Space Resources: International Legal Frameworks

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Policy Building Blocks for Space Resources Development

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Terrestrial Mining Sciences Symposium Golden, CO June 12, 2018



Secure World Foundation

Secure World Foundation is a *private operating foundation* that promotes cooperative solutions for space sustainability

- Why space sustainability? Increasing reliance on space assets coupled with potentially destabilizing trends
- Our mission: To work with governments, industry, international organizations, and civil society to develop and promote ideas and actions to achieve the secure, sustainable, and peaceful uses of outer space benefiting Earth and all its peoples

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Space Resources – Policy/Legal Discussions Current Status

Promoting Cooperative Solutions for Space Sustainability

- Overarching legal context: the Outer Space Treaty (1967) but a gap in the law relative to space resources
 - What is the meaning of "appropriation?" Of "use?"
 - How are benefits realized and shared?
 - What does "due regard for the interests of all states" mean?
- Emerging consensus that space resources utilization is not prohibited
- Domestic laws in place in US and Luxembourg.
 - Other countries (Japan, UAE?)
 - Are these laws sufficient and complete?
- What balance between domestic law and international law?
- UN Committee on Peaceful Uses of Outer Space (COPUOS) Legal Subcommittee likely to consider establishing a formal working group on the topic during it's 2019 session.

SECURE WORLD FOUNDATION Promoting Cooperative Solutions for Space Sustainability

International Law

Outer Space Treaty of 1967

(105 State Parties)

- ARTICLE I: "Outer space, including the Moon and other celestial bodies, shall be free for <u>exploration and use</u> by all States..."
- ARTICLE II: "Outer space, including the Moon and other celestial bodies, is <u>not subject to national appropriation</u> by claim of sovereignty, by means of use or occupation, or by any other means."
- ARTICLE VI: "The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall <u>require</u> <u>authorization and continuing supervision</u> by the appropriate State Party to the Treaty."

International law provides a framework under which all space activities are conducted but does not address space resources with any specificity



Policy Discussions – National Level

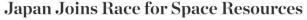
Promoting Cooperative Solutions for Space Sustainability



Space Policy Directive-2, Streamlining Regulations on **Commercial Use of Space**

PRESIDENTIAL MEMORANDA





Resources extracted from the moon could be used as fuel, allowing space missions to cut launch costs



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Luxembourg and the United Arab Emirates to Cooperate on Space Activities with Particular Focus on the Exploration and Utilization of **Space Resources**



Luxembourg adopts space resources law

by Jeff Foust — July 17, 2017

The need for regulation – to provide industry certainty and implement international obligations. The role of policy – to provide a context for development.



Law and Policy – Coordination?



- The Hague International Space Resources Governance Working Group aims to build consensus on regulatory "concepts needed to enable, support and co-ordinate the use of space resources and be acceptable for space-faring nations and other interested states"
- Industry, government, and civil society participation from across the globe
- Based on the principle of adaptive governance

Coordination of principles at national and international level will help States establish the conditions under which socio-economic benefit might result from space resources development

Terms of Reference - Objectives

- Assess the <u>need for a framework for space resource activities</u>
- In case of need, to <u>lay the groundwork</u> for the definition of such a framework based on the UN Space Treaties
- The groundwork required will include the <u>identification and</u> <u>formulation of building blocks</u> for the governance of space resources with possible implementation of a relevant forum for the negotiations
- Following its conclusions the Working Group would like to encourage States to start negotiating a framework



Platform

The WG is hosted by a Consortium of organizations located in all continents:





NISHIMURA & ASAHI

International Institute of Air and Space Law (Leiden University, The Netherlands)

Secure World Foundation (USA)

Nishimura Institute for Advanced Legal Studies (Japan)



University of Luxembourg (Luxembourg)



University of Cape Town (South Africa)



Catholic University of Santos (Brazil)



Centre for Resources, Energy and Environmental Law (University of Melbourne, Australia)



Indonesian Centre for Air and Space Law (Padjajaran University, Indonesia)

Ten to the Ninth Plus Foundation (USA)



Members

• Important stakeholders from government, industry, academia, research centres, space agencies, international organisations, and civil society.

Observers

Professionals & academics directly involved in space resources issues

Technical Panel

 Purpose: identify technical challenges related to the use of space resources; advise the WG about current developments; assess the feasibility of the implementation of the building blocks

SocioEconomic Panel

 In the process of being established; to be similar in function to the technical panel

Draft Building Blocks for the Development of an International Framework on Space Resource Activities

As released in September 2017

- 1. Objective
- 2. Definition of key terms
- 3. Scope
- 4. Principles
- 5. International responsibility for space resource activities and jurisdiction over space products
- 6. Access to space resources





Draft Building Blocks (cont'd)

- 7. Utilization of space resources
- 8. Due regard for interests of all countries and humankind
- 9. Avoidance of harmful impacts resulting from space resource activities
- 10.Technical standards for prior review of, and safety zones around space resource activities
- 11. Monitoring and redressing harmful impacts resulting from space resource activities
- 12. Sharing of benefits arising out of the utilization of space resources



Draft Building Blocks (cont'd)

- 13. Registration and sharing of information
- 14. Provision of assistance in case of distress
- 15. Liability in case of damage resulting from space resource activities
- 16. Visits relating to space resource activities
- 17.Institutional arrangements
- 18. Settlement of disputes
- 19. Monitoring and review



Invitation to submit comments on the Draft Building Blocks

The preliminary result of the work of The Hague Space Resources Governance

Working Group can be found at:

https://www.universiteitleiden.nl/en/law/institute-of-public-law/institute-for-airspace-law/the-hague-space-resources-governance-working-group

The Working Group invites any interested organisation or individual to submit comments and remarks on the text of the Building Blocks by <u>15 October 2018</u> to <u>spaceresources@law.leidenuniv.nl</u> or via this <u>questionnaire</u>.

