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SMALL SATELLITES AND THE CHALLENGES OF INTERNATIONAL LAW: DIALOGUES BETWEEN PUBLIC AND PRIVATE

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A photograph showing three small satellites in orbit above a vast, textured landscape of Earth, likely a desert or tundra, under a clear blue sky. The satellites are dark, rectangular objects with some solar panels or antennas visible.

**WHAT ARE THE
CHALLENGES OF
INTERNATIONAL
SPACE LAW ON SMALL
SATELLITE INDUSTRY
UNDER PUBLIC AND
PRIVATE MATTERS?**

Presentation

- **International Outer Space regulation**
- **National Laws**
- **Private International Law of Outer Space**
- **Conclusions**

INTERNATIONAL REGULATION

A photograph of Earth from space, showing a vast expanse of blue oceans and green landmasses. Three small, dark, rectangular satellites are visible in the upper right quadrant, appearing to be in orbit. The background is a deep blue gradient, suggesting the edge of space.

- **What is the importance of international space law?**
- **What sort of international regulation do we have?**
- **What change with small satellites ?**

What is the importance of international space law?

- Enhance international cooperation among states;
- Outer space the Moon and other celestial bodies shall be used exclusively for peaceful purposes;
- Create a international obligations system for States on development of space activities
- Establishes the body of law governing space-related activities rule on a joint global governance.
- Outer space is a international public good and outer space shall be free for exploration and use by all States.



What sort of international regulations do we have?

- Multilateral treaties in global and regional level
- Bilateral agreements between states

• HARD LAW

- Outer Space Treaty (1967).
- Rescue Agreement (1968).
- Liability Convention (1972).
- Registration Convention (1975).
- The Moon Agreement (1979).

SOFT LAW

- Declarations
- Recommendations
- Principles
- Model Law
- Practical Guidelines.

What change with small satellites ?

- The miniaturization of satellites reshapes the state of the art in the aerospace industry.
- It makes it possible to increase developing countries' participation and companies in the space technology market, with very high investments.
- Access to outer space.
- Despite this, States are the main actors/investors and dominate the exploration of space activities through their government agencies.



Article VI of the Outer Space Treaty provides that the activities of non-governmental entities in outer space must be subject to authorization and continuous supervision by the appropriate State Party to the treaty.

NATIONAL LAW

Three small, rectangular satellites are shown in orbit above Earth's surface. They are arranged in a diagonal line from the bottom-left towards the top-right of the frame. The Earth's surface is visible below, showing a mix of green and brown terrain with some white clouds. The top of the image shows the blue curve of the atmosphere and the blackness of space.

- National laws on small satellites

National Laws



- The United Nations system has encouraged States to enact national laws to establish rule on authorization and continuing supervision on outer space of private entities under their jurisdiction.
- The main purpose is to facilitate and stimulate commercial outer space activities, investments, and establishes liabilities, civil or criminal.
- Most States that regulate commercial space activities require a license for each individual launch (Dempsey).
- There are different approaches on regulatory mechanism.
- For instance, in Korea, one who launches without a license may be sentenced to up to five years imprisonment, and face fines up to 50 million won (Dempsey).
- The United States Bill - sets forth requirements for the approval of applications or transfer of a certification. Applications must include a space debris mitigation plan.

Brazil

- Brazil has ratified 4 international Outer Space treaties, unless the Moon Agreement.
 - According to the Brazilian questionnaire answers,
 - Several public Universities and INPE are **carrying out small-satellite activities**.
 - Brazil is involved on the developing of small and Nanosatellites. Brazil has developed and operated several small satellites: SCD-1, SCD-2, SCD-2A*, SACI*, AESP-14, NanoSatC-BR1, SERPENS-1.
- However, although there is no specific rule on small satellite, the current regulations are enough to address small satellite operations.
 - “Civilian satellites” have to be registered.



What change with small satellites ?

- Access to development countries
- Increasing of space industry;
- Increasing of business in outer space activities
- Access to outer space technology
- Increasing of space debris
 - Need for removal obligation
- Absence of orbit regulation
- Safety
- Liability and responsibility special Iregulation

PRIVATE INTERNATIONAL LAW IN SPACE MATTERS



Private International Law

- The role of private international law (PIL)
- Regulation offers security in international private relations and
- Greater trust and predictability in cross-border transactions.
- **Particularism of PIL**
- The Coexistence of plurality of laws
 - National laws
 - International treaties
 - Hard law/soft law



Cross-border litigation on space matters

- Scope of private international law:
- **Applicable law** – what law apply?
 - Choice of law
- **Jurisdiction** – what court should be competent to adjudicate a case? –
 - Choice of court
- **Recognition and enforcement of foreign judgment** (judicial and arbitral decisions).



Relativism of Private International Law

- **Public policy/ ordre public** of the forum
 - For instance, depending on national law, an application for license in space activities must be denied on the basis of public policy protection if there is no space debris mitigation plan.
- **Immunity**
 - State may invoke jurisdiction immunity from execution/enforcement
 - Clear rules on *ius imperii and ius gestionis*.



UNIDROIT AND SPACE MATTERS



- There are no treaties regulating commercial or private space activities.
- **Convention on International Interests in Mobile Equipment On Matters Specific To Space Assets (2001)** - provides for the constitution and effects of an international interest in certain categories of mobile equipment and associated rights. **77 states parties**
- However, there is no support for **the Space Protocol (2012)** - only 4 signatures.
 - Preservation of rights and interests in a space asset in accordance with Article III.
- The Space Protocol is under the principles of space law, including those contained in the international space treaties of the United Nations and the instruments of the International Telecommunication Union.
- The Space Protocol sets forth rules on occurrence of an insolvency-related event pursuant Articles XXI and XXII.

UNOOSA

Resolution adopted by the UN General Assembly on 11 December 2013
68/74. Recommendations on national legislation relevant to the peaceful
exploration and use of outer space

- Recommends elements for consideration, as appropriate, by States when enacting regulatory frameworks for national space activities, in accordance with their national law.
- **the scope of application** (definition of space activities targeted by national regulatory frameworks). For instance it may include the design and manufacture of spacecraft (Marboe);



UNOOSA

- **the definition of national jurisdiction over space activities** (territorial, quasi-territorial and personal jurisdiction over space activities);
- **the authorization procedure** by a competent national authority
- **conditions for authorization** consistent with the international **obligations** of States, in particular under the United Nations space treaties;



- **appropriate procedures for supervision and monitoring** of space activities;
- A **national register** of objects launched into outer space by an appropriate national authority;
- possible recourse mechanisms (**liability for damage** engaged) and **insurance** requirements; and
- **transfer of ownership** or control of a space object in orbit.

CONCLUSIONS

- **Space industry demand a dialogue of legal sources, between public and private law, national and international law.**
- **The miniaturization of satellites reshapes the state of the art in the aerospace industry.**
- **National laws regulate authorizing/licencing/certificate private companies to develop space activities. States are responsible and liable for those activities pursuant Articles VI and VII of the Outer Space Treaty and the Liability Convention. They have an obligation of register the space object launched in accordance with Article II of the Registration Convention.**
- **However, there are different types on national regulations and it may lead to “national laws competitions”.**

CONCLUSIONS - CHALLENGES

- **States should cooperate to harmonize or uniform space laws in a minimal level addressing safety, authorization (space license), liability insurance, transfer of ownership, space debris.**
 - Global harmonization void *forum shopping* and unfair trade space activities with lower standards on national laws.
- On private approach, commercial space activities guidelines should be developed to address compliance of private companies.
- **International community should enhance capacity building on outer space regulation in a sustainable ways, with equilibrium for future generation**
- In relation to private international law on space activities, assets, intergovernmental organizations should develop joint cooperation in order to achieve better solution on commercialization and privatization issues.

THANK YOU!

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