

Updated draft set of recommended principles for space resource activities¹

Prepared by the Chair and Vice-Chair of the Working Group on Legal Aspects of Space Resource Activities

Explanatory Comment Regarding the Structure of this Document

In the interests of inclusivity, openness and transparency, this document is presented in **two parts**:

Part 1 is the Updated Draft Set of Recommended Principles for Space Resource Activities (including the preamble), addressing fundamental concepts, reflected in the headings of each Principle, regarding which there appears to be, in general terms, a common understanding in the Working Group.

It also includes at the end of **Part 1** additional draft text, in original form as submitted by individual Working Group members during the meetings of the Working Group at the sixty-fourth session of the Legal Subcommittee, which has not yet been discussed in detail by the Working Group.

Part 2 sets out several possible additional draft provisions within the original existing Principles addressing issues raised by some delegations regarding which, at present, there does *not* appear to be such a common understanding in the Working Group. However, these possible additional draft provisions have been set out separately to enable Working Group members to more fully consider the initial draft in **Part 1**, to provide further input and to consider amendments accordingly, as appropriate, during ongoing discussions.

In accordance with the agreement of the Working Group at the sixty-fourth session of the Legal Subcommittee, this document has been prepared so as to incorporate the draft proposed updates to the initial draft set of recommended principles for space resource activities, circulated to States members on 14 March 2025, which were raised by States members during those Working Group meetings.

As requested by the Working Group, this document is colour coded as follows:

- ➡ **Black** reflects the original text of the Initial draft set of recommended principles for space resource activities (Document [A/AC.105/C.2/L.339](#))
- ➡ **Green** reflects the track changes made during the Working Group meetings at the sixty-fourth session of the Legal Subcommittee
- ➡ **Blue** reflects the additional text proposed by Working Group members at the sixty-fourth session of the Legal Subcommittee, which has not yet been discussed in detail by the Working Group

Emeritus Professor Steven Freeland
Dr. Ayman Mahmoud Mohamed Ahmed
Chair and Vice-Chair, Working Group on Legal Aspects of Space Resource Activities
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¹ This document is an unofficial document and has therefore not been formally edited.

Part 1

Initial Draft Set of Recommended Principles for Space Resource Activities

***Recognizing** the common interest of all humankind in the progress of the exploration and use of outer space, including space resource activities, for [exclusively] peaceful purposes [and underscoring the importance of [responsible] stewardship and sustainable use of its [space] resources for both present and future generations].*

[Recognizing that [the exploration and use of] outer space is the province of all humankind and underscoring the importance of [responsible] stewardship and sustainable use of its [space] resources for both present and future generations.]

[Believing][Recognizing] that the exploration and use of outer space, including space resource activities, should be conducted for the betterment of all humankind and for the benefit and in the interests of all States, irrespective of their degree of economic or scientific development, and shall be the province of all humankind.

***Recognizing** that space resource activities can provide [critical] support for the safe and sustainable exploration and use of outer space, including the Moon and other celestial bodies.*

***Desiring** to promote [understanding and] broad international cooperation in the conduct of space resource activities [and develop a set of initial recommended principles for such activities],*

***Taking into account** the need to ensure that space resource activities ~~they~~ are carried out in accordance with international law and in a safe, sustainable, [rational], [responsible] and peaceful manner.*

[Noting the need to [identify best practices and to] have legal clarity on space resources and space resource activities.]

***Bearing in mind** [the mandate of the Committee on the Peaceful Uses of Outer Space to discuss space resources] [the importance of] [the widest possible adherence to and] full compliance with the Outer Space Treaty, and the role of the Committee on the Peaceful Uses of Outer Space (UNCOPUOS) in discussing the establishment of new frameworks for [space traffic, space debris and] space resources.²*

² Resolution [79/1](#), action 56.

[Taking into account that space resources as an object of legal regulation are an integral part of outer space.]

Recognizing the Outer Space Treaty as the cornerstone of the international legal regime governing outer space activities, including space resource activities.

[Recognizing the understanding of COPUOS [member] states that these principles do not create any legally binding rights or obligations; and are not intended to affect the [member] states' [existing] rights and obligations under international law [, including international space law].]

[Noting that the following recommended principles may complement but not substitute relevant provisions of international law[, including the United Nations Outer Space Treaties, [as well as guidelines, principles and recommendations on outer space activities][international space law]].]

Affirming that[, in conducting] space resource activities[, States] [shall][should] be guided by the following principles.

Principle 1: Compliance with International Law, including International Space Law

(A) Space resource activities shall be conducted:

(a) in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding; and

(b) in full compliance with and subject to the existing legal framework for the exploration and use of outer space, including the Moon and other celestial bodies, in particular the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (Outer Space Treaty),⁵ and other applicable United Nations treaties, also taking into account other relevant instruments, as appropriate.

Principle 2: Freedom of Exploration and Use, Access [for All] and Non-Appropriation [Freedom [for the Conduct] of Space Resource Activities]

(A) Outer space, including the Moon and other celestial bodies, shall be free for all States to conduct space resource activities in accordance with and subject to these Principles.

(B) Space resource activities shall be conducted in a manner that preserves free access [for all States] to all areas of the Moon and other celestial bodies.

(C) Space resource activities shall be conducted in a manner that does not constitute [, or purport to constitute] [, directly or indirectly,] national appropriation of [any part of] outer space, including the Moon and other celestial bodies, by claim of sovereignty, by means of use or occupation, or by any other means.

(D) Nothing in these Principles shall be interpreted as authorizing [directly or indirectly] [a] national appropriation of [any part of] outer space, including the Moon and other celestial bodies.

Principle 3: Peaceful Purposes

(A) The Moon and other celestial bodies shall be used by all States exclusively for peaceful purposes.

(B) Space resource activities shall be conducted exclusively for peaceful purposes.

Principle 4: Safety [and Rescue] [of Operations] [and Emergency Provisions] [and Resilience]

(A) Space resource activities shall be conducted in a safe manner and with priority for human life and health.

(B) States [conducting space resource activities] shall take all possible steps to rescue and render all necessary assistance to any person in the case of accident, distress or emergency landing on the Moon and other celestial bodies, or in any other circumstance, or due to any phenomena, which could constitute a danger to the life or health of that person.

Principle 5: Sustainability and Protection of the Environment of Earth and Outer Space

(A) In developing, planning and conducting space resource activities, States shall take all necessary measures to:

(a) ensure that such activities are sustainable [and realize the objectives of equitable access to the benefits of the exploration and use of outer space, including space resource activities, for peaceful purposes,] in order to meet the needs of the present generations while preserving the outer space environment, including the Moon and other celestial bodies, for future generations;

(b) avoid adverse changes in the environment of Earth resulting from the introduction of extraterrestrial matter or otherwise;

(c) avoid the harmful contamination of outer space, including the Moon and other celestial bodies;

(d) minimize the creation of debris in outer space, including on or in orbit around the Moon and other celestial bodies;

(e) avoid the creation of hazards which could constitute a danger to human life or health, impact on the freedom of access to all areas of the Moon and other celestial bodies, or interfere with the safety and sustainability of space resource activities of other States; and

(f) to the greatest extent practicable, remediate all areas affected by their space resource activities and restore them to their original condition upon the completion of such activities.

Principle 6: [Prioritization] [Freedom] [Involvement] of [and Collaboration with] Scientific Research and Investigation and International Cooperation

(A) Space resource activities shall be conducted for the benefit and interests of all humankind and shall be the province of all humankind.

(B) There shall be freedom of scientific investigation of outer space, including the Moon and other celestial bodies, including when conducting space resource activities, and States shall facilitate and encourage international cooperation in such investigation.

(C) In developing, planning and conducting space resource activities, States shall give priority to:

(a) scientific research and investigation missions that [aim to give rise to benefits to and] promote the interests of all humankind; and

(b) space resource activities that support such missions.

Principle 7: Sharing of Information and Data

(A) When conducting space resource activities, States shall in a timely manner inform the Secretary-General of the United Nations as well as the public and the international scientific community [, to the greatest extent feasible and practicable,] of the nature, locations, [duration] and results of such activities.

(B) States shall in a timely manner share relevant scientific and technical data that they have identified as well as their experiences gained in conducting space resource activities [, to the greatest extent feasible and practicable], so as to contribute to multilateral efforts to:

(a) develop interoperable and common space-based infrastructure and standards for space resource activities, as appropriate; and

(b) ensure that space resource activities are conducted in a safe, sustainable, rational and peaceful manner for the benefit and in the interests of all States irrespective of their degree of economic or scientific development.

Principle 8: [Notice,] Cooperation, Coordination, and Consultation [and Due Regard]

(A) In developing, planning and conducting space resource activities, States shall:

(a) give due regard to the corresponding interests of all other States, including States that do not presently have the capacity to conduct or participate in space resource activities but may wish to do so in the future;

(b) provide mutual assistance when necessary; and

(c) [to the greatest extent feasible and practicable,] promote transparency, coordination and cooperation among all States.

(B) In developing, planning and conducting space resource activities, States shall refrain from any intentional actions that may cause [potentially] harmful interference with activities of any other State, including space resource activities.

(C) A State with reason to believe that the planned or conducted space resource activities by another State would cause potentially harmful interference with activities in the peaceful exploration and use of outer space, including space resource activities, may request consultation with that State regarding those activities. Upon receiving a request, the requested State shall undertake appropriate international consultations in good faith with the requesting State [all interested States].

Principle 9: International Responsibility for Space Resource Activities

(A) States shall bear international responsibility for national activities, including space resource activities, in outer space, including the Moon and other celestial bodies, whether such activities are conducted [in whole or in part] by governmental agencies or by non-governmental entities, and for assuring that such activities are conducted in conformity with these Principles.

(B) Where space resource activities are proposed to be conducted in the future by, or with the involvement of a non-governmental entity, the appropriate State shall ensure that:

(a) it has established an authorization mechanism [, which shall include an Environmental Impact Assessment,] providing for a comprehensive review of such proposed space resource activities prior to any authorization for such activities being granted, taking account of these Principles [, and having regard to environmental, ethical, cultural heritage and indigenous peoples' considerations, as appropriate]; and

(b) prior to and as a condition of proceeding with such space resource activities, that non-governmental entity has been granted authorization by that State in accordance with such authorization mechanism.

(C) Where space resource activities are conducted with the involvement of a non-governmental entity, the appropriate State shall [take all necessary measures to] continuously supervise such activities to ensure that these Principles are met.

Principle XXX: Definitions

[Whilst there are currently no internationally agreed definitions of ‘space resources’ or ‘space resource activities’,] For the purposes of these Principles, the following [clarifications] apply [to the application of these Principles]:

(a) space resources include extractable and/or recoverable natural, abiotic resources [material] [such as minerals, water, ice, other liquids, and gases] located [in situ] in outer space, including [on the surface or in the subsurface of] the Moon and other celestial bodies [and do not include satellite orbits, radio spectrum, solar energy or other resources not of a physical nature]; and

(b) space resource activities include activities conducted in outer space, including the Moon and other celestial bodies, for the [primary] purpose of searching for space resources, the extraction of space resources, and the [exploration,] exploitation and utilization of space resources [as well as related activities such as processing and transportation [conducted in outer space]].

Principle XXX: [Monitoring and] Review of Principles

(A) Research and innovation by States in the conduct of space resource activities, and progress in such activities, should continue in a spirit of international cooperation to maximize the benefits to all humankind of such activities.

(B) As space resource activities evolve [develop], States may, through UNCOPUOS and its Subcommittees:

(a) review these Principles, having regard to new information, where relevant; and

(b) revise and amend these Principles accordingly as warranted in the circumstances.

Additional Principle proposed by a Working Group member which has not yet been discussed in detail by the Working Group

Principle XXX: International Cooperation

(A) All space resource activities shall be conducted to promote international cooperation, mutual assistance, and inclusive participation of all States, regardless of their level of technological development or current access to space capabilities. To foster international cooperation, States should:

a) Actively promote capacity-building programs, including technology transfer, knowledge sharing, and educational initiatives, to facilitate broader participation in space resource activities by developing countries.

b) Facilitate opportunities for joint ventures, cooperative missions, and multilateral research and development projects that reduce the technological and financial barriers for emerging space actors.

c) Ensure that space resource activities remain open, transparent, and responsive to the needs and aspirations of developing countries, including those States that have not yet developed access to space or resource extraction capabilities.

d) To explore international cooperation mechanisms, under United Nations auspices, aimed at promoting the equitable sharing of benefits from space resources and ensuring the peaceful use of outer space for all nations.

Additional Principle proposed by a Working Group member which has not yet been discussed in detail by the Working Group

Principle XXX: Control

- (A) Space resource activities should be carried out under the control of States.
- (B) States should monitor compliance by their national participants in space activities with international legal norms governing space resource activities.
- (C) States will consider establishing a special international body responsible for ensuring compliance with international legal norms governing space resource activities to ensure that such activities are carried out for the benefit and in the interests of all States.

Alternate to the Preamble and the Review Principle proposed by a Working Group member which has not yet been discussed in detail by the Working Group

Space Resource Activities Principles

1. Background

Since the Committee on the Peaceful Uses of Outer Space established an agenda item on the legal aspects of space resource activities in 2021, it has been a common understanding that space resource activities can provide support for the safe and sustainable exploration and use of outer space, including the Moon and other celestial bodies, and that the international community would benefit from both the study of the existing frameworks for such activities and the consideration of further development of a framework for such activities. The Working Group agreed to develop a set of initial recommended principles for such activities, taking into account the need to ensure that they are carried out in accordance with international law and in a safe, sustainable, rational and peaceful manner. The Working Group further agreed to identify areas for further work of the Committee and recommend next steps, which may include the development of potential rules and/or norms, for activities in the exploration, exploitation and utilization of space resources, including with respect to related activities.

This effort was undertaken to promote broad international cooperation in the conduct of space resource activities. The prompt implementation of appropriate space resource principles is therefore considered a prudent and necessary step towards ensuring that such activities are carried out in accordance with international law and in a safe, sustainable, and peaceful manner.

For the purpose of this document, space resources include extractable and/or recoverable natural, abiotic resources [material] [such as minerals, water, ice, other liquids, and gases] located [in situ] in outer space, including [on the surface or in the subsurface of] the Moon and other celestial bodies [and do not include satellite orbits, radio spectrum, solar energy or other resources not of a physical nature]; and for the purposes of these Principles, space resource activities include activities conducted in outer space, including the Moon and other celestial bodies, for the [primary] purpose of searching for space resources, the extraction of space resources, and the exploitation and utilization of space resources and products derived from them [as well as related activities such as processing and transportation].

2. Rationale

There is a need to examine the framework for space resource activities in order to ensure that space resource activities meet existing treaty obligations and the framework facilitates the co-ordination of, enables, and supports space resources activities and is acceptable for space-faring nations and other interested States.

Several international efforts have been undertaken to provide further clarity regarding space resource activities. In 2019, the Hague International Space Resources Governance Working Group adopted the Building Blocks for the Development of an International Framework on Space Resource Activities. In 2020, a group of states introduced the Artemis Accords, which reinforce the commitments by signatory nations to the Outer Space Treaty, the Registration Convention, the Rescue and Return Agreement, as well as best practices for civil space exploration and use. The Accords reinforce that space resource extraction and utilization can and should be executed in a manner that complies with the Outer Space Treaty.

The Committee on the Peaceful Uses of Outer Space acknowledges the benefit of a set of high-level principles having wider acceptance among the global space community. The Working Group on the Legal Aspects of Space Resource Activities was therefore established (by the Legal Subcommittee of the Committee) to develop a set of recommended principles based on the views submitted by member States since the establishment of the Working Group, contributions of the 2024 international Belgium-Luxembourg hosted Expert Meeting, and the 2024 international conference hosted during the sixty-third session of the Legal Subcommittee, and other relevant contributions. Additionally, the Working Group noted the need for its work to be informed by scientific and technological experts, including through consultations with the Scientific and Technical Subcommittee and the Action Team on Lunar Activities Consultation (ATLAC).

Consistent with States Parties' obligations under the Outer Space Treaty, the recommended principles should reaffirm that space resource activities on the Moon and other celestial bodies should be for exclusively peaceful purposes. These principles should provide predictability for governmental and nongovernmental entities seeking to invest in space resource activities, including by promoting consistency within the governance framework.

3. Application

Member States and international organizations should voluntarily take measures, through national mechanisms or through their own applicable mechanisms, to ensure that these principles are implemented, to the greatest extent feasible.

These principles are applicable to the survey, planning, conduct, and post-mission planning for space resource activities. They are not legally binding under international law and are expected to be implemented in a manner consistent with applicable international law.

4. Space Resource Activities Principles

The following principles should be considered for space resource activities:

[Insert Chair's Headings here/principles underneath]

5. Evolution and Implementation of Principles

These principles reflect a common understanding on existing conduct of space resource activities and progress in implementing such activities. Research and

innovation by States, international governmental organizations, and non-governmental entities in the conduct of space resource activities, and progress in implementing such activities, merits regular reviews of these enabling, non-legally binding principles.

As space resource activities progress, the periodic review and revision of these principles can ensure that they continue to provide effective guidance to promote the sustainability of space resource activities. Proposals for revising this set of principles may be submitted by a member State of the Committee, for consideration by the committee, to review these non-binding principles, having regard to new information, where relevant; update these non-binding principles accordingly as warranted on the basis of new circumstances; or exchange information on implementation of these non-binding Principles.

Part 2

Possible Additional draft provisions

[addressing issues regarding which, at this stage, there does *not* appear to be, in general terms, a common understanding in the Working Group]

[Note: the inclusion of any of these draft provisions in the initial draft in Part 1 may require alteration to the numbering within the relevant Principle as necessary]

Principle 2: Freedom of Access and Non-Appropriation

possible additional Principle 2(E)

(E) [Subject to Principles 1, 2(C) and 2(D),] The extraction of space resources [and/or the utilization of space resources do] does not inherently constitute national appropriation under Article II of the Outer Space Treaty.

Principle 4: Safety

possible additional Principle 4(C)

(C) In conducting space resource activities, States may [after giving sufficient prior notification to all other States] establish [declare] a temporary safety [coordination] zone, or other area-based safety [coordination] measure, around a location identified for space resource activities [in circumstances] where such a measure is necessary to assure safety [, promote coordination] and avoid any harmful interference with their own [any] space resource activities.

Principle 5: Sustainability and Protection of the Environment of Earth and Outer Space

possible additional Principles 5(A)(g) and 5(A)(h)

(g) protect [specific] areas that may have special scientific, environmental, historical, or cultural heritage interest or special significance for indigenous peoples;

(h) avoid depletion of space resources located at an area on the Moon or other celestial bodies, or the destruction of a celestial body in which space resources are located.

Principle 6: Prioritization of Scientific Research and Investigation

possible additional Principles 6(D) and 6(E)

(D) [Subject to Principles 1 and 8,] Space resource activities that are not conducted [primarily] for scientific research and investigation purposes shall not [unduly] interfere with other existing [space resource] activities that are conducted [primarily] for scientific research and investigation purposes.

(E) In developing, planning and conducting space resource activities, States shall [to the greatest extent feasible and practicable] take steps to promote the broadest possible involvement among States in such activities.

Principle 7: Sharing of Information and Data

possible additional Principle 7(A)

(A) Prior to conducting any space resource activities, States shall in a timely manner inform the Secretary-General of the United Nations as well as the public and the international scientific community [, to the greatest extent feasible and practicable,] of the planned nature, locations, [duration] and results of such activities, as well as [the results of any Environmental Impact Assessment in relation to such activities and] any measures designed to prevent potentially harmful interference with activities of any other State.

Principle 8: Coordination, Cooperation and Consultation

possible additional Principle 8(C)

(C) A State developing or planning to conduct any space resource activities shall, prior to proceeding with such activities, undertake appropriate international consultations with all States which it has reason to believe may suffer [potentially] harmful interference as a result of such activities.

Principle 10: Review of Principles

possible additional Principle 10(C)

(C) Such revision and amendment may include, but shall not be limited to, further refinement of these Principles, including elaboration of any of the following:

- (a) development of potential rules and/or norms for space resource activities, including with respect to related activities;
- (b) development of potential rules and/or norms for an equitable sharing among States of benefits derived from space resource activities [, taking into account the interests of all States, whether or not they are engaged in such activities] and development of mechanisms for such benefit sharing;
- (c) capacity building, knowledge exchange and the transfer of technology relevant for space resource activities to developing and emerging spacefaring States;
- (d) sharing with States and the scientific community of a portion of space resources extracted as a result of space resource activities;
- (e) [procedures for] development of interoperable and common infrastructure and standards for space resource activities, as appropriate;
- (f) international liability for damage caused to a State by the space resource activities of another State;
- (g) [benefits of] development of differentiated international governance frameworks for space resource activities conducted on different [types of] celestial bodies;
- (h) rules and international practices relating to the prior notification, nature, scope, size, duration and other relevant criteria applicable to the definition and determination of any temporary safety [coordination] zone, or other area-based safety [coordination] measure, that a State conducting space resource activities might seek to establish [declare];
- (i) return of space resources to Earth for scientific research and investigation purposes;

- (j) sustainable commercial uses of space resources [as well as the determination and transfer of any ownership rights with respect to space resources];
- (k) consideration of the designation as international preserves of areas on the Moon and other celestial bodies that may have special scientific, environmental, historical or cultural interest or special significance for indigenous peoples, for which special protective arrangements are to be agreed upon in consultation with the competent bodies of the United Nations;
- (l) [benefits of] development of an international mechanism, including appropriate procedures, for:
 - i. licensing, monitoring, and/or coordination of space resource activities;
 - ii. rational management of space resources;
 - iii. registration of relevant human-made objects used for space resource activities or constructed in outer space using space resources;
 - iv. coordination of requests for consultations in accordance with these Principles; and/or
 - v. resolving international disputes in relation to space resource activities by peaceful means;
- (m) development of procedures for the sharing and dissemination in a timely manner of information and scientific and technical data in relation to space resource activities;
- (n) establishment of a body of experts to offer UNCOPUOS and its Subcommittees [and other competent bodies of the United Nations] technical advice and recommendations regarding space resource activities; and/or
- (o) development of procedures to exchange information and coordinate with other intergovernmental fora, as appropriate, within whose remit fall matters that are relevant to the conduct of space resource activities.