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English only

Committee on the Peaceful Uses of Outer Space
Legal Subcommittee
Sixtieth session
Vienna, 31 May–11 June 2021
Item 14 of the provisional agenda*
General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources

Responses to the set of questions provided by the Moderator and Vice-Moderator of the Scheduled Informal Consultations on Space Resources

Note by the Secretariat

At its fifty-eighth session, in 2019, the Committee on the Peaceful Uses of Outer Space, adopted document A/74/20, para 259, which provides that the "Moderator and Vice-Moderator would present to States members of the Committee, in the intersessional period, a draft plan for the scheduled informal consultations containing proposed substantive topics for discussion and their rationale".

The present conference room paper contains replies received to the Draft Plan for Informal Consultations on the Issue of Exploration, Exploitation and Utilization of Space Resources by Moderator Mr. Andrzej Misztal (Poland) and Vice-Moderator Mr. Steven Freeland (Australia) from Australia, Austria, Bahrain, Belgium, China, Ethiopia, Finland, Germany, Luxembourg, Mauritius, Mexico, Netherlands, Saudi Arabia and Switzerland.

* A/AC.105/C.2/L.317.

I. Replies received from States members of the Committee

Australia

[Original: English]
[Received on 31 January 2020]

Australia welcomes the opportunity to provide our preliminary views regarding the Draft Plan.

Australia is a State Party to the five UN space treaties, including 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) and the *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies* (Moon Agreement). We are mindful of our obligations under the UN space treaties and are committed to the safety, sustainability and stability of the space environment.

Australia is committed to working with Member States to address new challenges and initiatives in order to ensure the long-term sustainability of outer space and welcome the opportunity to further contribute to discussions on the issue of exploration, exploitation and utilisation of space resources.

I Procedural topics

Australia has no objection to the proposed process for the scheduled informal discussions.

II Proposed substantive topics

Australia suggests that discussions be confined to those issues directly related to exploration, exploitation and utilization of space resources.

Australia encourages the exchange of views and approaches to relevant principles in the Outer Space Treaty, and other UN space treaties as appropriate.

Australia queries the inclusion of the sentence (in the ‘Rationale’) that expresses that ‘discussions will be guided with a view toward arriving at legal certainty and predictability…’ We do not consider this an appropriate aim for the informal consultations and should focus on an exchange of views to reach an understanding of the issues.

On the discussion on ‘Soft Law’ guidelines/principles, it is Australia’s preference that this include the importance of norms of behaviour in relation to planetary protection, transparency, safety, responsibility and sustainability of space operations, in the context of exploration, exploitation and utilisation of space resources.

Australia suggests that proposed substantive topics 5 and 6 be merged to streamline discussion.

III Way forward

Australia recognises value in considering general issues and the coordination of space resources as a topic of interest for the international community. We support the establishment of a working group under the Legal Subcommittee of the Committee on Peaceful Uses of Outer Space, which we consider would provide a useful platform to support Member States in continuing discussions on the exploration, exploitation and utilisation of space resources.

Austria

[Original: English]
[Received on 11 February 2020]

Austria thanks the co-moderators Andrzej Misztal and Steven Freeland for their efforts to prepare a Draft Plan for Informal Consultations on the Issue of Exploration,

Exploitation and Utilization, which in our view forms an excellent basis for discussions on the issue of space resources during the upcoming 59th Session of the Legal Subcommittee.

Austria fully supports the structure and content of the proposed Draft Plan for Informal Consultations and takes this opportunity to provide the following comments.

I. Procedural issues:

We find it useful to clarify at the outset the process for conducting the work, to provide an overview of inputs and communications received by member States and to establish the modalities for the conduct of discussions. This brings clarity regarding the methods of work and facilitates participation by all member States. In addition, current initiatives could also be presented (e.g. the initiative by Belgium and Greece for the establishment of a Working Group of the Legal Subcommittee or the results of the Hague International Space Resources Governance Working Group).

II. Proposed substantive topics:

All the substantive topics proposed are in our view relevant for the discussions. With regard to legal issues and the interpretation of applicable international law, Austria supports an in-depth exchange of views on the following questions:

- How to ensure that space resources activities are carried out for the benefit and in the interests of all States (Art. I OST)?
- How to ensure that outer space remains free for exploration and use by all States without discrimination of any kind (Art. I OST)?
- How to ensure free access to all areas of celestial bodies (Art. I OST)?
- Can non-renewable space resources, such as minerals and water, be subject to an ownership regime or is this contrary to the prohibition of the appropriation of outer space, including the Moon and other celestial bodies (Art. II OST)?
- How to ensure that the exploration, exploitation and utilization of space resources does not amount to national appropriation of certain areas in outer space (Art. II OST)? This question is important in view of the fact that Art. II OST does not only prohibit “claims of sovereignty”, which allegedly require an “intention” to extend national sovereignty to celestial bodies, but it also prohibits national appropriation “by means of use or occupation, or by any other means”.
- How to ensure that due regard is given to the corresponding interests of all other States Parties (Art. IX OST)?
- How to ensure that all stations, installations, equipment and space vehicles will be open to representatives of other States based on reciprocity (Art. XII)?

In addition, comparable legal regimes of areas beyond the limits of national jurisdiction, such as the Law of the Sea, could be discussed as a reference point and as a source of inspiration for solutions on the legal status of space resources. In particular, the legal regime of the seabed beyond the limits of national jurisdiction could be taken into consideration, which establishes an international legal regime for the exploration and exploitation of the resources of the Area. This regime addresses issues, which are also present in the exploration and exploitation of space resources, such as the possibility of conflicting claims, the non-renewable character of the resources, and environmental concerns.

Austria also supports to discuss the role of domestic legislation and input by experts, universities, space agencies and industry stakeholders as well as from other initiatives, such as the Hague International Space Resources Governance Working Group. For a future regime to be successful, it is in our view important that views from all stakeholders are heard and taken into consideration.

III. Way forward

Austria believes that the way forward is a main point of discussion and sufficient time should be dedicated to this question. In particular, the question should be addressed of how the topic of exploration, exploitation and utilization of space resources could best be dealt with in future sessions of the Legal Subcommittee.

Austria is of the view that a multilateral approach is the only way to tackle the complex legal issues relating to the exploration, exploitation and utilization of space resources. Such a multilateral approach could facilitate, to the greatest extent possible, the exploration, exploitation and use of the natural resources of the moon and other celestial bodies in accordance with international law. In our view, activities should be coordinated at the international level in order to avoid competing interests and conflicts.

Furthermore, appropriate international standards of safety for those activities need to be elaborated. Space resource activities should be based, inter alia, on the principles of sustainable use of natural resources, avoidance of harmful contamination and efficiency. Space resource activities should also be implemented in a coherent, sustainable and equitable manner.

Such a multilateral approach would create legal certainty and predictability for States as well as commercial actors and investors in space resources activities. A multilateral approach would also ensure the consistency of such activities with applicable international law as well as facilitate a harmonized and coherent approach by all actors.

Austria deems it necessary to establish a Working Group of the Legal Subcommittee in order to continue the discussions on the exploration, exploitation and utilization of space resources. This would allow in-depth discussions and comprehensive deliberations, which are necessary to develop an international regulatory framework that takes into account the interests of all stakeholders.

Bahrain

[Original: English]
[Received on 31 January 2020]

The Permanent Mission of the Kingdom of Bahrain to the United Nations Office and other international organizations in Vienna, presents its compliments to the United Nations Office for Outer Space (OOSA), and wished to refer to draft plan for informal consultations, on the issue of exploration and utilization of space resources to be held during the fifty-ninth session of the Legal Subcommittee, from 23 March to 3 April 2020.

In this regard, the mission has the honour to attach herewith the comments and suggestions of the National Space Science Agency of the kingdom of Bahrain on the abovementioned draft plan.

The Permanent Mission of the Kingdom of Bahrain to the United Nations Office and other international organizations in Vienna avails itself of this opportunity to renew to the United Nations Office for Outer Space (OOSA) the assurances of its highest consideration.

The Risk of Appropriation of Resources from Outer Space by One Single Country or Entity

- With outer space being a ground of fair play for any private or public entity had the potential of risking space resources to appropriation.
- With the limitation of earth resources many look to incest in Space mining and the potential of extracting resources from outer space for use on earth, which may lead to the possibility of trying to commercialize these resources for personal gain.

- With space being unclaimed territory there must be a legal mechanism put in place when it comes to the use of space resources on earth.
- Similar Laws to investigate are Laws of the Seas where space is similar to the high seas (international waters) in terms of unclaimed territory and the extraction of space resources would be compared to fishing in the high seas.

The Risk of Illegal Commercialization

- Rendering the commercialization of rare space resource illegal would promote illegal activity as it is very evident in historical context, therefore firm regulations must set in place in advance.
- The more advanced technology becomes and the easier it is to extract Space resources, which will lead to possible exploitation of these resources in black markets.
- Similar laws that could be investigate is the Free Trade Agreement (FTA) the North American Free Trade Agreement (NAFTA) and the Trans-Pacific Partnership (TPP).

The Risk of Outer Space Resources on the Environment of the Earth and Human Health

- Environmental and Health policies and procedures must be put in place and supported by a legal mechanism when it comes to the use of space resources on earth.
- An International Agency should be established under the United Nation to monitor Space mining and the potential of extracting resources from outer space for use on earth.

Belgium

[Original: English]
[Received on 31 January 2020]

I'm particularly happy to see your proposal for 'substantive topics' and the splitting up between the various items to be considered.

One thing I would like to bring to the attention of the co-moderators is the issue of the actual subjects of the scope of our discussion under the dedicated agenda item of LSC, as well as under the possible terms of reference for a WG. We had this discussion with Mathias Link of the Luxembourg Space Agency: as we need to address activities of exploitation of celestial bodies' mineral resources, it is important that we distinguish it from 'utilization' of the same resources, just like we need to distinguish 'prospection' from 'exploration'. In my mind, 'utilization' refers to a form of use in compliance with Article I and Article II of the 1967 Outer Space Treaty. For instance, using water ice to supply a permanent station on the Moon would qualify as 'utilization' (instead of 'exploitation') as long as the station is used for scientific research, accessible to other States' scientists for peaceful purposes research, etc. Likewise, 'prospection' would refer to exploration aiming at identifying resources which could be used for exploitation. A starting point could be to review whether international law (if not the UN outer space treaties themselves) provides for a definition of the concept of 'exploitation' (as featured in the Moon Agreement) or of the concept of "prospection' as it is used in Antarctic law for instance. I believe all these considerations could be addressed under item 1 of the 'proposed substantive topics'.

China

[Original: English]
[Received on 31 January 2020]

China appreciates the efforts made by the co-Moderators in preparing the draft plan for the scheduled informal consultations, which could work as a document of procedural guidance in general. China looks forward to fruitful discussions under the able coordination of the co-Moderators. To this end, China would like to provide the following comments on the draft plan:

In the 58th session of the Legal Subcommittee, the proposal made by Greece and Belgium to establish a working group on the exploration, exploitation and utilization of space resources was supported by quite a few delegations, which served as the main background of the upcoming informal consultations. Therefore, China suggests the informal consultations to be scheduled in a way that facilitates focused and full discussion on "*the possible establishment of a working group under the relevant agenda item*".

China notes the draft plan proposed "*substantive topics for discussion*" "*in order to achieve a common understanding of problems to be dealt with at a later stage*". China is of the view that the proposed substantive topics, which have been comprehensively discussed under the relevant agenda item during the regular sessions of the Legal Subcommittee, would only assist the discussion of the aforementioned core issue of possible establishment of a working group rather than serve as the core issue *per se*. China suggests to set an appropriate time limit for the proposed substantive topics to avoid excessive discussion.

Considering the limited resources of the Secretariat for the interpretation services of all official languages of the UN, China suggests to make full use of informal meetings without interpretation services to fully exchange ideas and advance the work.

Furthermore, since the informal consultations is an intergovernmental process under the COPUOS, China suggests it be clearly reflected in the draft plan that the views from member States of the Committee, organizations having permanent observer status with the Committee, as well as civil society and industry are to be incorporated in accordance with the rules of procedure, methods of work and established practices related to the COPUOS.

Ethiopia

[Original: English]
[Received on 31 January 2020]

The Ethiopian Space Science and Technology Institute (ESSTI) is strengthening and expanding international cooperation with public, public-private partnerships, private organizations and NGO space organizations to secure the interest of the country. This includes working closely with the United Nations Office for Outer Space Affairs (UNOOSA), Committee on the Peaceful Uses of Outer Space (COPUOS) and actively participate and contribute to meeting the goals and objectives of such UN organizations and the international community with regard to peaceful use of outer space.

Ethiopia is building strong and rapidly growing space sector. It has started by establishing ESTI, an institute demonstrating commendably growth within two years. Now the country has a comprehensive national space policy that advocates strong regional and international cooperation, creation of partnerships and leading the national effort to expedite maximum benefits from the global pursuit of international cooperation in the peaceful use of outer space including combat national and transnational security threats.

The Ministry of Foreign Affairs has revised its national policy and has included space for the first time and is making encouraging developments in this regard. It is encouraging that the ministry is now working closely with the institute on space related issues and activities of UNOOSA. Accordingly, the following are proposed to be pushed as common agenda among the UN Member States:

1. The space debris challenge: UNOOSA and European Space Agency (ESA) has joined forces to address the space debris challenge by signing a joint statement on their wish to cooperate on the challenges of space debris. The two organizations agreed to work together to increase global understanding and the consolidation of knowledge on space debris; to disseminate information on the latest research on space debris; to support the implementation of existing space debris mitigation guidelines; and to strengthen international cooperation and global awareness on space debris mitigation. This improper use of space is affecting the international community and more specifically developing countries that have no contribution to the rapid build-up of space debris in outer space. This is arising from irresponsible behaviour of some space faring and space emerging nations that failed to demonstrate compliance with international treaties and agreements. The international community and developing countries cannot sit silent on this issue of serious concern. Hence, the Effort by UNOOSA and ESA is welcome and Ethiopia shall join this group to mobilize other forces and interested parties in the space community to push for the implementation of the guideline and standard endorsed recently for mutual interest of the international community.

2. Ensure equity in utilization of space resources: The need for an enforceable legal instrument to promote and ensure equity in utilization of space resource is becoming critical for good of mankind and benefit of the global community. We have realized that agenda that are unfavourable to developing countries were being pushed on international stages regarding access and utilization of space resources. Furthermore, there is growing development of commercial activities in outer space from private organizations of space faring nations. Space resource appropriation and frequency assignments is now becoming an issue of concern and hot debate because of lack of equity of utilization of space resources.

Art. II of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies provides that "Outer space, including the Moon and their celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means". Hence as 'Common Heritage of Mankind' the exploration and exploitation of a certain 'area' of space and its resources shall be carried out in accordance with enforceable rules of an international legal regime. In this regard, the international community and Africa needs an enforceable legal instrument to ensure access and equity in space resource utilization. Ethiopia is highly interested to negotiate and push the issue of equity in space resource utilization to come to the table as an agenda so that the African voice could be heard in the international stage.

3. Establishment of continental UNOOSA offices and sustainable development

a. Establishment of Continental UNOOSA offices. There is huge demand for promotion, support and management of space activities at the international level. However, UNOOSA remained centralized in Austria Vienna and has limited capacity to support and mobilize efforts and resources to meet expectations. The office could not implement its commitment to provide sufficient support to developing countries. A good examples of UN structure in this regard could be the economic and environment sectors that have established continental offices. Therefore, it is in the interest of the international community and all humankind that continental branch Offices be established. Africa needs a branch office of UNOOSA and Ethiopia is ready to host such office an important office for future development of the continent. By doing this Africa will benefit a lot in making its voice heard and exploitation of the benefits of outer space applications and resources for the development of its people.

b. Peaceful uses of outer space and sustainability. It is high time to push the "Space2030" Agenda: Space as a driver for peace and sustainable development to debate and take a common ground with other concerned parties on the future of Space and Global Space Governance. Ethiopia feels the concerns of the UN regarding the possibilities of an arms race in outer space and of outer space turning into an area for military confrontation. Taking into consideration the obligations of all member states to observe the provisions of the UN charter regarding the use of threat of use of force in their international relations including in their space activities- the country recommends for international negotiations and multilateral agreements be strengthened related to prevention of arms race in outer space and push agenda 2030 in the forthcoming UN meetings. To that effect, Ethiopia has come up with establishment of continental UNOOSA offices and sustainable development as one of the Agendas to the Forth coming meeting.

Finland

[Original: English]
[Received on 31 January 2020]

1. Introduction

Finland welcomes with appreciation the Scheduled Informal Consultations on the issue of Exploration, Exploitation and Utilization of Space Resources in ensuring meaningful and effective exchange at international level.[1] We find that the Draft Plan provides an appropriate way to continue discussion taking into account the views provided by the Member States of the United Nations (hereinafter UN) Committee on the Peaceful Uses of Outer Space (hereinafter COPUOS). Finland is of the opinion that exploration, exploitation and utilization of space resources (hereinafter space resource activities) are best to be coordinated at international, multilateral level in order to ensure a uniform approach to space resource activities which is to minimize risk of conflicts and to assure peaceful exploration and use of outer space. In this regard, Finland provides its views to further the discussion and mutual understanding on this matter.

2. Cooperation in Space Matters at International Level

Finland acknowledges the UN space treaties as the cornerstones of international space law forming the primary international legal source for the governance of outer space activities. In relation to the space resources activities Finland specifically underscores the essential importance of the Outer Space Treaty in providing fundamental principles to guide all space activities in order to ensure peaceful exploration and use of outer space.

Finland supports furthering of common interpretation of the principles set out in the UN space treaties and other relevant international instruments developed in the UN, in particular taking into consideration the technological development, the rise of new space actors and novel uses of outer space, as well as the growing number of national space laws. Finland believes that is of paramount importance that the space activities are carried out with respect to rule of law. Advancing the development of clear rules at international level alleviate uncertainty and create predictability needed for the development of space activities, including space resource activities. Additionally, a comprehensive rule-based international regime could prevent fragmentation in the regulation of inherently global space activities. All norms should seek to ensure that space resource activities are conducted in a sustainable, economically viable and rational manner, with due regard to the rights of others.

[1] Reference: OOSA/2019/13, CU 2019/385.

3. Finland's Space Policy and Current Situation with Regard to Space Resource Activities

Finland has particular interest in the themes of sustainable use of outer space and the New Space economy. The Finnish space strategy supports innovation and sustainable growth in the space sector. We believe that having a legally clear and predictable operating environment is key in promoting competitiveness as well as sustainable development of the space industry. Furthermore, it can enable the entrance of new actors, as well as investments to the space sector. To enable growth of the space sector in Finland and to set up a legal framework to authorize and supervise these activities to ensure compliance with international law, a national space law entered in force in January 2018. The Act on Space Activities[2] and a supplementing Decree by the Ministry of Economic Affairs and Employment of Finland[3] aim to create a predictable and stable operating environment for the private operators.

The Act on Space Activities refers to space activities in general encompassing "launching a space object into outer space, operation and other control of the space object in outer space, as well as measures to return the space object and its return to the earth".[4] This definition does not mention space resource activities. Thus far, no information has been provided to the Finnish administration on any planned undertakings or initiatives regarding space resource activities by the Government of Finland or by non-governmental entities under the jurisdiction of Finland. Therefore, also no national policy specifically addressing space resource activities has been deemed necessary. While the definition of 'space activities' in the Act on Space Activities could, at least in theory, be interpreted to include space resource activities, any authorization for space resource activities by Finnish non-governmental entities would necessitate a determination whether Finland considers such activities to be in accordance with its international obligations, and whether it perceives to have jurisdiction over the subject matter in the context of a national license application.[5] Consequently, Finland is of the view that clarification and mutual understanding at international level on the definition and scope of lawful space resource activities would bring clarity not only to the international framework applicable to States, but also to the domestic level where these rules are applied and enforced. What is more, ensuring substantially similar interpretation of the principles creates a level playing field for the non-governmental entities, and supports the development of the space sector at large.

4. Continuation of the Discussions on Space Resource Activities

4.1 COPUOS

Finland is of the view that a common understanding and interpretation on the relevant principles of the Outer Space Treaty should be developed in a multilateral process. We believe that continuous dialogue in a multilateral forum provides the best possibilities for international cooperation, coordination and information sharing, all of which we consider to be of great importance in ensuring the peaceful exploration and use of outer space.

Finland recognizes COPUOS, including its Subcommittees, as the main forum for an international dialogue on space policy and space law, and considers it as a positive

[2] Laki avaruustoiminnasta (63/2018) (hereinafter 'Act on Space Activities'), available at www.tem.fi/spacelaw.

[3] Asetus avaruustoiminnasta (23 Jan. 74/2018), available at www.tem.fi/spacelaw.

[4] Section 4 of the Act on Space Activities.

[5] Section 5 of the Act on Space Activities stipulates that space activities may be carried on only subject to prior authorization by the Ministry of Economic Affairs and Employment; Finland is a State Party to the Outer Space Treaty, Rescue Agreement, Registration Convention and Liability Convention, but not to the Moon Agreement. At the current stage, Finland is not seeking to become a party to the Moon Agreement, and notes that the issue of space resource activities is not decisively solved in the Moon Agreement but left to be dealt with in the future, when such activities are close to become a reality or have already done so (See e.g. Art. 11(5) and 18 of the Moon Agreement).

sign that the space resource activities have been deliberated in the Legal Subcommittee as a single item for discussion.[6] Finland welcomes the continuation of the discussions relating to space resource activities in COPUOS under the agenda item in the plenary sessions, and supports the creation of a dedicated working group with a clear terms of reference and method of work under the Legal Subcommittee. As the issue is complex and multidimensional, the working group should establish and maintain a close connection to the Scientific and Technical Subcommittee. Lessons learned from other working groups established under the Subcommittees should be considered to ensure effectiveness of the work.

4.2 Input from Some Other Groups and Relevance Thereof

Finland underscores the importance of close cooperation with all the stakeholders and actors from both public and private sector, including expert groups, universities, space agencies and private entities, in ensuring the practical and pragmatic way forward in the development of space resource activities. We believe that cooperation between all stakeholders is key in ensuring that future space resource activities develop in a meaningful, practical and pragmatic manner taking into account the interests of all the actors, and in accordance with the principles of freedom of exploration and use, non-appropriation, due regard and avoidance of harmful contamination of outer space environment.

Accordingly, Finland welcomes the work of the Hague International Space Resources Governance Working Group (hereinafter Hague Working Group) as a form of a multi-stakeholder approach in discussing the future of space resource activities. In this respect, the Hague Working Group and other international initiatives, may provide a bridge between private sector and the governments represented at COPUOS. Duplicating the work being done within these international entities should be avoided, and therefore the COPUOS space resources working group could consider utilizing the building blocks created by the Hague Working Group in outlining the issues relating to space resources at the level of COPUOS.

Germany

[Original: English]
[Received on 31 January 2020]

I. Introduction

Germany welcomes the decision of the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) to hold Scheduled Informal Discussions on the issue of the exploration, exploitation and utilization during its 59th session. We thank the Moderator Mr. Andrzej Misztal and the Vice-Moderator Mr. Steven Freeland for the preparation of a draft plan for these informal consultations and the opportunity to submit comments.

II. Views on future deliberations concerning the exploration, exploitation and utilization of space resources

As we submitted in various oral statements to the Legal Subcommittee, Germany holds the view that the Legal Subcommittee should define and develop the legal framework for space resource activities. In January 2020, Germany addressed this issue additionally in a written comment submitted in response to the “Set of questions provided by the Chair of the Working Group on the Status and Application of the Five

[6] In 2016, the Legal “Subcommittee agreed that a new single issue/item for discussion, entitled “General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources”, should be included on the agenda of the Subcommittee at its fifty-sixth session”, see COPUOS Doc. A/AC.105/1113, para. 250; mandate of the Legal Subcommittee to interpret international space law, UN General Assembly Resolution 1472 (XIV) of 1959, section A, para 1(b).

United Nations Treaties on Outer Space, taking into account the UNISPACE+50 process" (A/AC.105/1203 Annex I, Appendix I).

Along this line, Germany supported the proposal for a dedicated Working Group of the Legal Subcommittee for the Development of an International Regime for the Utilization and Exploitation of Space Resources as submitted by the delegations of Greece and Belgium during the 58th session of the Legal Subcommittee in 2019.

III. Objectives of the Scheduled Informal Consultations on the issue of the exploration, exploitation and utilization of space resources during the 59th Session of the Legal Subcommittee in 2020

It is our view that the primary objective of the scheduled informal consultations should be building consensus among member states on the establishment of a *Working Group of the Legal Subcommittee for the Development of an International Legal Regime for the Utilization and Exploitation of Space Resources.* This would include fostering a consensus on the mandate, terms of reference and work plan as well as deliberations regarding the nomination of a chairperson. Therefore, the discussion of these questions should be given priority and significant room during the scheduled informal consultations.

The outcome should be a decision of the Legal Subcommittee taken during its present 59th session on the establishment of a working group including a decision on its mandate, terms of reference and work plan as well as the election of a chairperson. This would allow the working group to start its work without further delay.

Deliberations on substantive topics as proposed under chapter II. 3. – 7. of the draft plan would be within the mandate of the future working group. Therefore, we would regard them to be of subsidiary relevance during this year's informal consultations. 2

IV. Preliminary thoughts on the establishment of a Working Group of the Legal Subcommittee on the Exploration, Exploitation and Utilization of Space Resources

Germany supports the establishment of a dedicated working group with a mandate to develop principles and guidelines for a future international legal regime for the utilization and exploitation of space resources.

The workplan could comprise the following:

- Identifying the objectives and expected benefits as well as necessary elements of an effective international legal regime for the utilization and exploitation of space resources
- Drafting principles and guidelines for a future international regime for the sustainable utilization and exploitation of space resources
- Inviting comments by experts including from academic and private sectors on the draft principles and guidelines for a future international regime for the sustainable utilization and exploitation of space resources
- Finalizing principles and guidelines for a future international regime for the sustainable utilization and exploitation of space resources for consideration by the Legal Subcommittee and adoption by COPUOS

The working group could be open to all member states members of COPUOS and could engage with permanent observers in accordance with COPUOS' established practices. The working group could consider input from scientific and technical experts including from academic and private sectors obtained through COPUOS member states and permanent observers. In order to facilitate progress, the working group's terms of reference should provide for intersessional meetings. A first informal meeting should already be considered to be held before the 60th session of the Legal Subcommittee in 2021. In this regard, we refer to the exemplary intersessional work done by the Scientific and Technical Subcommittee's Working Group on the Long-term Sustainability of Outer Space Activities.

Luxembourg

[Original: English]
[Received on 31 January 2020]

We agree with the purpose of these informal consultations, as endorsed by COPUOS during its 62nd session and as recalled in your paper. We also agree with the procedural topics that you propose in your draft.

We have started consultations on our side and will come back to you with more detailed input in early 2020. We can already make the following observation regarding the substantive topics. In order to arrive "*at legal certainty and predictability for all public and private actors intending to explore, exploit and/or utilize space resources, and to ensure the consistency thereof with applicable international law*" as foreseen in the rationale, and in order to provide an incentivizing framework for future investment by public and private investors into space resource exploration, we believe it to be important to include as substantive topics at least the ones described in the final building blocks of the Hague International Space Resources Governance Working Group. In particular, these include priority rights between different countries, coordination mechanisms, respect of safety zones and ownership/use rights of resources. These are essential in our view for guiding the work of a working group to be established.

In addition, rather than merely referring to the role of the work of non-governmental stakeholders in the future work of the working group, we would like to explore a more active participation of non-governmental stakeholders, in particular from the academic and commercial sectors. They could provide valuable knowledge and technical understanding of the surrounding issues and practical needs. However, such consultation shall not be confused with or replace the decision makers.

We are looking forward to the intersessional consultations and the ensuing discussions at the Legal Subcommittee.

Mauritius (Republic of)

[Original: English]
[Received on 31 January 2020]

The Republic of Mauritius is sending its first satellite, the MIR-SAT1 (Mauritius Imagery and Radio-communication Satellite 1), on orbit in 2020. This initiative by the Mauritius Research and Innovation Council (MRIC) which operates under the aegis of the Ministry of Technology, Communication and Innovation, is being realised thanks to the UNOOSA-JAXA KiboCube Programme, whereby Mauritius was the first winner of the KiboCube 3rd round. The MIR-SAT1 project serves as a demonstration and awareness project whereby the main focus is to encourage capacity-building in satellite technology for the young generations of the country. The expected deployment in space will be in December 2020. Through this initiative, Mauritius will, for the first time in its history, send an object in space.

This project has triggered a thinking process leading the MRIC to contemplate initiating the setting up of a Space Unit for Mauritius. The main aim of this unit will be to cater for all matters pertaining to Space Technology and its applications, including all space-based laws and policies relevant to the objectives of the Space Unit. Furthermore, within the next decade, a second space mission is being planned, which aims at providing high-resolution data to aid in better tackling the priority socio-economic challenges of the country.

In light of the above objectives, it is primordial to have a solid foundation in terms of understanding the space laws and defining the underlying space policies to carry forward the vision of the country in its endeavour in the peaceful usage of space to

address its challenges. Mauritius is just at the dawn of understanding the importance of Space, and its opportunities and challenges.

Therefore, it is proposed to add a new item on “Capacity Building and Support to developing countries from well-established State members in the Space industry on Space Law and Space Policies” under the “Proposed substantive topics” listed in section II of the Draft Plan for Scheduled Informal Consultations on the issue of Exploration, Exploitation and Utilisation of Space Resources. Through this topic, UNOOSA/States Members can assist developing countries to draft and implement their own space law and policies. This will enable stakeholders engaging in space activities and also bringing in private sector investment for socioeconomic benefits.

Mexico

[Original: Spanish]
[Received on 31 January 2020]

CHAPTER 1

Integrate a parallel analysis of the Moon Agreement with the United Nations Convention on the Law of the Sea

Review and analyse the background to the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies in parallel with the United Nations Convention on the Law of the Sea

Background to the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Agreement)

Space law, or astronautical law, is the part of the law that establishes relations in the field of outer space of a general and international character; there are also internal regulations of some nations for the regulation of such activity in their respective constituencies. In other words, it is the set of principles, precepts and rules to which human relations are subject as far as the field of space is concerned.

The agreements, acts and conventions, between different countries go far beyond the bilateral application or reduced to the scope of the signatory countries for example: the agreements Strategic Arms Limitation Talks (SALT) and Anti-Ballistic Missile Treaty (ABM), among many others. These Ciltimos may be of a restrictive or cooperative nature and have been widely referred to by other studies, so they will be abundant in this regard.

With the advent of satellites, international law immediately raises a number of basic policy issues. For, as is almost always the case in law, facts precede regulation. With the advent of satellites, international law immediately raises a number of basic policy issues. For, as is almost always the case in law, facts precede regulation.

Thus, when a satellite from one place flew over and observed the territory of another, the obvious question was where are the limits of the airspace of each place? Whose sovereignty is it over the rooftops? Who owns the Moon and other celestial bodies? How is human life to be governed in space? This and many other issues such as space commercialization, telecommunications regulation, repair of data to third parties, etc. made it necessary to regulate human activities in outer space.

With the large-scale development of the field of human activity, space law has been projected as an extension of air and maritime law, together with other international law norms, such as the Antarctic Treaty. From then on, other points of reference were taken, international air law being historically condensed in the following conventions: the Paris Convention of 13 October 1919 and the Convention of 15 June 1929; the International Civil Aviation Convention signed in Chicago on 7 December 1944; the Convention on Damage Caused by Foreign Aircraft to Land by Third Parties signed in Rome on 7 October 1952; and the International Civil Aviation Convention. However, the space field was much outside of all the above mentioned regulations.

For this reason, space law was given a new focus in some respects and the potential danger posed by its multiple possibilities was soon revealed, thus the need to establish a broader framework of relationships, scope and limits. All this in an international context of great political-military tension caused by the cold war between the two main blocks, with the Soviets and Americans at the head of each. With the arrival of the space age, the powers determined the special regulated delimitation of diverse aspects of the space that later would seem more than obvious and that at the same time allowed to formulate questions as decisive as why conquer space? At what price? and by virtue of what military, economic, scientific imperatives?

The Organs from which such regulations emerged were the international ones. The UN, the multilateral forum par excellence, played a decisive role through the Commission on the Peaceful Uses of Outer Space (COPUOS), the COPUOS Legal Subcommittee and the International Astronautical Federation (IAF), which created the International Institute of Space Law and the International Telecommunication Union (ITU). The international agreements, as well as the recommendations or proposals of nations and other international bodies, extended and complemented such regulation. Currently, the existing legal systems on space can also be assumed and signed by countries that are not members of the UN itself. This is another reflection of the crisis of multilateralism that prevents the full implementation of the Moon Agreement.

In order to establish the regulatory standards, however, it was first necessary to define the basic elementary issues well. For example, at what altitude should the sovereignty of a nation end? or where does space begin and air law end? This was one of the first questions raised. The United States, for example, has set a ban on flying beyond 18 km for private photos, but the military, with the rocket planes have gone beyond 100 km. Therefore, in the United States the construction of a manned rocket that flies over such a limit of 18 km requires express authorization.

The so-called Von Karman line (Theodore Von Karman) set the limit between 85 and 160 km, the latter zone in which the atmospheric effects are practically nil. Space by convention begins there. The sovereignty of a nation would therefore have its limit of competition here. There were other proposals, such as the one of the Spanish Sebastian Estrada, who proposed that the limit should be up to the same height at the same radius of the earth, and thus would be at an altitude of 6,000 km, keeping the equivalent of the borders. The daily reality is however closer to the Von Karman line, by the simple physical atmospheric imposition established for the orbits of the satellites.

So far, no country has officially protested because satellites of any condition and nationality fly over 150–160 km of their territories almost daily. Before the launch of the first artificial Sputnik satellite in 1957, the USSR, fearing that the Americans would launch one, believed that the sovereignty of each country would have no roof over its head, warning that any country that flew an object over its territory would be violating its alleged sovereign rights. From 1957, when the Soviets anticipated the Americans and launched the first satellite, they silenced such vision of the space frontier and later proposed an altitude between 100 and 110 km as the limit of sovereignty and with it the beginning of the international legal vocation of space, excluding the vertical projection of the principles of air law, especially the principle of state sovereignty.1

In the following 35 years, after the beginning of the space age (1957), five international treaties were signed to condition the use of outer space and five declarations of legal principles were made; three UNISPACE conferences were also held, in 1968, 1982 and 1999. These regulations were signed by UN member countries and mainly stipulate and guarantee the international use of space.

In this way, space regulation swims with the artificial satellites themselves (the first satellite appeared in October 1957). In 1958, at the height of the Cold War between the Americans and the Soviets, in order to prevent a potential nuclear war and to promote international cooperation, among other things, COPUOS was set up.

In 1959 COPUOS began its work, created within the United Nations on 13 December 1958 (Resolution 1348) with 18 initial members, currently 77. COPUOS is composed of two sub-commissions, one legal and one scientific-technical. Both receive opinions from Member States and submit their proposals through COPUOS to the UN General Assembly. COPUOS agreements are adopted by vote, however, in the UN General Assembly, they are adopted by simple majority and without the right to veto by anyone.

On 27 January 1967, after intense negotiations between the Americans and the Soviets, the first space legislation was signed: the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, better known as the "Outer Space Treaty", also known as the Space Pact. It was signed simultaneously in Washington, Moscow and London by 96 countries and entered into force on 10 October. It is considered the Magna Carta of space and establishes that "space" is subject to international law; that space can be exploited by any country but none can appropriate it; that the use of space must be done for the common good, for all States, independently of its economic or scientific-technical potential, with the right of all to free and equal exploration and use.

Along the same lines and within the UN, the following treaties were codified through COPUOS: The 1967 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (Rescue Agreement), the 1971 Convention on International Liability for Damage Caused by Space Objects (Liability Convention), the 1974 Convention on Registration of Objects Launched into Outer Space (Registration Convention) and the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Agreement). The latter is the agreement governing the activities of States on the Moon and other celestial bodies. It develops the basic principles of the 1966 Treaty - relating to the Moon and celestial bodies - and establishes the regulation of future exploration and exploitation of the natural resources found there.

The Moon Agreement was adopted on 5 December 1979 and opened for signature on 18 December 1979, entered into force on 11 July 1984 and to date has received only 11 ratifications.

Since 1971 COPUOS has been working on a draft treaty on the Moon, which states that the Moon and other celestial bodies will be used exclusively for peaceful purposes; that the exploration of space will be for the benefit of all peoples; that States planning space missions shall take measures to avoid disturbance of the environmental balance on the Moon and other celestial bodies; that States shall not interfere with the activities of other States Parties to the Moon; that States shall provide information on phenomena they discover in space which could endanger human life or health and that States may visit space stations of other States, upon reasonable notice, in order to ensure that the activities of other States parties to the agreement are compatible with the provisions of the agreement.

In relation to the Moon and its natural resources, this agreement clearly states that they are the common heritage of mankind and that States Parties undertake to establish an appropriate international regime to regulate the exploitation of the natural resources of the Moon, where such exploitation is feasible.

Finally, and due to the long and arduous dissertations and debates inside the COPUOS Legal Subcommittee and in the UN General Assembly, forums where space law was codified, it was recognized that outer space and celestial bodies do not have recognized rights and has turned out to be, besides a privileged place for telecommunications, meteorological observation as well as of the neighbour, the enemy and the potential enemy. In this sense, the concept "without rights" is not declared as a "territory to be protected" by States as in other cases of International Law.

Broadly speaking, the main subjects regulated in the first six decades of space history are:

- The peaceful use of outer space and celestial bodies is declared open and without discrimination to all countries and in equal conditions. Regulated in 1958 by the UN and submitted to the General Assembly and ratified by the member nations.
- The disarmament and prohibition of military use of outer space. Delimitation of the sovereignty of states in space. It is forbidden to carry nuclear weapons or weapons of mass destruction into space or on celestial bodies. However, space warfare is not prohibited by other means; hence the legal possibility exploited by the Americans with the Strategic Defense Initiative (SDI), known as "Star Wars".2
- The launch bases and the limitation of dangerous experiments.
- International cooperation and technical assistance in space telecommunications.
- The World Meteorological Organization.
- The legal nature of international, national and private space agencies.
- The return of fallen space assets outside their country of launch.

It is understood that, given the recognized peaceful purpose of space, both the astronaut and his vehicle must be returned to his country of origin in case of emergency returns elsewhere.

- Human rights in space and saving astronauts. The astronaut is defined as a "representative" of all humanity, a reason that obliges all nations to help him in cases of need, accidents, emergency return, etc.
- The renunciation of national sovereignty rights over bodies in space, as well as their occupation. The United Nations Outer Space Treaty of 1967 states, among other things, that no nation shall have the right of ownership over the Moon and other celestial bodies.
- The exploitation of outer space for the benefit of all mankind. The exploration and use of outer space is the common heritage of all mankind. The benefits derived from the use of space or heavenly bodies will be for the benefit of all nations, that is, of all mankind. On 13 December 1963, the United Nations General Assembly adopted a document with the following sentence: "The exploration of space and its use shall be carried out for the benefit and in the interests of all mankind". However, the definition is so general that it does not specify or develop as it should and is therefore hardly considered viable.
- Damage caused by space objects. Treaty of 1972. The responsibility for the damage lies, as established, by the launching States or sponsors of the spacecraft.
- Prescription of isolation and asepsis to avoid importing beings or substances from other celestial bodies to the Earth.
- International conventions on space telecommunications. The first allocation of frequencies for space use took place between August and December 1959 by the International Telecommunication Union in Geneva, and it is this body that is competent for the case.
- Contamination of outer space by space debris or remnants of space assets. An International Code of Conduct for Space Activities is currently under negotiation.
- Insurance and rights over industrial and intellectual property in space findings or uses. Likewise, copyright is regulated in cases of use by broadcasting, etc.

Background to the Convention on the Law of the Sea (UNCLOS)

The law of the sea is mainly governed by the "United Nations Convention on the Law of the Sea" (UNCLOS), which contains 320 articles and nine annexes which define maritime zones, establish rules for demarcating maritime boundaries, assign rights, duties and responsibilities of a legal nature and provide a mechanism for the settlement of disputes.

This Convention was the result of negotiations initiated at the Third Conference on the Law of the Sea in 1973 and was opened for signature in 1982 in Montego Bay, Jamaica. It has 158 signatories, and is the international instrument signed by the most States. It entered into force in 1994 and by December 2000 had 135 States Parties.

This Convention is taken as the framework and basis for any future instrument that aims to define more rights and commitments on the oceans. It has also borne the following important fruits:

- The almost universal acceptance of the twelve miles as the limit of the territorial sea.
- The jurisdiction of coastal States over the resources of an exclusive economic zone not exceeding 200 nautical miles. The right of transit through straits used for international navigation.
- The sovereignty of the archipelagic states over an area of sea delimited by lines drawn between the extreme points of the islands.
- The sovereign rights of coastal States over their continental shelf.
- The responsibility of all States to manage and conserve their biological resources.
- The obligation of States to settle disputes concerning the application or interpretation of the Convention by peaceful means.

In addition, legislation has been passed on the issue of seabed mining (Part XI of the Convention), which has been one of the most difficult issues, since many 'industrialized nations did not accept the detailed procedures for producing the seabed, the terms of contracts and the compulsory transfer of technology". Because of this, the "Agreement on the Implementation of Part XI of the Convention" was adopted in 1994, which removed the obligation to transfer technology, set out general provisions on exploitation, and left it to the Seabed Authority to determine the nature of the rules for authorizing seabed mining operations.

The Law of Maritime Navigation is moving towards its international unification. The achievement of a uniform law in this field is greatly facilitated by the substantial coincidence of the solutions established in the various national systems.

The undisputed protagonist is the International Maritime Organization (ON/II), a specialized agency of the United Nations. Its main objectives are summarized in its motto "for safer navigation and cleaner seas", which are contained in its founding Convention as follows: "To provide a system of cooperation between Governments in the regulation of governmental practices in all technical matters relating to international commercial navigation; to encourage and facilitate the general adoption of standards as high as practicable in matters relating to maritime safety, the efficiency of navigation and the prevention and containment of marine pollution from ships" (Art. 1.a).

Another important government agency that promotes cooperation between States and the transport industry to improve maritime security is the United Nations Conference on Trade and Development (UNCTAD). In the maritime field it has acted mainly through the Maritime Transport Commission. UNCTAD has done a great deal of work in studying and reviewing the various economic and commercial aspects of international contract law and practice.

Comparative analysis of the Moon Agreement with the United Nations Convention on the Law of the Sea

Some legal definitions are necessary to understand the nature of these two instruments (the Moon Agreement and the Convention) and the way in which they distinguish, relate and complement each other:

The State is composed of different elements, one of which is the territory.

Definition of territory: It is the physical base, the space in which the State deploys its rule, its sovereignty.

State sovereignty is understood as the exercise of state functions in a full, exclusive and excluding manner.

State land domain: Of a legal nature, it involves the modes of acquisition of territories as well as the effects of the change of territorial sovereignty.

There are various spatial environments - land and subsoil, sea and/or river waters (surface or underground), air and airspace (and beyond this, outer space) - with a deployment of state sovereignty and with defined borders and other spaces subject to a legal regime or international control, e.g. the area known as the Seabed and Ocean Floor. Including spaces that are common to both one and the other such as the environment and outer space. The extension of sovereignty also covers the content of these spaces, both natural resources and economic and social activities that take place within the borders.

In the case of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, this instrument is very clear, it promotes international cooperation in the field of space, and “mutual understanding of problems of states”. Article 2 states that space and celestial bodies (Moon, Sun, planets, asteroids, etc.) “shall not be subject to national appropriation for the purpose of claiming sovereignty, whether by use or occupation or by any other means”. This means that man, nation, company or individual, cannot claim any property over anything, other than our atmosphere.

However, this does not prevent open use or exploitation by private companies. What is evident is that in recent times, when legislating on space exploration, it simply did not occur to anyone that any entity, other than a powerful or economically strong nation, could go into space. In this respect, there are similarities with the Antarctic Treaty and the rescue of individuals from the treasures of sunken ships in the seas. However, all this is still today, despite the wind that is blowing, since for the moment no public or private entity has the technical or economic capacity to deal with a significant exploitation outside the Earth, whether mining or otherwise.

In the case of the “United Nations Convention on the Law of the Sea” (UNCLOS), it is highlighted that it is considered one of the most comprehensive instruments of international law that provides the fundamental framework for all aspects of sovereignty, jurisdiction, use and rights and obligations of States in relation to the oceans. The Convention deals with ocean space and its use in all its aspects: navigation, overflight, exploration and exploitation of resources, conservation and pollution, fishing and maritime traffic. The UNCLOS provides for legislation on the question of deep-sea mining (Part XI of the Convention).

The genuine unification of an objective law of the sea can only be achieved through the adoption and incorporation of international maritime conventions. The maritime conventions enjoy wide international acceptance and affect the most diverse areas of the Law of Navigation. Here it is very important to distinguish the three important aspects: the reception of international maritime law as a broad and complex extension of international public law, comprising various disciplines such as the law of the sea, maritime law and the law of navigation, is a fundamental issue for national interests and for the unique strategic location in the world geopolitics of marine natural resources.

The sea, a means of communication and transport and a strategic component for establishing and maintaining zones of influence through military power, constitutes a common frontier for States as subjects par excellence of international law; therefore, the law of the sea and the law of air and space are dynamic legal disciplines which are constantly evolving in their application.

The spatial scope of validity of the rules of both the law of the sea and the law of space is composed of the areas subject to the national jurisdiction of States and those within the international legal regime.

In the case of the sea, national jurisdiction includes inland waters, territorial sea, contiguous zone, exclusive fishing zone, exclusive economic zone and the continental shelf.

The maritime zones of international jurisdiction are the high seas, the sea and ocean floor and the subsoil outside the national boundary.

In the case of air, national and international jurisdiction is regulated by air law (air or aviation law), which can be defined as the set of principles and rules governing the conditions under which airspace must be used by aircraft and the services supporting movement in this space, as well as the legal relations that take place on the occasion of such activity.

This definition comprises a complex regulatory system, as it covers both public (administrative, criminal, fiscal, etc.) and private (civil, commercial) provisions, whether national or international. These rules are a consequence of the international projection of air navigation and of the extraordinary number and diversity of questions that this navigation can involve (e.g., from the organization of the administrative services that support it, to the monitoring of traffic that guarantees its safety, including questions relating to transport, tickets, aeronautics, responsibilities, etc.).

Therefore, it is important to note that we are faced with a set of provisions from various sources (administrative, civil, commercial, criminal, tax, etc.) that apply to a phenomenon such as aviation and air navigation, and the legal relationships that derive from this fact.

Its adaptation to technical progress and consequent mutability of its regulations, since these must be adapted at all times to the incessant progress of airworthiness systems, which also involves a constant emergence of new standards that must meet the unavoidable requirement that air navigation is performed with the maximum conditions of safety and efficiency.

Such rules may be of national or internal origin – unilaterally adopted by each State – or of international origin – arising from bilateral or multilateral agreements between several States or from organizations constituted by them, in the search for uniformity to internationality.

Without prejudice to the recognition of the sovereign rights of each State, International Aviation Law is largely constituted by a set of rules issued by International Organizations (in particular the International Civil Aviation Organization/ICAO) which extend their competence throughout the world, and which, when accepted and applied by internal systems, allow air navigation throughout the Earth, subject to uniform rules.

In this sense, space law, with a widely international dimension, is conceived as an extension of air law, beyond the limits of air space. The space law, as well as air law, being disciplines that have emerged through the evolution of the human being and its constant exploration, has been granted its academic, dogmatic and legislative autonomy from other branches of law.

This special rule requires a deep analysis, by virtue of a fundamental principle of every modern state, the sovereignty that has been granted to each and every one of the states in various international conventions, which as a concept is also in

transformation given the speed of scientific and technical progress that humanity has achieved.

Currently, in the globalized world, Air and Space Law is of paramount importance, which does not have visas to lose influence over time, but quite the opposite. The air and space activity with all the consequences that are inherent to it, legal, economic, social and psychological, is developed with a widely dizzying pace. The constant development of aviation and space exploration must lead to the improvement of both global International Aviation Law and extended or updated Space Law, with Soft Law rules in areas as diverse as the long-term sustainability of space activities and space security, which include threats from the eventual impact of asteroids on the Earth as those generated by human activity, such as space debris.

Thus, Space and Aeronautical Law is consolidated on new and changing bases, different from the anachronistic rules sustained for a long time. Specialists in the field at the beginning of the 20th century, raised as a fundamental principle the need for an International Law of Peace, which ensures peaceful aviation and more recently space relations between peoples, allowing this to be a factor of development, unity and harmony in the world and in general for the benefit of humanity.

In this international context, the law of outer space is called upon to meet the challenges that human space activity imposes on it in its exploration of space, while providing for the long-term sustainability of such activity and space security.

As can be seen in this comparative analysis, the different fields of maritime and space law have been differentiated, in addition to aeronautics, which for obvious reasons have some similarities in their conception process. However, each of these areas of law are complementary among themselves from their respective competences, and that is where the value of this analysis lies, in knowing and differentiating their fields of application from their contrasts and similarities.

SECOND CHAPTER

Analyse other international instruments related to trade in goods.

Space activity, and particularly that related to satellites in their various forms and applications, has required a serious definition of jurisprudence in this area, particularly on such specific issues as the claiming of security interests in cases of liability for damage caused to third parties during the launch of objects into outer space. Space law in that area has made significant advances in the field of private and public international law, including the following:

Convention on International Liability for Damage Caused by Space Objects

Called the Liability Convention, it was first considered by the Legal Subcommittee at its second session in 1963. It was concluded at the tenth session, in 1972, so IlevO 8 arms. The General Assembly closed the procedure by adopting resolution 2777 (XXVI) of 29 January 1972, which was opened for signature on 29 March and entered into force on 12 September of the same year.

The possibility that an object launched into space may accidentally return to the earth’s surface causing destruction where it lands is considered to be the responsibility of the launching state. This Convention covers that contingency and stipulates that a State is responsible for the challenge caused by the objects it launches into space, establishing the system of absolute responsibility without limitation on the amount of compensation, in addition to other valuable innovations that make it not only the most advanced in international space law, but unique in its kind. The agreement provides for the liability of the State that launches objects into space when they cause damage to the surface of the Earth or to aircraft in flight.

Claims for compensation can be made through diplomatic negotiations or, if agreement is not possible, a tripartite claims commission will be formed to decide the merits of the claim and determine the amount of compensation, if appropriate.

The COPUOS Legal Subcommittee has also made progress in the consideration and revision of a number of items, including developments relating to a possible space assets protocol to the Convention on International Interests in Mobile and Aeronautical Equipment. The Convention and the Protocol are called the Convention on International Interests in Mobile Equipment Applied to Space Assets, which currently has a group of experts under the auspices of the International Civil Aviation Organization, the International Institute for the Unification of Private Law (UNIDROIT), which has its headquarters in Rome, and other organizations.

A number of IISL experts participated in the meetings organized by UNIDROIT, which had as their theme the development of the space protocol to the draft convention on international interests in mobile equipment. It was stated that that amendment would ensure that the draft UNIDROIT Convention on International Interests in Mobile Equipment and protocols relating to specific categories of mobile equipment would prevail only where it applied to a specific transaction.

The Convention on International Interests in Mobile Equipment does not apply to assignments of receivables given as security for the financing of mobile equipment, especially where such receivables fall within the scope of the UNIDROIT Convention on International Interests in Mobile Equipment.

Examination of the Convention on International Security Rights in Capital Equipment May ‘‘, opened for signature in Cape Town, South Africa, on November 16, 2001, and of the preliminary draft of the related protocol on specific issues related to space property Project Resolution on the assumption by the United Nations of the fund of supervisory authority under the Protocol on Specific Matters of Space Assets to the Convention on International Security Rights in Mobile Equipment.

Another international instrument relating to the registration of space objects is the 2001 preliminary draft protocol on matters specific to space assets to the Convention on International Interests in Mobile Equipment, as amended by the UNIDROIT Committee of Governmental Experts. Pursuant to paragraph 4 of article 17 of the Convention on International Interests in Mobile Equipment, the Supervisory Authority shall have all property rights in the databases and archives of the International Registry.

UNIDROIT is active in a number of areas, including matters as important to international economic relations and trade in goods as franchising, international warranties on mobile equipment, general warranty transactions and liability for dangerous acts such as space activities.

The Principles, however, are just that, “principles”, since they are not part of a legal system in the classical sense. Criticized as “soft law”, they have been compiled and systematized by UNIDROIT and its methods of international arbitration, as well as its efforts to …?

While some currents converge to a further development of “usages and customs in international trade” through model clauses and contracts, the results have been fragmented and tied to certain types of contracts or particular aspects. UNIDROIT, however, has followed a new path that advocates the formulation of general rules applicable to international commercial contracts; that is, a restatement of the principles that are uniformly applied in a given field.

Thus the “internationality” of a contract can lead to different solutions. The rules on this subject in treaty law and in domestic legislation may differ in the approach taken, e.g. the Vienna Convention (under the auspices of the United Nations) on Contracts for the International Sale of Goods applies its provisions to contracts concluded between parties having their places of business in different States (if such States are parties to the convention), or where the rules of private international law provide for the application of the law of a Contracting State.

Vease Principios del UNIDROIT sobre contratos comercia les internacionales en:

http://www.luridicas.0nam.mx/publica/reviderpriv/cont/11/dtridtr6.html

THIRD CHAPTER

Analysis of the term humanity; of the concept of world heritage in the Moon Agreement in parallel with the United Nations Convention on the Law of the Sea

The analysis of terms such as humanity and the concept of the heritage of mankind forces us to examine elementary questions such as: What humanized man? And what is the reason for his humanity? The answer is so broad that it does not go as far as the actual phenomenon. The Darwinian answer, although scientific, is negative and even exclusive. Natural selection, the mechanism of the theory of evolution of species, cancels out realities, annuls characteristics or properties whose origin is genetic mutations. However, the nature of man is positive, of contribution. On the other hand, natural selection only establishes the basis or conditions in which the still primitive man (man-monkey, monkey-man) was humanized.

The stimulus, the medium that selected him, interpreted him, which means that he made it his own, appropriated it, manipulated it, modified it and there he was humanized. Man created his own environment, his stimulating environment, life in society. Man is the product of a selection that is the contribution that he selected and that humanized him with the species during his stay on the planet. Man's humanity was the product of natural selection; but nature in man is in turn his creation, so it is the product of his own natural selection that is unnatural. The scientific origin of man's humanity is also unnatural is credited to man. Man's relationship with his environment is paradoxical, it is part of the environment, its product, because it is a product of man. Man modifies his environment, man without life in society would not be man, human culture humanized him, including his genetic load up to now given. Life in society determined him to be the only being that is his object, the foundation of the origin of his humanity. And Humanity is the set of all human beings that inhabit the Earth.

To reach man's humanity, that is, the manipulation of the stimulus, its interpretation, which explains and supports man's culture, including his humanity which is also culture and as part of human culture or humanity is the legacy which is the heritage. The term heritage refers to the set of inherited goods that are lived in the present and that must be protected and preserved, to be transmitted to future generations.

The categories internationally recognized in the field of world heritage particularly by work developed by the United Nations Educational, Scientific and Cultural Organization (UNESCO), where World Heritage, is a category instituted by that international body, which distinguishes specific properties of exceptional relevance – cultural or natural – to the common heritage of humanity. These properties make up the World Heritage List, endorsed by the Convention concerning the Protection of the World Cultural and Natural Heritage. In this way, World Heritage is the title conferred by UNESCO to specific sites on the planet that have been nominated and confirmed for inclusion on the list maintained by the World Heritage Programme, administered by UNESCO's World Heritage Committee.

In this sense and beyond these categories, after having analysed the implications of human activity in the sea, air and outer space, the need necessarily arises to highlight the importance of space, in the context of the Moon Agreement, as a universal heritage of mankind, as has already been established in previous paragraphs.

As can be seen, the existence of the World Heritage is inseparable from the existence of Humanity itself, insofar as the international society organized through the use of the specialized agencies of the United Nations (in this case, UNESCO and COPUOS) requires, among other things, natural, immaterial and cultural assets that constitute the deposit of civilization throughout the ages, and others of a material nature, susceptible to use and exploitation and that make up what we could call Heritage, and within which we can distinguish, in turn, different types of resources and assets: both those of an economic nature (that is, those which, like the resources of the sea bed, can satisfy human needs of this order, immediately or in the more or less distant future) and those which can serve as a means for other uses and exploitation for the

benefit of mankind, such as the geostationary orbit which can be used by artificial satellites or the moon as a platform for scientific astronomical research, or other celestial bodies as a source of mineral resources, among other multiple possibilities of space exploration that should be of common use, *res communis omnium*, that is to say, those things that by nature are destined for the use of all men and that, therefore, could not belong to a single individual.

In this case the property is exclusive to Humanity, considered this comma subject or holder of this economic right, who is responsible for its use, exploitation and administration, although these operations may be carried out on their behalf by some state or public or private entity.

In the light of this perspective, the exploration of space should consider the idea of the universal destination of all these goods, thus trying to overcome the antinomy between the "particular appropriation" and the "common heritage", under this dynamic principle of the "universal destination of the goods" an intermediate or complementary way is opened by which without excluding the possibility that those resources benefit the national or particular patrimonies, also contribute to satisfy community purposes.

With regard to the nature of the legal relationship between Heritage and Humanity, we understand that whatever their type, natural resources belong in general to Humanity, either under the exclusive and direct use and exploitation regime of the common authority, or through States to international entities authorized by them, either tacitly or expressly. On the other hand, the ownership exercised over them by Humanity serves as a unifying centre for all assets.

We are, therefore, faced with a very special legal relationship of non-property: "World Heritage" over certain properties whose use, exploitation and exploitation must be inspired by the principles of *ius humanitatis*, in such a way that space activities, whatever the entity that carries them out, must always have peaceful purposes and benefit all of Humanity, through international cooperation, which implies the renunciation of all kinds of rights of sovereignty or exclusive appropriation, national or of individuals. However, it is important to reconcile, on the one hand, the dominion of the common authority of Humanity over the spaces and heritage resources, with the promotion of exploration and research activities in space by the States and other private entities and, on the other hand, the common benefit for Humanity, with the fair compensation due to the latter.

Any activity beyond the boundaries of the Earth's atmosphere must consider this inescapable and inscrutable reality, since space law in constant evolution, even in its current phase of soft law mechanisms, must preserve that order.

CHAPTER FOUR

References of national regulation of the terms humanity and heritage

The terms humanity and heritage as well as the common heritage of mankind have usually been used to name different objects, places and values, and have a strong link to the legal field.

Therefore, the many references in the doctrine point to the existence of a right to benefit from the common heritage of mankind, without a clear definition of either the right or the concept referred to. As noted in previous sections, the continued use of these terms has led to confusion as to what is implied by a common universal or world heritage belonging to humanity and the elements that would make it up.

In this regard, we have at least clarified the contexts in which the constant references to a common heritage of humanity are circumscribed, which mostly correspond to the area of common goods or elements shared by the international community and to the area of culture or the protection of cultural heritage, whose development is led by UNESCO.

However, it has also been established that space is also the common heritage of mankind as a whole, and that only on the basis of the perfectible functioning of the international legal scaffolding can a system for the protection of this right assigned to mankind as a whole be established.

In this sense, the need to strengthen legal mechanisms to guarantee that the Moon and other celestial bodies are the heritage of humanity has been made clear.

However, it is necessary that such mechanisms also strengthen international cooperation between the different types of nations (developed, emerging and developing) that make up humanity and their respective interests in order to ensure that such heritage belongs to all States and that decisions on scientific exploration allow for its protection and preservation for the benefit of all nations.

The existing international space scaffolding may be used to interpret or supplement international references and uniform law texts and serve as a model for national or international space legislation in the field of human heritage. This is justified by the fact that any law, whether of national or international origin, raises questions as to the precise meaning of its articles. In the case of national law, the interpreter often relies on established criteria to ascertain that meaning, but the situation may be complicated in the case of international instruments that have already been incorporated into national law and that were prepared and agreed upon at the supranational level.

Therefore, the inscrutable belonging of the space to the common patrimony of the humanity warns us of the existence of a right in this respect as well as the enforceable right as for the use or benefit on the common or shared goods of the planet, considered as patrimony of the humanity. In the case of space, although it is understood that it must be particularly protected for the benefit of all persons due to its indispensable nature for the survival of the human species, there is still no specific internationally accepted legal regime establishing that from the resources of the universe that can be preserved for the benefit of humanity or its protection a correlative right to such elements arises.

However, references and claims to a common heritage of humanity or to this heritage as a human right are still as valid as they were at the time of the emergence of the concept, even from the field of human rights. For that reason, it is very important to elucidate the current state of the notion of the common heritage of mankind, in the context of space activities and its relationship to human rights or to mankind as a whole, in order to have the greatest possible elements that will allow today's civilization to determine whether it is possible to refer to the existence of a right to the common heritage of mankind and that this right implies in particular, with regard to the use of outer space for peaceful purposes that guarantee the existence, permanence, development and evolution of the human species in the long term.

In that direction, the criteria for analysing and exploring legal mechanisms to ensure these needs of the human species, in the context of the exploration and use of outer space for the benefit of the development and evolution of the human species, must be based on the spirit that encouraged the signatories to the Outer Space Treaty and the Moon Agreement, that is, the integration of a uniform law to be applied multilaterally, avoiding as much as possible the temptation to fall into the new trends in soft law that are proliferating in many areas.

At this stage, it is very important to speculate on existing resolutions on the subject, complementing the current phase of space law development with internationally accepted notions of the common heritage of mankind, on the basis of a comparative study of precedents at the national, regional and international levels.

In this way, the existing Treaties, Agreements, Principles and Codes will be an effective means of interpreting international instruments of uniform law and may constitute the legal basis that can be expanded in accordance with the needs of the current stage of development of mankind.

CHAPTER V

International references regarding the commercialization of the Moon and other celestial bodies

On the other hand, the existing principles can serve as a model for national and international legislators in the development of national and international laws or regulations. At the domestic level, the principles relating to the common heritage of mankind and its relationship to space law can also be a source of inspiration for countries wishing to initiate or modernize their legislation and bring it into line with current international standards with regard to situations arising from the unavoidable increase in space activities and the potential consequences arising from their isolation.

In the international sphere, progress in linking the current stage of space law and the incorporation of the notions of the common heritage of mankind could become a point of reference and a turning point in the preparation of multilateral conventions and model national laws that will make it possible to argue for and guarantee the exploration of space and its use for peaceful purposes, for the benefit of all mankind and in the interests of mankind itself.

Finally, the necessary progress and convergence of Space Law with the full acceptance of the notion that space is a common heritage of mankind, may be used as a guide in the drafting of national legislation; specifically, for the identification of the central issues in the specific interest of each country, as well as in the use of a neutral legal terminology, accessible to all parties involved in the negotiation and facilitating its international adoption.

Some countries such as Colombia have insisted on extending their sovereignty into outer space without a solid argument, but the current international legislation on the subject is conclusive. Nevertheless, Colombia maintains sites on UNESCO’s World Heritage List and subscribes to the principle that space is a common good of humanity.

Netherlands

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The Kingdom of the Netherlands would like to express its gratitude to the Moderator, Mr Andrzej Misztal, and the Vice-Moderator, Mr Steven Freeland, for their Draft Plan. The Netherlands welcomes the discussion on the regulation of the exploration, exploitation and utilization of space resources (in short, space resource activities) in the framework of COPUOS, and would support the establishment of a working group mandated to set the first step in the direction of achieving multilateral agreement on such regulation.

The Netherlands considers that a (legal) framework for the regulation of space resource activities should be an enabling regime, based on adaptive governance, and that such a framework should be adopted in a timely fashion. To achieve this result, the input of all stakeholders, including non- State actors such as industry and civil society, should be welcomed. The Netherlands, therefore, appreciates the call of the Moderator and the Vice-Moderator for the inclusion of the views of all stakeholders and would like to support the notion that observers to COPUOS can participate in the work of the working group.

The Netherlands would note that the purpose of the Scheduled Informal Consultations was to facilitate an “exchange of views on the future deliberations” concerning space resource activities (see para. 279 of the 2019 Report of the Legal Subcommittee). The Netherlands would therefore consider that the purpose of the Scheduled Informal Consultations is not to discuss the details of potential legal models for the regulation of space resource activities, nor to identify the areas of agreement and disagreement between the COPUOS Member States. The Netherlands would rather propose that the outcome of the Scheduled Informal Consultations should be terms of reference for a

working group, including rules of procedure and a timeframe. As to the terms of reference and the mandate, the Netherlands would like to make the following observations:

- The terms of reference should provide for the identification of the relevant issues to be addressed, including an identification of the areas of agreement, for the regulation of space resource activities.
- The terms of reference should provide for the identification of the instruments that are relevant for the regulation of space resource activities, including the five United Nations treaties on international space law, the Building Blocks as adopted by the Hague International Space Resource Governance Working Group, and national space law.
- The terms of reference should provide for the participation of all stakeholders, including observers of COPUOS on the same condition as their participation in COPUOS and its subcommittees. In addition, the terms of reference should provide for the acquisition of input from stakeholders not participating in the working group as members or observers of COPUOS. This could be achieved through accepting their written contributions and the organisations of seminars.
- The terms of reference should contain a dear timeframe which should not exceed a period of four years.
- The terms of reference should require the working group to provide annual reports to the Legal Subcommittee and a final report before the end of the timeframe referred to above.

The Kingdom of Netherlands looks forwards to a constructive session of the Legal Subcommittee this year and is confident that an agreement can be found on the way forward on the issue of the legal regime concerning space resource activities.

Saudi Arabia

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[Received on June 2020]

The Saudi Space Commission (SSC) would like to present its compliments to the United Nations Office for Outer Space Affairs (UNOOSA) and the Committee on the Peaceful Uses of Outer Space (COPUOS) for scheduling informal consultations on the issue of exploration, exploitation and utilization of space resources. Also, we would like to convey our greetings to Moderator Mr. Andrzej Misztal (Poland) and Vice-Moderator Mr. Steven Freeland (Australia) for all the efforts are putting in order to have a broad exchange of views between States members on the future deliberations concerning the exploration, exploitation and utilization of space resources.

I. Saudi Arabia's comments on proposed substantive topics and their rationale:

We do agree that it is important to clarify the process for carrying out the work, highlighting the mandate, providing an overview of inputs and communications received by States members of the committee, and establishing the modalities for the conduct of discussions. Saudi Arabia concur on proposed procedural topics by the co-Moderators and the Secretariat.

We believe that the discussion on the compatibility of the issue of exploration, exploitation and utilization of space resources with regard to international space law regimes/ treaty arrangements is very important. It will provide an oversight of activities by the public and private sector. Also, will ensure that the fruits of the universe are available to improve the general welfare of all humankind.

Saudi Arabia has ratified the four United Nations treaties on outer space as follows.

1-The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. (the “Outer Space Treaty”, or the OST), adopted by the General Assembly in its resolution 222 (XXI), opened for signature on 27 January 1967, and entered into force on 10 October 1967.

2-The Convention on International Liability for Damage Caused by Space Objects (the “Liability Convention”, or the LIAB), adopted by the General Assembly in its resolution 2777 (XXVI), opened for signature on 29 March 1972, and entered into force on 1 September 1976.

3-The Convention on Registration of Objects Launched into Outer Space (the “Registration Convention”, or the REG), adopted by the General Assembly in its resolution 3235 (XXIX), opened for signature on 14 January 1975, and entered into force on 15 September 1976.

4-The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (the “Moon Agreement”, or the Moon), adopted by the General Assembly in its resolution 34/68, opened for signature on 18 December 1979, and entered into force on 11 July 1984.

However, the outer space treaties did not provide a comprehensive international regime governing activities relating to the utilization of space resources. We believe that the Subcommittee should develop a legal framework for the conduct of space activities that aligned with the Outer Space Treaty. Also, it ensures that the international community as a whole would benefit from space resource exploitation.

We also realized the urgent necessity to establish a national regulatory framework (National Space law), which Saudi Arabia currently is working on. The national space law will emphasize on the role of domestic legislation and facilitate the private endeavours with sufficient legal certainty and in compliance with the international obligations on the part of Saudi Arabia.

Saudi Arabia also agreed on the importunacy introducing relevance work by experts, other entities, universities, space agencies and industry stakeholders. We believe that the international space community can make a difference. Considering inputs from other groups in the issue of exploration, exploitation and utilization of space resources would encourage member States to engage in negotiations for an international agreement. In addition, setting up different working groups would support finding solutions for the lack of a legal framework for the use of space resources found on asteroids and other celestial bodies. Also, it would encourage member States to carry outreach activities if needed. We believe that working groups will help in continuing the discussion about the interpretation of applicable international space law. We also support Belgium and Greece on their coming initiative of establishing a working group on the development of an international regime for the utilization and exploitation of space resources.

Finally, we do see that all proposed topics are rationale and important topics to be discussed. We also believe that more work needed on regulatory framework to ensure that all governments are able to meet its obligations. We agree that when participants enjoying a complete and exclusive sovereignty at the scheduled informal consultations over the process and methods, this will make things move forward.

The SSC extend its hearty thanks and appreciation to the Legal Subcommittee for scheduling this informal consultation. Also, for opening this chance to exchange views on the future deliberations concerning the exploration, exploitation and utilization of space resources.

Switzerland

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First of all, Switzerland would like to express its sincere gratitude to Andrzej Misztal and Steven Freeland – co-Moderators of these informal consultations – for their excellent work in elaborating the proposed draft plan. Insofar as it addresses the substantive questions and their justification, this document adequately reflects the mandate given to the co-Moderators at the 62nd session of the COPUOS in June 2019.

The following paragraphs detail comments and suggestions that Switzerland would like to submit with respect to each item proposed in the draft plan.

I. Procedural Topics

In view of the rarity of such informal consultations, it appears appropriate to first deal with the procedures that will frame the substantial work. Although necessary, this initial task should leave sufficient time to address the substantive topics.

II. Proposed Substantive Topics

The substantive topics proposed by the co-Moderators seem perfectly suited to the mandate insofar as they cover very broadly the question of the exploration, exploitation and use of space resources, be it in terms of relevant legal issues under international law, the role of domestic legislation, or the relevance of the work from other actors (universities, space agencies, industry, and other entities as appropriate).

Switzerland agrees that discussions should be guided with a view toward arriving at legal certainty and predictability for all public and private actors intending to explore, exploit and/or utilize space resources, and to ensure the consistency thereof with applicable international law.

Switzerland is convinced that the question of the exploration, exploitation and utilization of space resources must be addressed at the multilateral level, in particular to prevent tensions.

III. Way Forward

Switzerland agrees on the proposition to further develop a common understanding as to the necessity to continue the consideration of these legal issues, also taking into account the question of the single agenda item.

Furthermore, we support the view that the informal consultations should bring clarity over the next steps to be followed, inter alia with the aim to forward the result of these deliberations to the Legal Subcommittee. We grant our full confidence in the two co-Moderators to report to the Subcommittee in the appropriate manner.