

# The Hague Building Blocks

Prof. Dr. Mahulena Hofmann  
SES Chair in Space, SatCom and Media Law  
University of Luxembourg



## Structure

- I. Space resources in international law: open issues
- II. Space resources in national law: open issues
- III. Space resources and the recommendations of The Hague Group
- IV. Conclusion



## I. International Law: Open Issues

Space resources under the perspective of:

Article I OST: Freedom of use and exploration

Article II OST: Prohibition of appropriation of celestial bodies: interpretation?

Article VI OST: Responsibility: Authorization and supervision

Article 6 MA: Samples and minerals for the support of space missions?

Article 11 MA: Neither surface, nor natural resources in place may be appropriated; international regime?



## II. National Law: II.1 USA

**US Legislation** – evolving dynamically, originally scattered

1958 National Aeronautics and Space Act (amended 2010) – NASA – National Aeronautic and Space Administration

1984 Commercial Space Launch Act: licensing, Federal Aviation Administration (FAA) – US Department of Transportation, insurance!

1992 Land Remote Sensing Policy Act: Landsat, licensing (amended 2010)

2010 Bill H.R.3237 **Title 51**: National and Commercial Space Programs replaced the original acts

2015 Bill H.R. 2262 Space Act of 2015 amended the Title 51 of 2010


Title I: Commercial Space Launch: authorization, liability capped by 500.000 USD;

Indemnification of victims up to 1.500.000 USD

Title II: **Space Resources Exploration and Utilization ( § 51303)**, appropriation allowed for US citizens (51%)

Title III: Commercial Remote Sensing

Title IV: Office of Space Commerce



## II.2 Luxembourg: 2017 Law on Space Resources Activities

2016: Announcement of the Spaceresources.lu program

- How to authorize and supervise the missions?
- Law on the Exploration and Use of Space Resources entered into force on 2 August 2017
- Scope: missions of exploration and use of resources for commercial purposes
- [Art. 1: Resources are capable of being appropriated](#)
- Obligatory authorization
- Registered office in Luxembourg
- Risks covered by personal financial means or insurance policy
- Full responsibility of the operators for any damage

Enforcement:

- Supervision of the mission by the Minister (Art. 15)
- Non fulfillment of the conditions of authorization: withdrawal of the authorization by the Minister (Art. 14)
- Violation of authorization: fine or imprisonment up to five years (Art. 18)
- Violation of the Law: a discontinuation of the operation can be ordered by the court (Art. 18).



## II.3 United Arab Emirates

### **2019 Federal Law on the Space Sector**

Space resources: Any non-living resource existing in Outer Space, including minerals and water

Space resources activities covered by the Law

Authorization from the Space Agency necessary

[Article 18: Conditions for authorization, ownership and transfer to be determined by the Cabinet](#)



## II.4 Japan

### **2021 Space Resources Mining Act**

- Enlarges the 2016 Space Activities Act
- Explicitly permits space mining
- Space resources: water, minerals and other natural resources (bio?)
- Necessity of a governmental permission on the basis of an activity plan
- Activity plan must not breach the space treaties, national security,
- Operator has to have the technical and material capacity
- Resources belong to the person having an intention to own them
- Transfer of ownership govern by the Civil Code.

### III. The Hague Building Blocks

The Hague WG: non-governmental international interdisciplinary group, met in 2016-20

Building Blocks: Text 2019

<https://www.universiteitleiden.nl/binaries/content/assets/rechtsgeleerdheid/instituut-voor-publiekrecht/lucht--en-ruimterecht/space-resources/bb-thissrwg--cover.pdf>

A Commentary (O. Bittencourt et al, Eleven, 2020)

Outcome: [Recommendations](#), delivered to the UNOOSA:

1. Aim: to create enabling environment, international framework (IF)
2. IF should enable the attribution of [priority rights](#) to operators – see ITU regime
3. [“Resource rights” over materials and product recognized](#)
4. States guarantee that environmental measures are taken (???)
5. Right to establish [safety zones](#), consultations in case of conflicts
6. No compulsory benefit-sharing, but cooperative measures (international fund)
7. National and international register of activities and priority rights
8. Applicability of ARRA.



## IV. Conclusion

- Potential legal (binding, non-binding?) models discussed in the UN COPUOS
- From the prohibition of space mining to a more flexible approach
- 2020 Artemis Accords are based on the right to appropriate space resources
- Article II OST is prohibiting the appropriation of celestial bodies, not the resources
- MA is binding only 18 States, for others it is not a binding law
- [The Hague Building Blocks: a realistic approach taking into account the interests of operators.](#)