

The space governance of small satellites and the sustainability of outer space activities

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Outline of the presentation:

- ▶ Overview of the new age of Small Satellites
- ▶ International Regulations governing small satellites
- ▶ Global Space Governance for small satellites
- ▶ The Way Forward: Suggestions for the achievement of sustainable use of outer space activities in the benefit of the present and future generations.

Overview of the new age of Small Satellites

- ▶ **For developing countries** small satellites had often served as precious opportunity for States and their non-governmental organizations, including universities, research institutes and also industry, with modest research budget to join the outer space benefits for social and national technology development.
- ▶ **For developed countries**, the satellite industry is a dynamic sector: launch and operation affordable; satellites operate in various areas: telecommunications, disaster mitigation, remote sensing and also testing and demonstrating new technologies, regularly replenishing commercial satellite constellations and also the possibility of commercial lunar missions or other non-Earth-orbiting missions in the future, utilizing CubeSats or other small satellite designs.
- ▶ However **there is no international definition of small satellites**: small, microsattellites, nanosatellites, picosatellites, femtosatellites, lean satellites etc.
- ▶ **Small satellites are “space objects”** and thus covered under the existing international space treaties and would be regulated adequately regarding their specificities

International Regulations governing small satellites

- ▶ **Space Law regulations**
- ▶ States are internationally responsible for their national (public and private) space activities. States obligation for **authorization and continuing supervision** of the space activities of non-governmental entities (1967 Outer Space treaty and 1977 Liability Convention).
- ▶ Launching States were required to **register** the satellite with the United Nations: G.A. Res 1721 B (XVI) 1961; Convention on Registration of Objects Launched into Outer Space, 1974; Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects, G.A. Res. 62/101, 2007.
- ▶ Space **Debris Mitigation** Guidelines (COPUOS, IADC Statement on Large Constellations of Satellites in Low Earth Orbit, ESA).



- ▶ **ITU regulations for member States**
- ▶ Radio Regulations require that no transmitting station may be established or operated by a private person or by any enterprise without a license by or on behalf of the government of the country to which the station in question is subject (ITU RR n.18.1, 2016).
- ▶ Require operators **prevent harmful interference** to the radio services.
- ▶ Require them to **obtain licenses** from the designated governmental agency.



Global space governance framework for small satellites

National space regulations are the vectors of the international space treaties, U.N. resolutions and policies to provide stability and predictability to private enterprise in outer space

Unauthorized launches and operations in space constitute threat to space governance system

UN General Assembly

UNCOPUOS - Agenda item 14
“General exchange of views on the application of international law to small satellite activities” (started in 2016 LSC)

Long-term Sustainability of outer space activities - Working Group (started in 2010 STSC)

ITU

Space Debris Mitigation Guidelines COPUOS/Inter-Agency Space Debris Coordination Committee ESA/ITU/European code of conduct

Authorization, supervision, and registration can ensure good governance of small satellites activities

The Way Forward

Suggestions for the achievement of sustainable use of outer space activities in the benefit of the present and future generations

- ▶ States must enact appropriate **national regulatory mechanisms** governing space activities, with attention to a tailored and reasonable normative regarding small satellites activities, supportive for operators.
- ▶ National governments could **work more close coordinated with all their national agencies** involved in space license, registrations and supervision, including those responsible for frequencies license.
- ▶ **Expanded and strengthened the COPUOS and UNOOSA** basic structures and also **better utilize the Regional Centres for Space Science and Technology Education (affiliated to the United Nations)**, in order to enhance awareness among all space actors regarding international and national regulatory requirements, liability risks and insurance coverage.
- ▶ *“Nenhum novo poder ao homem sem um imediato controle jurídico. Cabe ao Direito proteger o homem contra os desmandos do próprio homem. A cada novo progresso social, econômico ou técnico, outra cobertura jurídica à pessoa humana. No limiar duma nova era, o alvorecer dum novo direito.”*

Haroldo Valadão, 1957

**Muito obrigada!
Thank you very much!**

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