

59th IISL COLLOQUIUM ON THE LAW OF OUTER SPACE

Session 2

LEGAL PERSPECTIVES ON SPACE
RESOURCES AND OFF-EARTH MINING

Co-Chairs:

Mark Sundahl
Fabio Tronchetti

Rapporteur:

Guoyu Wang

The Hague Space Resources Governance Working Group *A Progress Report*

*Tanja Masson-Zwaan, René Lefeber, Giuseppe Reibaldi & Merinda Stewart**

Abstract

This paper explains the rationale for the establishment of The Hague Space Resources Governance Working Group in 2015, and reports on the work carried out during its first year of activity. It explains the purpose and objectives of the Working Group, and sets out its structure, working method and membership. A report is provided on the progress made so far regarding the discussions about possible building blocks for a future governance system for the use of space resources. Results of the first face-to-face meeting of the group, held in Leiden in April 2016, are given, and an indication of future work is given. All authors are closely involved with the creation and activities of the Working Group.

1. Introduction

The development of space resource activities is happening now. In November last year, the US government enacted legislation which provided legal certainty for private commercial space resource activities, whilst in early this year, the Luxembourg government announced its intention to be the first European state to establish a legal framework to provide certainty to private firms to engage in the mining of space resources. More recently, Moon Express has been granted a licence by the US Federal Aviation Administration to travel to the moon in 2017, a journey that would make it the first private company to venture beyond the Earth's orbit.

In the absence of a clear international framework to govern these activities, there is a need to examine the concepts that are being discussed in order to

* Tanja Masson-Zwaan, International Institute of Air & Space Law, Leiden University, The Netherlands, t.l.masson@law.leidenuniv.nl. René Lefeber, Netherlands Ministry of Foreign Affairs, The Netherlands, rene.lefeber@minbuza.nl. Giuseppe Reibaldi, International Academy of Astronautics (IAA), France, giuseppe.reibaldi@gmail.com. Merinda Stewart (corresponding author), International Institute of Air & Space Law, Leiden University, The Netherlands, m.e.stewart@law.leidenuniv.nl.

ensure that they meet existing treaty obligations regarding on-orbit operations and space resource rights. These concepts need to enable, support and co-ordinate the use of space resources and be acceptable for space-faring nations and other interested states. This need for an international framework is broadly accepted within the space law community, for example: F. Tronchetti, *Title IV – Space Resource Exploration and Utilization of the US Commercial Space Launch Competitiveness Act: A Legal and Political Assessment*;¹ and, R. Lefeber, *Relaunching the Moon Agreement*.² The Working Group comprises the main stakeholders involved in space resource activities, including representatives from all continents and both developed and developing nations.

1.1. Origin

The Working Group was set up following a Roundtable on the Governance of Space Resources, convened by The Hague Institute for Global Justice on 1 December 2014. The Roundtable was attended by industry leaders, scientists, diplomats as well as political and legal experts from across the globe and it served as a forum to discuss and propose solutions for the current lack of a legal framework for the use of space resources found on asteroids and other celestial bodies. The Hague Space Resources Governance Working Group has been established to support this process and promote its advancement, within a reasonable timeframe and in accordance with international law. The Working Group operates in a transparent and open manner and important information is posted on its website (www.iiasl.aero) and communicated through twitter (@SpaceResourceWG).

1.2. Objectives

The Working Group aims to assess, on a global scale, the need for a regulatory framework for space resource activities and to prepare the basis for such regulatory framework. Where the need is established, the Working Group will encourage states to engage in negotiations for an international agreement or non-legally binding instrument.

1.3. Activities

In achieving the above objectives, the key activities of the Working Group are the identification and formulation of building blocks for the governance of space resource activities and the provision of recommendations on the implementation strategy.

1 F. Tronchetti, *Title IV – Space Resource Exploration and Utilization of the US Commercial Space Launch Competitiveness Act: A Legal and Political Assessment*, *Air & Space Law* 41(2) (2016).

2 R. Lefeber, *Relaunching the Moon Agreement*, *Air & Space Law* 41(1) (2016).

2. Structure of the Working Group

The Working Group platform is a Consortium serviced by a Secretariat. The Secretariat consists of the Working Group's Executive Secretary (Giuseppe Reibaldi) and an Assistant Secretary (Merinda Stewart until September 2016, and presently Dimitra Stefoudi). The Working Group has a Chair (René Lefeber) and two Vice-Chairs (Michael Simpson and Olavo de Oliveira Bittencourt).

2.1. The Consortium

The founding Consortium partner is the International Institute of Air and Space Law (IIASL), Leiden Law School, Leiden University (the Netherlands). The Secretariat of the Working Group is hosted here. The other Consortium partners are: The Catholic University of Santos (UNISANTOS) (Brazil), The Centre for Resources, Energy and Environmental Law (CREEL), University of Melbourne (Australia), The Indonesian Centre for Air and Space Law (CASL), Padjajaran University (Indonesia), The Secure World Foundation (SWF) (USA), and The University of Cape Town (UCT) (South Africa).

2.2. Members

Members are major stakeholders from government, industry, universities and research centres. They are responsible for making the decisions and are invited to attend all teleconferences and meetings of the Working Group. The number of members to the Working Group is limited to 25, at which the number currently stands.

2.3. Observers

Observers are professionals directly involved in space resources issues and are invited to attend face-to-face meetings, but not teleconferences. They are not permitted to actively participate in the meetings. There is no restriction on the overall number of observers to the Working Group, however the number of observers per organisation is limited to one. Currently there are 25 observers to the Working Group, although this number is increasing consistently.

3. Building Blocks

The building blocks of the project are the basis for the negotiations on an international agreement or non-legally binding instrument. In its present draft form, there are 18 building blocks, which have been developed and elaborated on following the various discussions of the Working Group that have taken place.

The building blocks address non-substantive matters, such as the objective of an international legal framework, the definitions of key terms, and the scope and principles of an international legal framework, as well as substantive matters, such as the exercise of jurisdiction over space resource activities,

access to and utilization of space resources, as well as the sharing of benefits arising out of the utilization of space resources, the exchange of information under the international legal framework, and liability, monitoring and compliance issues.

Some building blocks generate particularly rigorous discussion, including the objective of the international framework, and the definitions of key terms, both of which are important elements in laying the basis for the framework. In relation to the former, Article 1 of the Outer Space Treaty – “The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interest of all countries” – is a pivotal factor. The considerations under the latter building block include the definition of ‘space resource activities’ and within that, the meaning of ‘resource’, as well as the definitions of ‘space object’ and ‘operator’.

The building block addressing the sharing of benefits arising out of the utilization of space resources has also been a platform for considerable discussion amongst the participants of the Working Group. Within the scope of this building block, the scope of the term ‘benefit’ has been debated, as well as the potential methods of sharing.

4. Working Method of the Working Group

Most of the activities of the Working Group are carried out by email or teleconference calls. In addition, there are face-to-face meetings conducted, of which there has been one to date.

4.1. Teleconference, 22 January 2016

The first meeting of the Working Group was a teleconference, held on 22 January 2016. It was attended by members only – with almost all in attendance. The meeting was moderated by the Chair, René Lefeber. The core discussion centred on the identification and titles of the building blocks of the project, of which at that stage there were 19. A summary of the teleconference was provided to the members following the meeting, along with the building blocks of the project, which were revised and elaborated on as a result of the teleconference discussions. The finalised version was distributed to the members on 3 March 2016 and it was in this form that they were discussed at the first face-to-face meeting (see below).

4.2. Face-to-Face Meeting, 18-19 April 2016

The first face-to-face meeting of the Working Group was held from 18-19 April 2016, at the Observatory of Leiden University, in the Netherlands. It was attended by a majority of members and a large number of observers. The meeting facilitated an extensive discussion on the proposed building blocks. The building blocks were discussed and revised and currently stand as follows:

1. Objective of international legal framework
2. Definition of key terms
3. Scope of international legal framework
4. Principles of international legal framework
5. Exercise of jurisdiction over space resource activities
6. Access to space resources
7. Utilization of space resources
8. Safety of space resource activities
9. Prevention and abatement of harmful impacts of outer space activities
10. Sharing of benefits arising out of the utilization of space resources
11. Exchange of information under international legal framework
12. Provision of assistance in case of distress
13. Liability in case of damage
14. Monitoring and inspection of space resource activities
15. Compliance with and enforcement of international legal framework
16. Institutional arrangements of international legal framework
17. Settlement of disputes
18. Final clauses of international legal framework.

5. Financing of the Working Group

The budget of the Working Group is covered by contributions received by the Dutch Ministries of Foreign Affairs and Economic Affairs, Secure World Foundation, and Deep Space Industries.

6. UNCOPUOS Legal Subcommittee 55th Session

A statement on the Working Group was delivered by the Dutch representative at the 55th session of the UNCOPUOS Legal Subcommittee, held in Vienna from 4-15 April 2016. The statement served as a factsheet, providing an overview of the origins of the Working Group, the objectives of the project, the structure and operation of the Working Group, as well as the contact details of the Secretariat. It was made available to all delegates as a Conference Room Paper.³

7. Future Events

The next face-to-face meeting will be held from 7-8 November 2016, again in Leiden. As planned, there will be two more face-to-face meetings in 2017. The conclusions of the WG are expected by the end of 2017.

³ A/AC.105/C.2/2016/CRP.17.

