Reviewing the Moon Agreement or Amending the Outer Space Treaty? - Views of UNCOPUOS Member States

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The 1979 Moon Agreement has left it for the future to determine international rules governing the exploitation of space resources, including appropriate procedures, which could clarify what it means that the Moon and its natural resources are the "common heritage of mankind". One third of the States parties could request the UN Secretary-General to convene a conference of the States parties to enact such rules by a review of the Moon Agreement. It might be tempting for the currently only 18 State parties to take advantage of their small number and to initiate such a process.
On the other hand, the Outer Space Treaty, with its larger number of currently 109 State parties, could also be amended. Any State party is free to propose an amendment at any time. Furthermore, by applying rules of the Vienna Convention on the Law of Treaties the unclear relationship between "free use", "non-discrimination", "free access", and "non-appropriation" could be clarified by subsequent agreements or subsequent practice
First exchanges of views took place in the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS) under the agenda item "General exchange of views on potential legal models for activities in exploration and utilization of space resources" in 2017, 2018, and 2019. The present paper will analyse different statements by governments made in this forum to evaluate the chances for a review, amendment or agreement on interpretation of the Moon Agreement or the Outer Space Treaty.

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1. Introduction

The recent interest of space agencies and private companies to engage in the exploration and exploitation of natural resources of celestial bodies has revived the discussion about the need for an international legal regime to govern such activities. As is well known, the Moon Agreement of 1979 determines that the Moon and its natural resources are the "common heritage of mankind",[1] and that the parties to the Agreement undertake to establish an international regime, including appropriate procedures, to govern the exploitation of the natural resources of the Moon as such exploitation is about to become feasible.[2] However, it is equally well known that the Moon Agreement fell behind the success its predecessors, the four other UN treaties on outer space, with its only 18 ratifications so far (2019).[3] As a result, it has been questioned whether the concept of the "common heritage of mankind" has any relevance for the legal regime of celestial bodies and their resources, including the envisaged international regime. On the other hand, the Outer Space Treaty of 1967, which regulates the activities of States in outer space and on celestial bodies in a general manner and is ratified by 109 States (2019),[4] does not contain specific provisions on the resources of celestial bodies. Opinions have been split on whether the "non-appropriation" principle also extends to the resources or whether those are covered by the "freedom of use" principle.[5]

While a few states, notably the United States[6] and Luxemburg,[7] have enacted laws that provide a legal framework for space resource activities, it is doubtful, irrespective of their compatibility with international law,[8] whether

1 Article 11 (1) of the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, opened for signature on 18 December 1979, entered into force on 11 July 1984, 18 ILM 1434, 1383 UNTS 3 (hereinafter: Moon Agreement).

2 Article 11 (5) Moon Agreement.

3 Status of International Agreements relating to activities in outer space as at 1 January 2019, UN Doc. A/AC.105/C.2/2019/CRP.3, p. 10.

4 See ibid.

5 See F. Tronchetti, *The Exploitation of Natural Resources of the Moon and Other Celestial Bodies* (2009) 220 ff, with further references.

6 Commercial Space Launch Competitiveness Act of 25 November 2015, H.R. 2262, Title IV, Space Resource Exploration and Utilization Act.

7 Loi sur l'exploration et l'utilisation des ressources de l'éspace, 20 July 2017, Official Journal of the Grand Duchy of Luxemburg of 28 July 2017.

8 For examples of academic debate on the compatibility of national laws on space resources with international law, see, S. Hobe and P. de Man, 'National Appropriation of Outer Space and State Jurisdiction to Regulate the Exploitation, Exploration and Utilization of Space Resources', 66 *German Journal of Air and Space Law* (2017) 460-475; H. Hertzfeld, B. Weeden, C. Johnson, 'How Simple Terms Mislead Us: The Pitfalls of Thinking about Outer Space as a Commons', IAC-15 - E7.5.2 x 29369 (paper presented at the International Astronautical Congress 2015); F. Tronchetti, 'The Space Resource Exploration and Utilization Act: A Move

this is sufficient. Most importantly, national laws alone cannot provide legal certainty beyond national jurisdiction and cannot avoid conflicts between competing claims from different jurisdictions. It follows that also these two states, in one way or another, support the development of an international regime. Luxemburg does so notably by the funding of the second phase of the "The Hague International Space Resources Governance Working Group",[9] and the United States by its observer status in that Working Group and its agreement on the introduction of a new agenda item on "General exchange of views on potential legal models for activities in exploration and utilization of space resources" in the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS).[10]

In particular the new agenda item on space resources in UNCOPUOS paved the way for an exchange of views between member states on the matter of space resource activities, their legality, and the need for an international regime. The views expressed in the Legal Subcommittee are highly relevant for a first analysis of the approaches and attitudes of states, which may later develop into state practice and/or *opinio juris*. They will be analysed at the end of the present text. Before that, possible mechanisms to arrive at a new internationally binding regime on space resources will be discussed, namely a review of the Moon Agreement and an amendment of the Outer Space Treaty.

2. Amending the Moon Agreement

The Moon Agreement provides in its Article 11 (5) that States Parties to the Agreement "undertake to establish an international regime, including appropriate procedures, to govern the exploitation of the natural resources of the Moon as such exploitation is about to become feasible." [11] Such an international regime should be implemented by a review of the Moon Agreement in accordance with Article 18. On this basis, ten years after the entry into force of the Agreement, thus in 1994, the question of the review of the Agreement should have been included in the provisional agenda of the

Forward or a Step Back?', Space Policy, Volume 34, November 2015, 6-10; F. Tronchetti, 'Private Property Rights on Asteroid Resources: Assessing the Legality of the Asteroids Act, Space Policy', Volume 30, Issue 4, November 2014, 193-196; F. Tronchetti, 'Legal Aspects of Space Resource Utilization', in F. von der Dunk and F. Tronchetti (eds). *Handbook of Space Law* (2015) 769-813.

9 The Hague International Space Resources Governance Working Group has developed so-called "Building Blocks" for an international regime. See: https://www.universiteitleiden.nl/binaries/content/assets/rechtsgeleerdheid/instituut-voor-publiekrecht/lucht--en-ruimterecht/space-resources/final-report_the-hague-space-resources-governance-working-group-7-6-18.pdf.

10 See Report of the Legal Subcommittee on its fifty-fifth session, held in Vienna from 4 to 15 April 2016, UN Doc. A/AC.105/1113, para 250.

11 Article 11 (5) Moon Agreement.

General Assembly of the United Nations to consider whether it requires revision. At that time, UNCOPUOS recommended to the UN General Assembly that "no further action at the present time" was necessary.[12]
However, any time after the Agreement has been in force for five years, a conference of the States Parties to review the Agreement may be convened by the UN Secretary-General. What it takes is "the request of one third of the States Parties of the Moon Agreement and with the concurrence of the majority of the States Parties."[13]
The Moon Agreement currently has 18 States Parties.[14] They do not include the major space faring nations and other states that have shown interest in furthering commercial space resources activities. Some of the States Parties are more active than others in their continued support of the Moon Agreement. In the discussions in UNCOPUOS, only a few of them have highlighted that the principle of the "common heritage of mankind", as explained in Article 11 of the Moon Agreement, should not be forgotten in the discussion about the legal nature of space resources.[15]
The current State Parties therefore can be divided in two groups. The first group is still a strong supporter of the Moon Agreement and its main ideas and wants to keep and even increase its relevance, including its membership. By way of example, the "Joint Statement on the Benefits" of adherence to the Moon Agreement could be mentioned.[16] In 2008, before the current discussion on the utilization of space resources had started, Austria, Belgium, Chile, Mexico, The Netherlands, Pakistan, and Philippines expressed their views in this document, which is now frequently referred to by supporters of the Moon Agreement in the discussions in UNCOPUOS. The other group of States Parties is more indifferent or even distanced vis-à-vis the Moon Agreement. They may not have remained unimpressed by repeated statements by the United States and other countries that there are only "four" core United Nations treaties on outer space.[17]

12 S. Freeland, 'Article 18', Moon Agreement, in S. Hobe/B. Schmidt-Tedd/K.-U. Schrogl (eds), *Cologne Commentary on Space Law*, Vol. II (2013) 415, 416.

13 Article 18, second sentence, of the Moon Agreement.

14 Status of International Agreements relating to activities in outer space as at 1 January 2019, UN Doc. A/AC.105/C.2/2019/CRP.3, 10.

15 See I. Marboe, The End of the Concept of "Common Heritage of Mankind"? – The Views of State Parties to the Moon Agreement, in: IISL (ed), *Proceedings of the International Institute of Space Law* (2017) 225-238.

16 Joint Statement on the benefits of adherence to the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies of 1979 by States Parties to that Agreement, UN Doc. A/AC.105/C.2/2008/CRP.11 of 2 April 2008.

17 See, B. Egan, 'The Next Fifty Years of the Outer Space Treaty', Galloway Symposium on Critical Issues in Space Law, Remarks of the Legal Advisor, Department of State, 6 December 2016, see https://2009-2017.state.gov/s/l/releases/remarks/264963.htm

For a revision of the Moon Agreement it will be necessary to know how many of the State Parties would actually be ready to support a respective initiative. Six of them would be required to formulate the request, four more would be needed to support it. The analysis of the statements of the governments in the Legal Subcommittee further below may provide some insight into this question.

3. Amending the Outer Space Treaty

Another option to clarify the legal status of space resources would be a revision of the 1967 Outer Space Treaty (OST).[18] This treaty has been ratified by 109 states, including all relevant spacefaring countries,[19] and is widely recognized as the legal basis for the rights and obligations of states in the conduct of outer space activities. The problem is, however, that the treaty does not contain any explicit reference to space resources, be it their legal status or their use.

With respect to the legal status of space resources, Article I and II OST are at the core of the debate. Is the principle of "freedom of use", as provided in Article I OST, or rather the principle of "non-appropriation", as contained in Article II OST, decisive for determining the legality of the commercial exploitation and use of space resources? Furthermore, what does it mean that the exploration and use of outer space must be carried out without discrimination of any kind and shall be the "province of all mankind", as laid down in Article I OST? In addition, the meaning of Articles IX, which calls for environmental protection, for "due regard" of the interest of other countries, and the avoidance of harmful interference, would also benefit from some clarification in the context of space resource utilization. Similarly, Article XI, which calls for information and transparency in the conduct of space activities needs to be understood correctly.

While treaty interpretation in accordance with the rules contained in Vienna Convention on the Law of Treaties,[20] most importantly in its Article 31, may help to solve problems to a certain extent, an explicit regulation on the legal

(retrieved 21 October 2019); see also B. Israel, 'Agora: The End of Treaties? Treaty Stasis', in: 108 *AJIL Unbound* (2014) 63-69.

18 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies of 27 January 1967, entered into force on 10 October 1967, 610 UNTS 205 (hereafter: Outer Space Treaty or OST).

19 Status of International Agreements relating to activities in outer space as at 1 January 2019, UN Doc. A/AC.105/C.2/2019/CRP.3, p. 10.

20 Vienna Convention on the Law of Treaties of 23 May 1969, entered into force on 27 January 1980, UNTS 1155.

status and the use of space resources could provide more clarity. Independently from the Moon Agreement, such a revision could be used to establish an international regime, including procedures, for the exploitation of natural resources of celestial bodies.

The Outer Space Treaty, unlike the Moon Agreement, does not call for a review conference after a certain number of years. No review conference seems to be necessary at all. The treaty simply provides with respect to its review:

> Any State Party to the Treaty may propose amendments to this Treaty. Amendments shall enter into force for each State Party to the Treaty accepting the amendments upon their acceptance by a majority of the States Parties to the Treaty and thereafter for each remaining State Party to the Treaty on the date of acceptance by it.[21]

Whether such a simple procedure will be successful may be questioned. So far, no amendments to the Outer Space Treaty have been proposed.[22] A review conference to convene a significant number of State Parties would probably have greater chances of success than a unilateral action of "any State Party" to propose an amendment. An amendment would enter into force once a majority of States Parties, thus currently 55 states, have accepted it. This is a rather high number and seems to be difficult to achieve.

Furthermore, even a successful entry into force of the amendment could not remove all uncertainties with respect to the legal status of space resources. The non-ratification by several States Parties could have various legal consequences. It would be necessary to analyse whether the successful amendment creates two parallel and different legal regimes on space resources or whether the provisions in the amendment can be regarded as a more precise interpretation of the terms of the Outer Space Treaty or, over time, even as customary international law.

While states have preferred the adoption of non-legally binding resolutions in the UN General Assembly to reflect new developments in the use of outer space,[23] the possibility of creating an internationally binding regime with respect to space resources should not be rejected from the outset. Only such a regime could provide legal certainty about the status of resources of celestial bodies at the international level and would therefore have the best chances to prevent conflicts.

21 Article XV of the Outer Space Treaty.

22 G. Goh, 'Article XIV-XVII', in S. Hobe/B. Schmidt-Tedd/K.-U. Schrogl (eds), *Cologne Commentary on Space Law*, Vol. I (2009) 223, 227.

23 Ibid.

4. Views Expressed in the UNCOPUOS Legal Subcommittee

The Legal Subcommittee of UNCOPUOS decided to put the topic "General exchange of views on potential legal models for activities in exploration and utilization of space resources" on its agenda in 2016.[24] In the sessions in 2017, 2018, and 2019, member States started used this opportunity and exchanged their views on legal issues connected to the use of space resources.

4.1. Belgium

The initiative for this agenda item originally came from Belgium.[25] Later on, the delegation prepared several questions in order to stimulate the discussion:[26]

(1) Do Exploitation Activities require an international legal framework?

(2) Do Exploitation Activities qualify as "exploration" or "use" of outer space in the meaning of Article I of the Outer Space Treaty?

(2a) What is the international legal basis for such type of activities? How would such activities comply with the United Nations outer space treaties?

(2b) How could such activities justify any appropriation under national law with respect to Art. II of the 1967 United Nations Outer Space Treaty (which explicitly prohibits national appropriation by means of use)?

(3) Would Exploitation Activities require the recognition of exclusive rights on, authority, control over, and/or access to certain areas of celestial bodies, asteroids or other natural bodies in outer space?

(3b) How would Exploitation Activities in that case be carried out under national jurisdiction in compliance with Article I (2nd para.) of the 1967 United Nations Outer Space Treaty, namely the two following principles?

(4) In the case of infrastructure erected and/or equipment placed on celestial bodies, by governmental or non-governmental entities, for the purpose of Exploitation Activities, will they be subject to Art. XII of the 1967 United Nations Outer Space Treaty, which requires that

24 See Report of the Legal Subcommittee on its fifty-fifth session, held in Vienna from 4 to 15 April 2016, UN Doc. A/AC.105/1113, para 250.

25 I. Marboe, The End of the "Common Heritage of Mankind"? – Views of the State Parties to the Moon Agreement, in: IISL (ed), Proceedings of the International Institute of Space Law (2017) pp. 225-238.

26 Questions and observations by Belgium on the establishment of national legal frameworks for the exploitation of space resources. Working paper prepared by Belgium, UN Doc. A/AC.105/C.2/2018/CRP.8 of 29 March 2018.

they be "*open to representatives of other States Parties to the Treaty on a basis of reciprocity*"?

(5) Is there a legal basis or practice in your State to submit space infrastructure (e.g. stations) and equipment to national jurisdiction, for instance by assimilating them to space objects to be registered?

While these questions seem to be genuine and neutral, they are carefully formulated and point precisely to the issues that have turned out to be controversial during the first exchanges of views. They certainly challenge the view that exploitation of space resources can be considered as "free use" of outer space. However, even if one could agree that this was the case, the questions address the concern that also "free use" must be carried out without discrimination of any kind, on a basis of equality, and that there shall be free access to all areas of celestial bodies. Yet, the Belgian delegation, in its questions, also concedes that Art. XII OST foresees the establishment of infrastructure on celestial bodies and that they – only – must be open to representatives of other parties of the OST on a basis of reciprocity. The prohibition of appropriation by means of use thus does not exclude the installation of stations and equipment on the Moon or other celestial bodies.

4.2. Austria

Austria, which had supported the agenda item in 2016, had also prepared a set of questions and presented them for the debate in 2017 and 2018.[27] While, in the view of the Austrian delegation, it was uncontended that the appropriation of outer space, including the Moon and other celestial bodies, was prohibited under international law, it was still to be discussed if non-renewable space resources such as minerals and water could be subjected to an ownership regime.[28] Comparable legal regimes of areas beyond national jurisdiction such as the Law of the Sea could be taken as reference and source of inspiration for solutions on the legal status of space resources. In addition to the freedom of the high seas, which allows for the free use of the high seas, including its resources such as fishing, also the legal regime of the deep seabed should be taken into consideration, which establishes an international legal regime for the exploration and exploitation of the resources of the deep seabed.[29] That regime addressed issues, which were also present in the exploration and exploitation of the space resources such as the possibility of

27 See Statement of the delegation of Austria under agenda item 15 on 13 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en. The statement of 2017 is reprinted in H. Tichy, K. Bühler, Ph. Bittner, U. Köhler, Recent Austrian Practice in the Field of International Law. Report for 2017, 73 Zeitschrift für öffentliches Recht (2018) pp. 147, 183-185.

28 Ibid.

29 Ibid.

conflicting claims, the non-renewable character of the resources, and environmental concerns.[30]

Similar to the Belgian delegation, the Austrian delegation pointed out that, even if one answered the question of appropriation of space resources in the affirmative, it had to be established how the principles enshrined in the outer space treaties could be ensured in the exploration, exploitation, and utilisation of space resources. In the discussions about potential legal models for space resources activities, one would have to ask, in particular, how it could be ensured that space resources activities are carried out for the benefit and in the interest of all countries and that outer space remains free for exploration and use by all states without discrimination of any kind. The Austrian delegation also pointed out that Art. II OST does not only prohibit claims of sovereignty which allegedly requires an intention to extend national sovereignty to celestial bodies but also prohibits national appropriation by means of use or occupation, or any other means.[31]

The Austrian delegation was of the view that, in order to implement these and other principles enshrined in the space treaties, a multilateral approach for space resource activities was required. Such a multilateral approach should facilitate to the greatest extent possible the exploration, exploitation and use of the natural resources of the Moon and other celestial bodies, while respecting international law. Any space resource activities should be based on the principles of sustainable use of natural resources, avoidance of harmful contamination, and efficiency.[32]

In its statement, Austria, as a State Party to the Moon Agreement, encouraged states, which had not done so yet to become parties of the Moon Agreement, as it was convinced that participation in the Moon Agreement offered substantial benefits and guarantees in addition to participation in the other UN treaties on outer space.[33]

It can be concluded from this statement that Austria believes that a multilateral approach should be pursued, ideally on the basis of the Moon Agreement. But even the Outer Space Treaty itself would contain ample leads to multilateralism, such as the consultations required and the international cooperation foreseen.

30 Ibid.
31 Ibid.
32 Ibid.
33 Ibid.

4.3. The Netherlands

The delegation of the Netherlands concentrated on presenting and explaining the work of The Hague International Space Resources Governance Working Group, a non-governmental activity set up at the University of Leiden.[34] It highlighted that the Working Group aimed to assist on a global scale the need for an international framework for space resource activities and to prepare the basis for such a framework. The characteristics of that initiative was that it included a variety of members and observers, from governments, space agencies, universities, industry, and individual experts. Between 2016 and 2018 the Working Group had drafted a set of building blocks to lay the groundwork for a potential international framework for the governance of space resource activities.[35] 19 building blocks had been identified which had been complied in a booklet, which had been made available to all members of the Legal Subcommittee.

To address the allegation that the group was not representative, the Dutch delegation pointed out that governments with an interest in participation could still apply for membership. The Dutch delegation highlighted that the Hague Working Group was an inclusive endeavour and invited the international community to comment on the building blocks. It intended to continue its operation for another period of two years, financially supported by the Government of Luxembourg. Consequently, until the end of 2019, inclusive consultations on the building blocks would therefore be going on.[36]

The Dutch statement did not highlight the Moon Agreement as a basis for a future regime on space resources, even though the Netherlands is a State Party to that agreement. However, the distinct support of the initiative of The Hague International Space Resources Governance Working Group showed its interest in pursuing a multilateral approach, which eventually could result in the provision of elements for building an international framework. This approach differs from traditional ways of creating an international regime insofar as the views of non-governmental representatives were invited at the outset and have played an important role throughout the entire process. The result is surprising insofar as the need for an international regime came out quite clearly as an interest of non-governmental members, in particular industry representatives, in order to provide protection and security to their future claims to space resources. This contrasts remarkably with views of

34 See Statement of the delegation of The Netherlands under agenda item 15 on 13 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en.

35 Ibid.

36 Ibid.

governments, which have been increasingly reluctant to accept new international rules in the exploration and use of outer space.

4.4. Luxembourg

The delegation of Luxembourg highlighted that the exploration and use of space resources offered numerous new opportunities for exploring the solar system and for the propagation of humankind through space.[37] However, the fast evolution of space activities led to a great number of new challenges and that it was important and necessary to provide clarity when it comes to the governance of space resources. In view of the complexity of the issue and the swift evolution of technology, Luxembourg expressed doubts that it would be possible to come to a sufficiently quick solution within UNCOPUOS due to its consensus based decision making.[38]

The government of Luxembourg had therefore decided to move step-by-step. By virtue of the Law on the exploration and use of space resources, which entered into force on 2 August 2017,[39] Luxembourg implemented Article VI of the Outer Space Treaty which calls for authorisation and continuing supervision of space activities by the responsible state. Luxembourg had thus established a legal basis for entities embarking on this new form of utilisation of space.[40]

The delegation of Luxembourg underscored that there was no will or intent to claim any kind of sovereignty over all or part of any celestial body.[41] Space resources would only be utilised for civilian purposes and to purely peaceful ends. The activities would be conducted within an authorisation and supervision regime of Luxembourg, which would endeavour to ensure the sustainable nature of the activities for the protection of the environment both of outer space and on Earth.[42]

According to Luxembourg, the growing interest of private sector businesses and public sector enterprises for the use of outer space was an important advantage for the exploration of outer space. This should be taken account by providing a legal framework to enable such enterprises to develop their projects on a stable foundation. These activities were also in the common

37 See Statement of the delegation of the Luxembourg under agenda item 15 on 13 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en.

38 Ibid.

39 Loi sur l'exploration et l'utilisation des ressources de l'éspace, 20 July 2017, Official Journal of the Grand Duchy of Luxemburg of 28 July 2017.

40 See Statement of the delegation of the Luxembourg under agenda item 15 on 13 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en.

41 Ibid.

42 Ibid.

interest of all states because all states could benefit from the progress achieved. Nevertheless, such activities should take place within an ordered environment by avoiding any kind of abuse, ill-considered risks, or conflicts. It was for this reason that the Luxembourg legislation called for such activities to be placed under an authorisation and supervision regime.[43]
The statement by Luxembourg was clearly directed at fostering the new developments and supporting space resource activities. While Luxembourg had decided to enact national space legislation relatively quickly, it also expressed its interest in the development of an international framework. It had been actively contributing in the work of The Hague International Space Resources Governance Working Group and offered to finance the final phase of the adoption of the building blocks. In its statement, the Luxembourg delegation pointed out that it regarded them as a useful contribution to the debate in the Legal Subcommittee of UNCOPUOS.[44] Nevertheless, the overall attitude of the government of Luxembourg with respect to an international solution was rather sceptical. Not, because the government would not consider international governance of the use of space resources unimportant, but because it did not believe in the capacity of UNCOPUOS to develop an appropriate framework in a reasonable time, which would satisfy practical needs and the expectations of Member States.

4.5. United States

The delegation of the United States also expressed its appreciation of the work of the The Hague International Space Resources Governance Working Group and pointed out that the use of space resources, either from the Moon, asteroids or elsewhere, was critical to the long-term viability of space activities.[45] Truly substantial increases in human and robotic presence in the solar system would require utilizing resources already located outside of Earth's gravity well. At the same time it was important to remember that humanity was in the earliest days of space resource exploration and utilisation. Space resources were not currently being used and commercial attempts to do so remained focused on technical development, demonstration and testing. It would be necessary to keep this reality in mind, when the legal questions surrounding space resources were discussed.[46]

43 Ibid.

44 Ibid.

45 See Statement of the delegation of the United States under agenda item 15 on 13 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en.

46 Ibid.

The U.S. delegation referred to the statement of the then Legal Advisor of the Department of State, Brian Egan, at the Galloway Symposium in Washington D.C. in 2016,[47] where he set out in detail the United States' views regarding space resources and international law. Subsequent statements by the United States at the Legal Subcommittee elaborated on that position, and also Scott Pace, the Executive Secretary of the U.S. National Space Council, reiterated the same legal position in December 2018. In short: The longstanding view of the United States was that the utilisation of space based resources, including commercial utilisation, was consistent with the four main United Nations space treaties. The Outer Space Treaty shaped the manner in which space resource utilisation activities may be carried out, but it did not broadly preclude those activities. Of course, the Outer Space Treaty did not provide a comprehensive international regime for space resource utilisation activities. However, at this stage the United States saw neither a need nor a practical basis to adopt such a regime.[48]

With respect to the criticism to the Space Resource Exploration and Utilisation Act of 2015,[49] the U.S. delegation responded that resource utilisation activities by U.S. companies must be conducted in accordance with the international obligations of the United States. The United States would only recognise rights to resources, obtained in accordance with those international obligations. Also non-governmental space resource utilisation activities are subject to authorisation and continuing supervision by the United States government in accordance with the relevant international obligations.[50]

The United States takes the position that the Outer Space Treaty permits property on space resources.[51] Both the United States and the Soviet Union returned samples from the Moon, and some of those samples were sold commercially.[52] The Moon Agreement itself also provided some historical guidance, as it reiterated the language of Article II of the Outer Space Treaty regarding the prohibition on national appropriation and then went on to discuss how the usage of resources on the Moon should be regulated.[53]

47 See above, fn 12.

48 See Statement of the delegation of the United States under agenda item 15 on 13 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en.

49 Commercial Space Launch Competitiveness Act of 25 November 2015, H.R. 2262, Title IV, Space Resource Exploration and Utilization Act.

50 See Statement of the delegation of the United States under agenda item 15 on 13 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en.

51 Ibid.

52 Ibid.

53 Ibid.

With respect to the question of where an international framework could be discussed, the United States disagreed that UNCOPUOS was the only appropriate forum. The U.S. delegation reiterated that space resource utilisation was not yet a reality and that major technical, commercial and practical questions remained open about how this industry would develop and function. Discussions about space resource governance would therefore require close involvement between governments, industry, academia and other non-governmental actors. The kind of coordination, demonstrated by The Hague International Space Resources Governance Working Group, should be celebrated and not be condemned.[54]

It can be concluded that the United States considers exploration and utilisation of space-based resources as consistent with the Outer Space Treaty and other relevant international obligations. National steps to act within the bounds of that framework were no different as a matter of international law than national steps to authorise and supervise other space activities. Nevertheless, the United States recognised the strong international interest in discussing these issues in detail and expressed its readiness to participate in the discussions.

4.6. Russian Federation

The Russian Federation expressed its scepticism with respect to legality of space resource activities under current international space law.[55] Too many issues were left open in the Outer Space Treaty which had not envisioned such activities. It was necessary to remember that the freedom of states to explore and utilize outer space was not limitless, as that freedom ends where that of other states begins. The Russian delegation supported the view expressed by Germany that the jurisdiction of extra-terrestrial resources was of the international community of states as a whole. The international community was bound at the same time to craft well defined international legal frameworks for these types of activities. The unique nature of the UNCOPUOS Legal Subcommittee lies with the fact that that forum of international cooperation had the necessary expert capacity to ensure consistent development of international space law duly taking into account the interests and views of all countries as well as consistent implementation of international standards in national law.[56]

By contrast, with respect to The Hague International Space Resources Governance Working Group, the Russian delegation was sceptical that it could discuss principles of equality, equal access to outer space, and due

54 Ibid.

55 See Statement of the delegation of the Russian Federation under agenda item 15 on 16 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en.

56 Ibid.

regard of the interest of other states, in a group of limited composition. Furthermore, despite declarations to the contrary, such an endeavour necessarily attempts to interpret standards of the space treaties. The draft building blocks made assumptions about certain interpretations of the United Nations space treaties. In addition, the Russian delegation noted that some wording was similar and reflective of certain provisions of recently adopted national laws on outer space resources while ignoring the practical results of the work of the Scientific and Technical Subcommittee.[57]

With respect to the content of the future international regime, the Russian delegation highlighted the need of ensuring the long-term sustainability of outer space activities and the safety and security of outer space operations. Furthermore, it noted the challenge of ensuring that the practice on Earth of a resource race by whatever means was not be projected into outer space.[58]

Finally, the Russian delegation emphasized that the interests of private companies in carrying out space activities should not override the interests of the international community as a whole in the peaceful and sustainable use of outer space.[59] The profits of companies should not supersede the lives and health of people, safety, and the long-term sustainability of outer space activities.[60]

The Russian Federation concluded that the first stage of the international analysis of the potential exploration, exploitation, and utilization of outer space resources should be conceptualising such activities by attaining a single understanding of key terms and uniform interpretation of the fundamental principles of international outer space law. This matter should be considered in tandem with the topic of the long-term sustainability of outer space activities and be based on a solid practical foundation. It would be a difficult task ahead to find mutually acceptable, comprehensive, and actionable international legal approaches to the new area of activities in outer space.[61]

4.7. GRULAC, Group of 77, and China

The statements of other countries and groups of countries, such as GRULAC and the Group of 77 and China concentrated on the need of an international regime and the role of UNCOPUOS in order to facilitate an inclusive discussion. The future international regime should appropriately take into

57 Ibid.

58 Ibid.

59 See Statement of the delegation of the Russian Federation under agenda item 15 on 16 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en.

60 Ibid.

61 Ibid.

account the benefit of humankind and the interests and needs of developing countries.[62]

China, in its own capacity highlighted that it welcomed the Legal Subcommittee's continued examination of the subject and pointed out that, according to its understanding, the 1967 Outer Space Treaty set up the basic legal framework for the exploitation and utilisation of space resources.[63] Under the treaty, space resource exploitation and utilisation should take into account the following principles. First: non-appropriation. With respect to this principle, states had the obligation not only to comply with this principle themselves but also to ensure that private entities under their jurisdiction also comply with it. Second: peaceful uses of outer space. This meant that space resource exploitation and utilisation should be carried out solely for peaceful purposes. Three: protection of outer space environment, which meant that relevant activities must be accompanied by measures to prevent pollution of outer space and negative impacts on Earth's environment. Four: due regard for the corresponding interests of other states and for the benefit of all countries.[64]

The above mentioned rules were negotiated not with space resource exploitation and utilisation as the subject of regulation. However, China believed that, thanks to their high level nature and adaptability, these rules had provided an effective legal framework for various categories of outer space activities over the past few decades. China purported to build on the rules set out in existing outer space legal regime, to engage in extensive discussions and accumulate practical experience so as to forge consensus and establish an international regime, to develop and further improve the interpretation and application of existing rules.[65]

According to China, in that process the following principles should be observed. First, upholding the existing legal framework and principles governing outer space and ensure that states, while enjoying the freedom of space resource exploration and utilisation should respect the principles of bringing benefits to all states, non-appropriation, peaceful uses and due regard for the corresponding interests of other states. Second, striking two balances. First, the balance between freedom of utilisation and benefit sharing and second the balance between rational long term utilisation and environmental protection. For any state's outer space exploration or

62 See Statements of GRULAC and the Group of 77 and China as well as of several other countries under agenda item 15 on 13 and 16 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en.

63 See the Statement of China under agenda item 15 on 13 April 2018. See recordings of the meeting at http://www.unoosa.org/oosa/audio/v2/meetings.jsp?lng=en.

64 Ibid.

65 Ibid.

utilisation activities to be in compliance with outer space law and values and objectives enshrined in it. They must benefit all states and peoples and ensure equitable sharing of benefits with all states. Three, states should discuss issues related to the relevant rules within the framework of the United Nations. Multilateralism should be upheld to seek broad consensus when establishing a future international regime in this area. Such potential international regime must ensure all relevant space resource activities benefit all states and peoples and serve the interest of humanity as a whole and accommodate developing countries' needs.[66]

5. Conclusion

The views expressed by members of UNCOPUOS with respect to space resources give no clear indication to what extent they would support a review of the Moon Agreement or an amendment of the Outer Space Treaty.

The statements made by delegations so far rather provide a first insight to interpret existing international space law in accordance with the Vienna Convention on the Law of Treaties.[67] This may pave the way for a "subsequent agreement" or a "subsequent practice" of States Parties which is relevant for the interpretation of a treaty in accordance with Article 31 (3) of that Convention.[68]

In light of the discussions in the Legal Subcommittee, the need for a multilateral approach for the regulation of the use of space resources and asteroid resources seems to be accepted by almost all UNCOPUOS member States. Most also consider UNCOPUOS as the appropriate forum for the development of a future international regime on space resources. However, international efforts on the governance of space resources outside that framework, such as The Hague International Space Resources Governance Working Group[69] are also welcomed. Some delegations see them as a counter-model to UNCOPUOS, others consider them helpful to inform and

66 Ibid.

67 Vienna Convention on the Law of Treaties of 23 May 1969, entered into force on 27 January 1980, UNTS 1155.

68 Article 31 (3) of the VCLT reads: "3. There shall be taken into account, together with the context: (a) any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions; (b) any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation; (c) any relevant rules of international law applicable in the relations between the parties."

69 The Hague International Space Resources Governance Working Group, see https://www.universiteitleiden.nl/en/law/institute-of-public-law/institute-for-air-space-law/the-hague-space-resources-governance-working-group.

inspire the work in UNCOPUOS. However, the format and timeframe of this discussion still needs to be decided. While some delegations have proposed to establish a Working Group of the Legal Subcommittee with a dedicated mandate in this respect,[70] this has not found the necessary consensus so far.

70 Working paper by Belgium and Greece containing a proposal for the establishment of a working group on the development of an international regime for the utilization and exploitation of space resources, UN Doc. A/AC.105/C.2/L.311 of 4 March 2019; Addendum to the working paper by Belgium and Greece containing a proposal on the working methods and workplan for the proposed working group on the development of an international regime for the utilization and exploitation of space resources, UN Doc. A/AC.105/C.2/2019/CRP.22 of 8 April 2019; see also Report of the Legal Subcommittee of its Fifty-eighth Session, held in Vienna from 1 to 12 April 2019, UN Doc. A/AC.105/1203 of 18 April 2019, pp. 32-36.