Current International Legal Framework Applicability to Space Resource Activities

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The prospect for commercial utilization of outer space resources has generated interest and controversy.
Is the commercial utilization of outer space resources legal under international space law?
Easy question

Complex answer
International space law does not give a clear and universally accepted answer to this question.
The international legal framework applicable to space resources utilization remains somewhat uncertain.

- **Interpretation**
- **State Practice**
Recovery and utilization of space resources

Scientific purposes

Commercial reasons (profit)
International legal framework applicable to space resources utilization
International space law

1967 Outer Space Treaty
Widely ratified (including all space-faring countries)

1979 Moon Agreement
Poorly ratified (main space-faring countries not parties to it)
The Outer Space Treaty
Art. I, 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 interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.

Outer space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies.”
Art. II, Outer Space Treaty

“Outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.”
“States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty”. 
The Outer Space Treaty

Moon/Celestial bodies vs. Resources

Celestial bodies

- Clear legal status
  - Non-appropriable
  - Open for exploration and use
  - Outer space as an international area (global common)
  - Freedom of scientific investigation

Resources

- Uncertain legal status
  - No specific reference
  - Scope of Art. II remains uncertain
  - Does the prohibition to appropriate extend to outer space resources?
Interpreting the Outer Space Treaty

1\textsuperscript{st} School

Art. II’s prohibition extends to outer space resources

Not possible to separate resources from the body that contains them

Private commercial use of resources inconsistent with Art. I

2\textsuperscript{nd} School

Art. II’s prohibition does not cover celestial bodies’ resources

Right to use resources is enshrined in Art. I

Commercial utilization of resources is not inconsistent with the spirit of the Treaty
Legality of space resources utilization

Arguments in favor of space resources utilization

- **Analogy with the high seas regime**
  Fishing in the high seas is allowed

- **Drafting history**
  No indication that the drafters wanted to exclude commercial forms of use

- **Use of outer space resources**
  Space resources, i.e. the geostationary orbit, are being used

- **State practice**
  Certain countries have officially recognized the legality of space mining and adopted related domestic legislation
Legality of space resources utilization

Important remarks

High seas and geostationary orbit regimes

- International recognition
- International agreement
- Rules
- Rights of States

No such recognition/agreement exists with respect to the commercial utilization of space resources
The status of space resources remains substantially unclear.

Arguments in favor of the legality of commercial utilization of space resources can be made; however, uncertainty remains.

Can a State authorize private entities to undertake space mining activities and recognize rights over the extracted resources by means of national legislation?
The Moon Agreement
Background of the Moon Agreement

- It was intended to clarify the legal status of celestial bodies resources and set out rules governing their utilization.

- It regulates two forms of resources utilization: 1) scientific; 2) non-scientific (commercial/exploitation).

- It introduces the concept of the Common Heritage of Mankind.

- It has been ratified by only a limited number of countries, not including the main space-faring ones.
The Moon Agreement elaborates the concept of freedom of scientific investigation through its provisions concerning the three phases in which such scientific activities may take place:

1. Landing
2. Establishing of stations
3. Extraction of resources
<table>
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<tr>
<th>The exploration, use, and exploration for scientific purposes 2</th>
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<tbody>
<tr>
<td><strong>Landing (Article 8)</strong></td>
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<td>States parties may</td>
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<td>- land their space objects on the Moon</td>
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<td>- place their personnel, vehicles, equipment, facilities on or below the surface of the Moon</td>
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<td><strong>Establishing stations (Article 9)</strong></td>
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<td>States parties may</td>
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<td>- establish manned and unmanned stations on the Moon</td>
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<td>- use only that area which requested for the needs of the stations</td>
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<td>- not impede the free access to all Moon areas</td>
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<td><strong>Extraction of resources (Article 6)</strong></td>
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<td>In carrying out scientific investigation States Parties may</td>
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<tr>
<td>- collect or remove Moon samples or minerals</td>
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<td>- use those minerals in quantities appropriate for the support of the mission</td>
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<td>- make portions of such samples available to others</td>
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Exploitation (non-scientific use) of resources

Article 11 of the Agreement regulates the exploitation of celestial bodies’ resources

The Moon (and other CB) and its resources are the Common Heritage of Mankind

The exploitation of resources shall be governed by an international regime

The rules of such regime are not set out under the Agreement
| Article 11, par.5 | States Parties to this Agreement hereby **undertake to establish** an international regime, including appropriate procedures, to govern the exploitation of the natural resources of the Moon *as such exploitation is about to become feasible*. |
| Article 11, par.7 | The main purpose of the international regime to be established shall include: a) the orderly and safe development of the natural resources of the Moon; b) the rational management of those resources; c) the expansion of opportunities in the use of those resources; d) **an equitable sharing by all States Parties in the benefits derived from those resources**, whereby the interests and needs of the developing countries, as well as the efforts of those countries which have contributed either directly or indirectly to the exploration of the Moon, shall be given special consideration. |
Moon Agreement - Summary

- It lays down rather detailed rules governing the recovery and utilization of celestial bodies’ resources for scientific purposes.

- Celestial bodies and their resources as the CHM.

- The exploitation of resources is to be governed by an international regime (to be established at a later stage).

- Parties to the Agreement are entitled to determine when the regime should be established and the content of its rules.
Concluding remarks
International legal framework applicable to space resource activities

- Primary attention has to be paid to the provisions of the Outer Space Treaty
- The Moon Agreement may still give a valid contribution in relation to space resources utilization
The commercial utilization of space resources is not expressly prohibited under the Outer Space Treaty (also not expressly authorized)

Any form of space resources utilization shall be consistent with the fundamental principles of international space law.
The international recognition of the legality of commercial space resources utilization (and, possibly, the setting up of basic principles related to it) could:

a) Contribute to a clear and predictable legal framework applicable to space resources utilization.

B) Provide support to the legality of domestic space resources utilization laws vis-à-vis international space law.
Thank you very much for your attention