve everyday challenges and leverage space-related innovation to improve the quality of life.”

PROPOSED AMENDMENT: “Overarching objective 2: Harness the potential of space to solve everyday challenges and leverage space-related innovation to improve the quality of life, *and to ensure the survival, growth, and continual evolution of human civilization.*”

### **2.20 Overarching objective 2.4**

ORIGINAL TEXT: “2.4. Advance the role of space technologies in highlighting, analysing and addressing climate change and facilitating the transition to low-emission societies, and promote international collaboration in that regard, in line with existing and recognized international mechanisms and organizations.”

PROPOSED AMENDMENT: “2.4. Advance the role of space technologies in highlighting, analysing and addressing climate change and facilitating the transition to low-emission societies, and promote international collaboration in that regard, in line with existing and recognized international mechanisms and organizations. *Ensure that a transition to low-emission societies will not happen at the detriment of Earth’s natural environments. For example, promote the mining of rare elements on the Moon and Asteroids, and not within the deep sea-bed.*”

### **2.21 Overarching objective 2.7**

ORIGINAL TEXT: “2.7. Strengthen the use of space technologies and their applications to support the development of socially and environmentally sustainable human settlements and infrastructure, both urban and rural; improve livelihoods; study urbanization and migration patterns; and monitor cultural heritage sites and contribute to their preservation.”

PROPOSED AMENDMENT: “2.7. Strengthen the use of space technologies and their applications to support the development of socially and environmentally sustainable human settlements and infrastructure, *both on Earth and in space*; improve livelihoods; study urbanization and migration patterns; and monitor cultural heritage sites and contribute to their preservation.”

### **2.22 Overarching objective 2.8**

ORIGINAL TEXT: “2.8. Promote space open data policies and the sharing of data.”

PROPOSED AMENDMENT: “2.8. Promote space open data policies and the sharing of data. *Considering the huge increase of electrical power demanded by the rapid global expansion of integrated artificial intelligence and big data management, promote the building of servers installed in near earth orbit and on the Moon, directly fueled by solar power. Support engagement for open-source participatory global data constructs such as those proposed by CERN initiatives.*”

### **2.23 Overarching objective 3**

ORIGINAL TEXT: “Overarching objective 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.”

PROPOSED AMENDMENT: “Overarching objective 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. *Also ensure that all the countries, including the not-yet-spacefaring countries, will have equal opportunities to join global civilian space development perspectives, and participate in advanced space activities, including the incoming cislunar economy. When needed, ensure the necessary support for capacity building.*”

### **2.24 Overarching objective 3.1**

ORIGINAL TEXT: “3.1. Leverage the potential of space to inspire youth, increase the involvement of young people in the space sector, support national and international initiatives that inspire the interest of young people in space activities, from elementary school onwards, and strengthen their engagement in science, technology, engineering and mathematics subjects.”

PROPOSED AMENDMENT: “3.1. Leverage the potential of space to inspire youth, increase the involvement of young people in the space sector, support national and international initiatives that inspire the interest of young people in space activities, from elementary school onwards, and strengthen their engagement in science, technology, engineering and mathematics subjects. *Foster the teaching of the history of altruism and compassion, as opposed to the history of violent wars. Expound the histories of those who were dedicated to the progress of humanity, scientists, philosophers, artists. Inspire the interest of young people in humanistic sciences and disciplines, since these attributes are fundamental in space development, and have an equal consideration with technical matters.*”

### **2.25 Overarching objective 3.2**

ORIGINAL TEXT: “3.2. Enhance space exploration as a long-term driver of innovation and strengthen international cooperation in that regard.”

PROPOSED AMENDMENT: “3.2. Enhance space *settlement and further human* exploration as a long-term driver of innovation and strengthen international cooperation in that regard.”

### **2.26 Overarching objective 3.3**

ORIGINAL TEXT: “3.3. Promote exploration beyond low Earth orbit, as the scientific, technological, economic and inspirational contributions of those missions will benefit humanity.”

PROPOSED AMENDMENT: “3.3. Promote *settlement, industrialization, and further* exploration beyond low Earth orbit, as the inspiring scientific, technological, and economic contributions of those missions will benefit humanity, *and as such development is a fundamental factor for civilization survival and continued growth.*”

### **2.27 Overarching objective 3.4**

ORIGINAL TEXT: “3.4. Enhance capacity-building, education and training in space science and applications, in particular for developing countries.”

PROPOSED AMENDMENT: “3.4. Enhance capacity-building, education and training in space science and applications, and *in space philosophy and related humanistic disciplines*, in particular for developing countries. *Also utilize the knowledge and culture that the people of developing countries might offer, in essential and compatible disciplines, e.g. agriculture, water-culture, fishing, forestry management.*”

### **2.28 Overarching objective 3.5**

ORIGINAL TEXT: “3.5. Increase knowledge of outer space, including through enhanced access to astronomical and space science data, for the benefit of humankind.”

PROPOSED AMENDMENT: “3.5. Increase knowledge of outer space, including through enhanced access to astronomical and space science data, for the benefit of humankind. *Foster a better comprehension of the roles of space science and technology, using facts to rectify misconceptions widely present in popular culture. Add the history of space science in all schools, promoting the history of the progress of humanity, rather than the history of violent wars, and explaining how civilian space advanced technologies replace military outlooks as a fundamental support of advancements in the aerospace industry.*”

### **2.29 Overarching objective 3.7**

ORIGINAL TEXT: “3.7. Promote inclusiveness and gender equality in space activities, including by strengthening the participation of women in science, technology, engineering and mathematics education.”

PROPOSED AMENDMENT: “3.7. Promote inclusiveness and gender equality in space activities, including by strengthening the participation of women in science, technology, engineering and mathematics education, *space philosophy, space diplomacy, and all related humanistic disciplines, as they are essential for equitable civilian space development, and carry as much weight as the technical matters.*”



### **2.30 Overarching objective 3.9**

ORIGINAL TEXT: “3.9. Strengthen international cooperation and preparedness to respond to the threat posed by near-Earth objects.”

PROPOSED AMENDMENT: “3.9. Strengthen international cooperation and preparedness to respond to the threat posed by near-Earth objects. *Also promote the development of technologies and methodologies to utilize NEOs’ resources for the construction of space infrastructures, through asteroid mining, asteroid capture and redirection, and the usage of engineered asteroids as supply bases and habitats.*”

### **2.31 Overarching objective 3.10**

ORIGINAL TEXT: “3.10. Strongly encourage States to strengthen international, multilateral and bilateral cooperation in the exploration and use of outer space for peaceful purposes, including by addressing challenges and obstacles, in particular those that hinder such cooperation, and in this regard urge States to effectively respond to such challenges and obstacles that impede the implementation of the ‘Space2030’ Agenda.”

PROPOSED AMENDMENT: “3.10. Strongly encourage States to strengthen international, multilateral, and bilateral cooperation in the *settlement, industrialization, further exploration, and comprehensive* use of outer space for peaceful purposes, including by addressing challenges and obstacles, in particular those that hinder such cooperation, and in this regard urge States to effectively respond to such challenges and obstacles that impede the implementation of the “Space2030” Agenda. *Uphold and encourage fully globalized settlement agendas through the pursuance of the PAROS mandate and the ban on space weapons. Support full global participation in the demonstration of new inclusive models of space situational awareness and international cyberspace assurance.*”

### **2.32 Overarching objective 4.6**

ORIGINAL TEXT: “4.6. Enhance the safety of outer space operations as a contribution to the long-term sustainability of outer space activities.”

PROPOSED AMENDMENT: “4.6. Enhance the safety of outer space operations as a contribution to the long-term sustainability of outer space activities. *Acknowledge the deep anthropological momentum, moving from space exploration to space settlement. Promote all requisites to protect human life in space. Enhance the priority of scientific research for protection against solar and cosmic radiation. Promote urgent experimentation with simulated gravity. Promote the research of plant species ensuring green environments in space habitats, and a healthy environment for space citizens.*”

### **2.33 Overarching objective 4.7**

ORIGINAL TEXT: “4.7. Promote international cooperation and exchange information and best practices, within the framework of the Committee, on the supervision of space activities of non-governmental entities, consistent with international law, with a view to enhancing the safety and long-term sustainability of outer space activities while facilitating the development of the space industry.”

PROPOSED AMENDMENT: “4.7. Promote international cooperation and exchange information and best practices, within the framework of the Committee, on the supervision of space activities of non-governmental entities, consistent with international law, with a view to enhancing the safety and long-term sustainability of outer space activities while facilitating the development of the space industry, *on Earth and in space.*”

### **2.34 Proposed Overarching Objective 5**

Overarching objective 5: Open the pathway to the entire Solar system for all humankind by building human outposts in space, on the Moon, and on other celestial bodies. Utilize the natural resources of moons, asteroids, and comets for the benefit of all humans and all terrestrial forms of life.

5.1. Promote and support the rapid establishment of space stations and space settlements in Earth orbit, on the Moon and Mars for the long-term habitation of humans, by private companies, by space agencies, and through public-private consortia, and international cooperation agreements.

5.2. Promote and support science and engineering to study the simulation of gravity by building small spinning space stations in Earth orbit as precursors for larger rotating habitats in the Earth-Moon system, in Mars orbit, and beyond.

- 5.3. Promote and support the utilization of all natural resources of the Solar system, especially the resources of our Moon and the Near Earth Asteroids by the development of advanced mining technologies.
- 5.4. Promote and support the development of industry in space, on the Moon, and in the Lagrange Points of the Earth-Moon system to process ores and extraterrestrial materials as well as orbital debris, and to produce manufactured goods, components, and propellant for spaceships in situ.
- 5.5. Promote and support the development of fully reusable, low-cost, ergonomic and safe space transportation vehicles for passengers and cargo.
- 5.6. Promote and support, and work with space agencies to assure higher priority to the research for protecting life and health in space from cosmic and solar radiations.
- 5.7. Support Space Tourism, as the unique industrial sector bringing untrained civilians, to travel and spend time in outer space.
- 5.8. Coherently with the thematic priority 4, promote an international framework for supporting state members to harmonize public and private initiatives, adopting space-friendly policies, grants, financial aids, and fiscal discounts to the civilian space industry.
- 5.9. Emphasize the importance of civilian space endeavors, space industrialization, and future space settlements as the next step of peaceful human evolution and the key factor of sustainable development.
- 5.10. Develop outreach to the public audience, raising general awareness of civilian outer space development as a key factor of terrestrial sustainable development. Emphasize the urgency to kick off the incremental process of global space settlement and industrialization. Invite celebrity testimonials, from many walks of life, including academia, artists, and astronauts.
- 5.11. Inspire youth to undertake studies and careers in many disciplines related to expanding civilization into space, i.e.: science, technology, engineering, philosophy, ethics, sociology, anthropology, arts, psychology, social sciences, architecture, agriculture, farming, tourism, computer sciences and artificial intelligence, real-time automation, project management, systems engineering, quality standards, and methodologies.
- 5.12. Promote and support space-based AI, big data banks, and big servers for electronic money utilities and banking attributes also considering the needs of global 17SDG realization.
- 5.13. Support policies for lunar and asteroid mining in order to achieve rare minerals such as cobalt for the green energy transition (SDGs 13, 14, 15).
- 5.14. Promote and support peaceful development, fair competition, and collaboration in space, namely between ARTEMIS Accords, ILRS, and any new cooperative initiative that might arise, within the frame of the incoming cislunar economy.
- 5.15. Promote and support a ban on weapons in outer space, as an evolution of the Outer Space Treaty Article IV. Designate a comprehensive space weapons ban as a set of mutual agreements that cover all pertinent issues including usage of dual technologies such as satellite maneuver vehicles and power beaming attributes.
- 5.16. Add an 18th SDG, focused on civilian space development, to the U.N. 2030 Agenda. Achieve this key milestone during U.N. General Assembly 80, in 2025. Determine that the placement of an 18<sup>th</sup> SDG will ensure the progressive and durable status of outer space development for the indefinite future. The Space 18th SDG to provide a clearing house, included in the Committee for the Peaceful Uses of Outer Space, harmonizing the various and concurring interests of all stakeholders: Governments, Space Agencies, Private Companies, Non-Governmental Organizations, Space Faring, and Not-Yet-Space-Faring Countries.

### **2.35 Paragraph 22**

ORIGINAL TEXT: “22. The Office for Outer Space Affairs serves as a conduit for promoting and facilitating the use of space-based solutions, including in the implementation of the “Space2030” Agenda, and should continue, within its mandate, functions and existing resources to pursue partnerships, including with research institutions, academia, industry and the private sector, to provide broader opportunities to access space for purposes of science, innovation, research and development, education and capacity-building. In that regard, the Office should implement activities to promote the use of space-based applications and technologies to support Member States in meeting the objectives of the global development agendas.”

**PROPOSED AMENDMENT:** “22. The Office for Outer Space Affairs serves as a conduit for promoting and facilitating the use of space-based solutions, including in the implementation of the “Space2030” Agenda, and should continue, within its mandate, functions and existing resources to pursue partnerships, including with research institutions, academia, industry and the private sector, to provide broader opportunities to access space for purposes of science, innovation, research and development, education and capacity-building. In that regard, the Office should implement activities to promote the use of space-based applications and technologies to support Member States in meeting the objectives of the global development agendas, *and promote participation in the cislunar economy and geo-lunar space industrialization.*”

### **2.36 Paragraph 23 bis**

**ORIGINAL TEXT:** “23. In view of implementing the “Space2030” Agenda, the Committee on the Peaceful Uses of Outer Space and the Office for Outer Space Affairs should continue to fulfil their respective mandates and to cooperate and coordinate with other relevant entities within the United Nations system, including through the Inter-Agency Meeting on Outer Space Activities (UN-Space).”

**PROPOSED ADDENDUM:** “23.Bis. *An essential plan for kicking off civilian space development should include the following steps, at a minimum:*

1. *Recovery and reuse of orbital debris, to produce fuel in space and build space infrastructure*
2. *Use Moon and asteroid resources for the same objectives*
3. *Accelerate research for the protection of life and health from sun and cosmic radiation*
4. *Start experimenting with simulated gravity*
5. *Accelerate research to select, and eventually modify, plant species to implement green environment in space habitats*
6. *Promote the design and production of fully reusable, safe, and ergonomic space vehicles, for passengers and goods transportation*
7. *Support the space tourism industry, vehicles, logistics and accommodation infrastructures, on Earth and in space.*”

### **2.37 Paragraph 24.a**

**ORIGINAL TEXT:** “24. In implementing the “Space2030” Agenda, Member States could contribute to and benefit from a number of international and regional mechanisms, programmes, projects and platforms that are already in place or are being developed, such as the following:

(a) The seven thematic priorities in the context of UNISPACE+50, undertaken in the agendas and work of the Committee and its subcommittees, and the Office for Outer Space Affairs, in the areas of global partnership in space exploration and innovation, current and future perspectives of the legal regime of outer space and global governance, enhanced information exchange on space objects and events, an international framework for space weather services, strengthened space cooperation for global health, international cooperation for low-emission and resilient societies and capacity-building for the twenty-first century.”

**PROPOSED AMENDMENT:** “24. In implementing the “Space2030” Agenda, Member States could contribute to and benefit from a number of international and regional mechanisms, programmes, projects and platforms that are already in place or are being developed, such as the following:

(a) *The fourteen thematic priorities in the context of UNISPACE+50, and further updated in paragraph 17,* undertaken in the agendas and work of the Committee and its subcommittees, and the Office for Outer Space Affairs, in the areas of global partnership in space exploration and innovation, current and future perspectives of the legal regime of outer space and global governance, enhanced information exchange on space objects and events, an international framework for space weather services, strengthened space cooperation for global health, international cooperation for low-emission and resilient societies and capacity-building for the twenty-first century.”

### **2.38 Paragraph 24.c**

**ORIGINAL TEXT:** “(c) The regional centres for space science and technology education, affiliated to the United Nations, including the alliance of the regional centres. The regional centres are designed to enhance capacity-building, education and training in space science and applications, as well as space law and policy, in particular for developing countries;”

**PROPOSED AMENDMENT:** “(c) The regional centres for space science and technology education, affiliated to the United Nations, including the alliance of the regional centres. The regional centres are designed to

enhance capacity-building, education and training in space science and applications, as well as space law and policy, *philosophy, sociology, psychology, anthropology, and humanistic disciplines*, in particular for developing countries.”

### **2.39 Paragraph 29**

ORIGINAL TEXT: “29. The Secretary-General is urged to consider the sufficiency of resources provided to the Office for Outer Space Affairs in its role as secretariat to the Committee on the Peaceful Uses of Outer Space and its subcommittees, and to ensure that the Office can fully and effectively implement its mandate, including capacity-building activities for Member States in the field of space science and technology and their applications, as well as in space law and policy, taking into account the “Space2030” Agenda and implementation plan.”

PROPOSED AMENDMENT: “29. The Secretary-General is urged to consider the sufficiency of resources provided to the Office for Outer Space Affairs in its role as secretariat to the Committee on the Peaceful Uses of Outer Space and its subcommittees, and to ensure that the Office can fully and effectively implement its mandate, including capacity-building activities for Member States in the field of space science and technology and their applications, as well as in space law and policy, taking into account the “Space2030” Agenda and implementation plan. *The budget assigned to UNOOSA and COPUOS should be increased, allowing the Office and the COPUOS to develop an extensive public campaign, raising public awareness of outer space activity as the primary and key factor of sustainability. Such a campaign should emphasize the urgency of kicking off civilian space development by 2030. The ensuing and upgraded 2030-2050 U.N. Space Agenda will be critical in establishing the parameters of our future world. Emphasis on global collaboration and fair competition for space settlement, together with the proposed ban of weapons in space will orient human society towards peaceful and productive legacies.*”