

The Hague International Space Resources Working Group and the Space Resources Debate

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UN/Turkey/APSCO Conference on Space Law and Policy



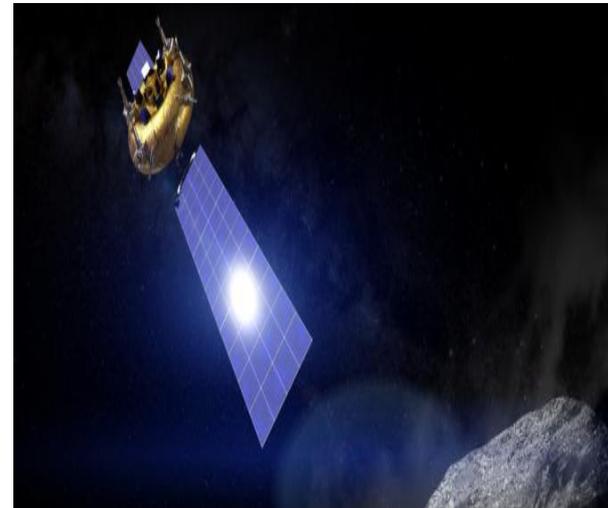
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'Space mining' – a new industry?

- From exploration and use to exploitation: requires generating revenues to be sustainable
- Several private commercial initiatives have started:
 - Ispace, JAPAN
 - PT Scientists, DE – *the company formerly known as PT Scientists was renamed Planetary Transportation Systems as part of the acquisition by Zeitfracht Group (18 Sep 2019, <https://pts.space/berliner-zeitfracht-group-invests-in-german-lunar-mission/>)*
 - Moon Express, USA
 - Asteroid Mining Corp., UK
 - Stellar Space Industries, NL

 - Planetary Resources RIP
 - Deep Space Industries RIP



Relevant legal framework - OST

- Article I
 - Freedom of exploration and use
 - Exploration for the benefit and in the interest of all and as province of mankind
- Article II
 - No national appropriation in outer space: sovereignty, occupation, other ways
- Article VI
 - International responsibility for national activities → national laws on SRU
- Article IX
 - No harmful contamination/adverse changes to space environment



Relevant legal framework - MA

- Article 1
 - Application of MA to the Moon and other celestial bodies
- Article 4
 - Exploration and use as province of mankind
- Article 6
 - Right to collect/remove samples during scientific investigation and for scientific purposes
- Article 7
 - Prevent disruption of existing environmental balance
- Article 11
 - Moon and natural resources are the common heritage of mankind
 - Moon is not subject to national appropriation
 - Surface, subsurface and any part thereof cannot become property
 - Right to explore and use the Moon



Establishment of an international regime,
when exploitation is about to become feasible

Purposes:

1. Orderly and safe development
2. Rational management
3. Expansion of opportunities
4. Equitable sharing in the benefits

Efforts to provide more clarity: national

- **USA** (2015):
 - U.S. Commercial Space Launch Competitiveness Act, Title IV
 - US citizens shall be entitled to any asteroid resource or space resource obtained, including to possess, own, transport, use and sell it, in accordance with applicable law, including the international obligations of the USA
 - The US does not assert sovereignty or sovereign or exclusive rights or jurisdiction over, or the ownership of, any celestial body
 - First license to Moon Express
- **Luxembourg** (2017):
 - Law on the Exploration and Use of Space Resources
 - Spaceresources.lu; bilateral agreements with companies and countries
 - Space resources are capable of being appropriated in accordance with international law
 - Space mining is no different than earthly mining or fishing in the high seas: one may own the mined resources or the fish, but not the ground or sea that contains them
 - Law is limited to authorization /supervision of exploration and use of space resources
 - General regime for launches, registration etc. is forthcoming
- **Risk if more countries do this:** a patchwork of laws that are not harmonized

Efforts to provide more clarity: international

- **Intergovernmental:**

- COPUOS Legal Subcommittee has an agenda item since 2017: 'General exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources'
- A working group was proposed by BE/GR in 2019 - to be decided
- May take a long time, and requires consensus - even aligned states do not all agree with each other, e.g. intra-Europe

- **Non-governmental**

- IISL Position Paper, 2015
- The Hague International Space Resources Governance Working Group, 2015-2019, Draft Building Blocks



Objectives of the Hague Working Group

- Assess the **need** for a framework for space resource activities
- In case of need, to lay the **groundwork** for the definition of such a framework based on the UN Space Treaties
- Identification and formulation of **Building Blocks** for the governance of space resources
 - Published as preliminary results in September 2017
 - Open for consultation until 15 October 2018
- **Recommendations** on the implementation **strategy and forum** for negotiations
- **Encourage States** to start negotiating a framework

- Work phase: 2016-2019 (two 2-year phases)



Participants

- **Consortium**

- Research centres on each continent

- **Members**

- Important stakeholders from government, industry, academia, research centers, space agencies, international organizations, and civil society
- Limited to **35** (currently 32 from Brazil, Indonesia, South Africa, The Netherlands, Japan, Italy, UK, USA, India, France, Mexico, China, Luxembourg, Ireland, Germany, Nigeria, UAE, Czech Republic)

- **Observers**

- Professionals & academics directly involved in space resources issues
- Not limited (currently **70+**, additional countries: Germany, Canada, Russia, Austria, Belgium, Serbia, Poland, Portugal, Latvia, Pakistan, Bulgaria, Greece, Malaysia, Ukraine)

- **Technical and Socio-Economic Panels**

- Experts in these fields
- To identify technical / socio-economic challenges and advise the WG



Draft 'building blocks'

- Published as preliminary results in September 2017
- Open consultation for 1 year, now being finalized
- A **Commentary** will be published, with, for each Building Block:
 - Text of the BB
 - Explanation of the BB
 - Legal basis of the BB
 - Alternatives discussed
- See for all information about the WG and BB:
 - <https://www.universiteitleiden.nl/en/law/institute-of-public-law/institute-for-air-space-law/the-hague-space-resources-governance-working-group>



Topics addressed by the 20 Building Blocks

Introductory provisions

- e.g. objective, scope, definitions, principles (adaptive governance)

Responsibility, access, utilization

- e.g. priority rights

Enabling environment

- e.g. environmental aspects, non-interference, safety zones

Benefit sharing

- TBD, but other than monetary

Registration

- UN, ITU, authorization practices, end of operations

Assistance, liability, visits

- In accordance with treaty requirements

Final provisions

- e.g. institutional arrangements, disputes, review, monitoring

Topics addressed by the Panels

- **Technical** panel:
 - Frequency allocation for deep space missions
 - Technical standards for the establishment of safety zones
 - Technical remarks on the content of the Building Blocks
- **Socio-Economic** Panel:
 - Social License to Operate (SLO)
 - Cooperation Models / Cooperation between Like-Minded Countries
 - Principles for Responsible Investment (PRI)
 - Capacity Building for Space Resources
 - Data Sharing and Lessons Learned

Outreach

- **Public events** to explain the status of activities and findings:
 - Symposium on Legal Aspects of Space Resource Utilisation, Leiden, April 2016
 - Progress reports, IAC 2016, 2017, 2018, 2019 (published in Proceedings)
 - IISL/ECSL Symposium, March 2017, presentation “The Hague Space Resources Governance Working Group”
 - 10th IAA Symposium on the Future of Space Exploration, June 2017
 - Press conference - NewSpace Europe, November 2017
 - IAC 2018 side event, October 2018
- **UNCOPUOS**
 - Statement at the 55th Session of UNCOPUOS LSC in April 2016 (A/AC.105/C.2/2016/CRP.17) and the 57th session in April 2018 (A/AC.105/C.2/2018/CRP.18)
 - Legal Subcommittee 2018, Side event and presentation of the Draft Building Blocks
- Bi-annual **newsletter**
- The **final results** will be presented to COPUOS, states parties of MA & other bodies and organizations, TBD

Contribution of the working group?

- Informal open platform for debate
- No formal mandate -- sometimes misunderstood?
- Over time, general sense of appreciation for the work, mentioned by many delegations during COPUOS

- Hopefully the building blocks and commentary will serve as a useful basis for further discussions by the international community of states

Thank you



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