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Global Governance of Outer Space Activities

New Space Economy

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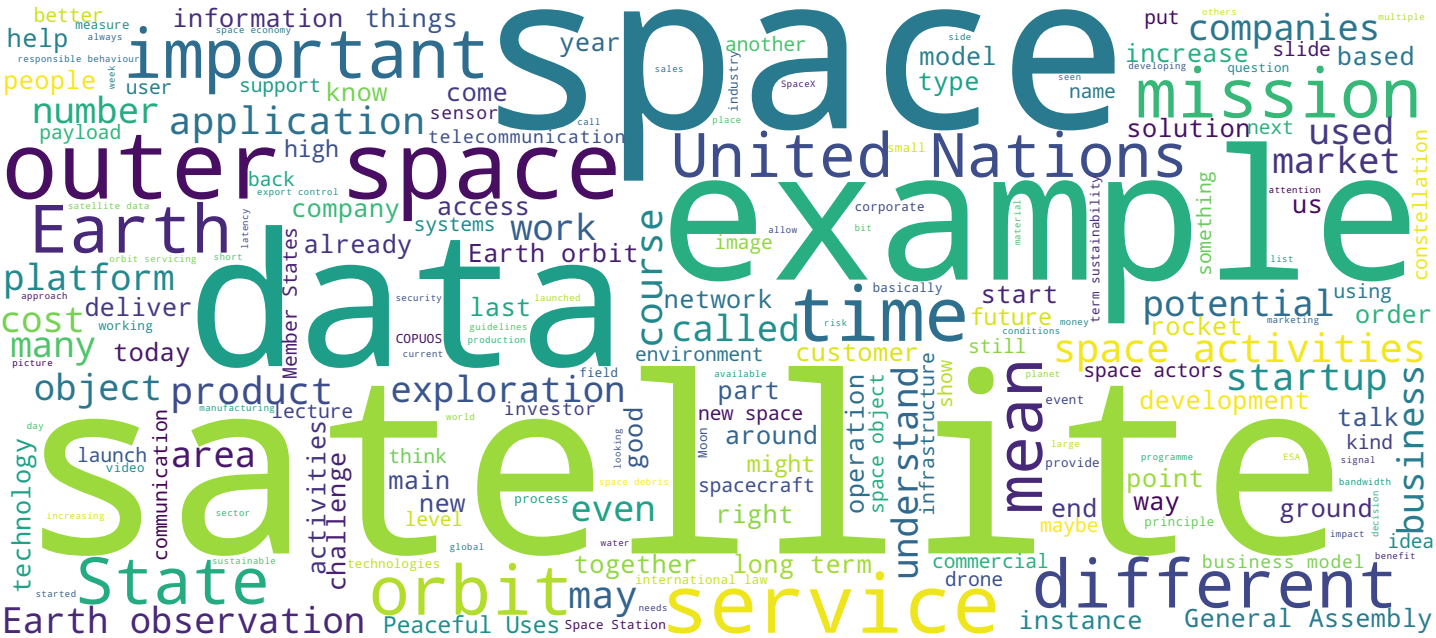

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Video

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Welcome

- The United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)
- United Nations Treaties and Guidelines
- Space Sustainability and Security

Hello, everyone. My name is Natália Archinard. I work at the Swiss Federal Department of Foreign Affairs in the area of space diplomacy. In this lesson, I would like to give you an overview of how the governance of space activities is organised at global level. I will introduce to you the United Nations Committee on the Peaceful Uses of Outer Space, the United Nations treaties and guidelines, as well as further work of the United Nations to promote space sustainability, safety, and security.

Notes

Summary

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United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)

- Establishment: 1958 as ad hoc, 1961 as a permanent Committee reporting to the United Nations General Assembly;
- Mission: promote international cooperation, discuss scientific aspects and study legal problems related to the exploration and use of outer space;
- Membership: 18 Member States in 1958, 28 in 1961, 71 in 2011 and 100 in 2021;
- All decisions taken **by consensus**.

(see www.unoosa.org for more details)

Let me start with a bit of history. Not long after the launch of Sputnik by the Soviet Union in 1957, the United Nations General Assembly started to discuss space matters. In 1958, the Committee on the Peaceful Uses of Outer Space, COPUOS, was established first as an ad hoc committee and then as a permanent committee reporting to the General Assembly. Its mission was to promote international cooperation in the peaceful uses of outer space, to discuss scientific aspects, and to study legal problems related to the exploration and the use of outer space. COPUOS started with 18 Member States in 1958, and now it has reached 100. Actually, the increase of membership in the last 10 years represents two-third of the increase during the 50 previous years. This is the reflection of the increased interest of States for space activities. At COPUOS, every decision is taken by consensus, which is important because it means that all Member States agree with the decision. But it sometimes also makes it difficult to even reach a decision. That's why rulemaking in space is not an easy task.

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First legal principles governing the activities of States

They were adopted in 1963 by the UN General Assembly and include:

- Benefits for all humankind
- Freedom of exploration and use by all States
- No national appropriation
- Accordance with international law
- Due regard
- Avoid harmful interference

https://www.unoosa.org/pdf/gares/ARES_18_1962E.pdf

Only six years after Sputnik, the General Assembly adopted the first legal principles governing the activities of States in the exploration and use of outer space. For instance, these principles say that the exploration and use of outer space shall be carried on for the benefit and interest of all humankind. Outer space and celestial bodies should be free for exploration and use by all States and they are not subject to national appropriation. Space activities shall be carried out in accordance with international law, with due regard for the activities of others and by avoiding any harmful interference.

Notes

Summary

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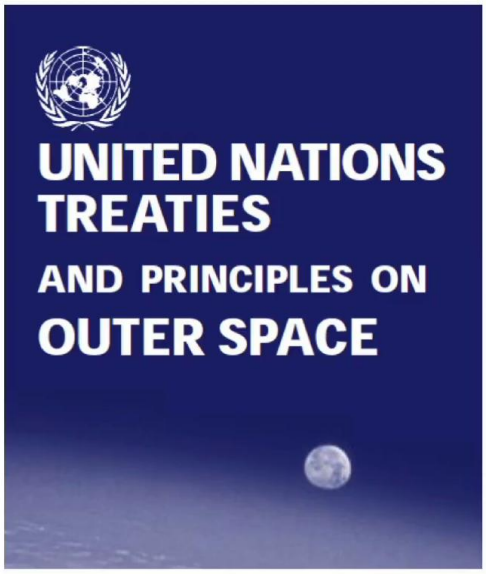
Five United Nations Treaties dedicated to outer space



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- Outer Space Treaty (1967)
- Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (1968)
- Convention on International Liability for Damage Caused by Space Objects (1972)
- Convention on Registration of Objects Launched into Outer Space (1976)
- Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (1984)

The first legal principles were complemented and integrated into five international treaties developed by COPUOS. You have here on the slide the list of them. The first one is the so-called Outer Space Treaty. It's entered into force in 1967. Its full name is Treaty Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. Hence, you notice it is addressed at States. The other four treaties are, in short, the Rescue Agreement, the Liability Convention, the Registration Convention, and the Moon Agreement. Except for the last one, the Moon Agreement, they all have been ratified by enough States to consider that they constitute the basis of international law for space activities.

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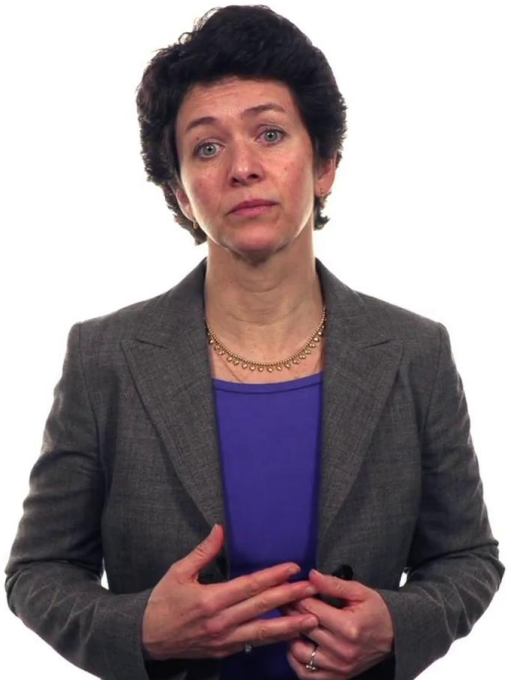
Further principles of international space law



- States bear responsibility
- Space activities shall require authorisation and continuing supervision by the State concerned
- Objects launched into space must be registered in the UN registry
- Launching States are liable in case of damage

Here, I would like to highlight some elements which may have concrete consequences for satellite operators, launch providers, and other space actors. States bear the responsibility of the space activities conducted by actors under their jurisdiction. These include actors from the private sector and academia. State parties to the Outer Space Treaty must take measures to authorise space activities and to supervise them continuously. When an object is launched into space, up to four States qualify as launching States for this object. Altogether, launching States are liable for any damage caused by this object. One of them shall register the space object in an appropriate national registry which it shall maintain. This State shall furnish to the Secretary General of the United Nations specific information on this space object, including basic orbital parameters. As States have to put these principles into practice at national level, it means that space actors should check which national rules are enforced in their country.

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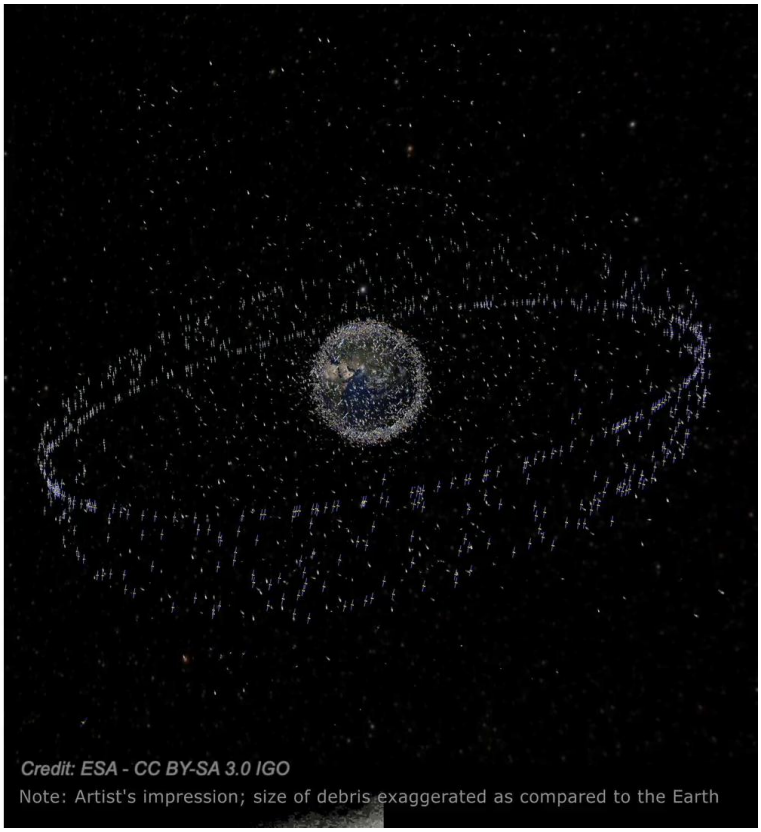
Space sustainability



Sustainability is not only important on Earth. It is, too, in space. The number of objects in Earth orbits is increasing in an uncontrolled manner. This is due in part to large constellation projects and also to accidental collisions, breakups, and voluntary destructions of satellite for military purposes. The need to use space in a safe and sustainable manner has been recognised by the United Nations. You have heard about it in our previous lecture.

Notes

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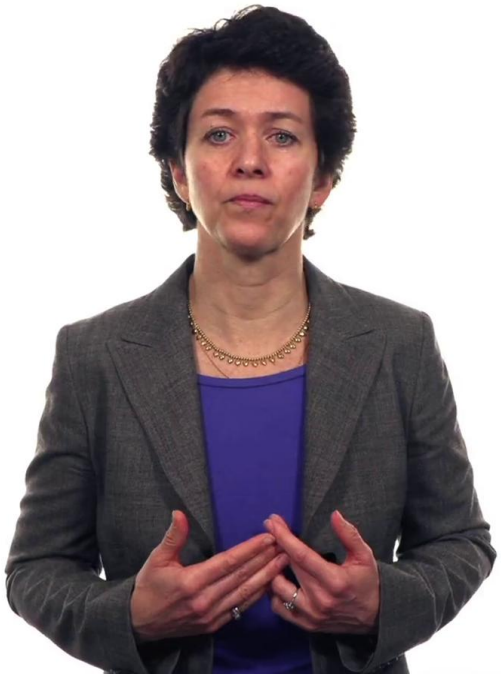
Guidelines recently adopted by the United Nations



- Space Debris Mitigation Guidelines (2007)
- Safety Framework for the Use of Nuclear Power Sources Applications in Outer Space (2008)
- Guidelines on the Long-term Sustainability of Outer Space Activities (2019)

Since 2010, COPUOS has started working on the long-term sustainability of outer space activities. In 2019, Member States of COPUOS could reach consensus on 21 guidelines, which were then adopted by the UN General Assembly. These guidelines provide recommendations for rendering space operations safer and space activities more sustainable on the long term. They also include recommended actions in the areas of regulation, scientific research, capacity building, and international collaboration. These guidelines encompass previous sets of guidelines and standards developed by COPUOS, including the Space Debris Mitigation Guidelines and the Safety Framework for the Use of Nuclear Power Sources Applications in Outer Space. All space actors are strongly encouraged to voluntarily implement these guidelines.

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Space security

States have always used space technologies to support their military capacities. Space is strategic for national security and defense. Up to date, four States have destroyed their own satellite in orbit using direct-ascent kinetic weapons, so-called anti-satellite or ASAT weapons. Motivations include the development and a demonstration of military capacities. The latest ASAT test was conducted in November 2021. Such kind of events generate debris, which may impose long-term risks to other space objects. Such actions are not explicitly forbidden by international law, but they have a destabilising effect on international security. In order to preserve peace in space, trust, transparency, and predictability are essential. New kind of space operations, such as on-orbit servicing and active debris removal, have a beneficial impact on the sustainability of the orbital environment, but they may also potentially be used for unfriendly purposes. In developing and conducting such activities, it is thus essential to show the greatest transparency, declare intentions, and notify other States. It is also important to take all measures to ensure the safety of the operations and to avoid unintended interference and damage to others.

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Avoiding conflicts in and from outer space

Areas of work at the United Nations General Assembly:

- Prevention of an Arms Race in Outer Space
- Transparency and confidence-building measures
- Reducing space threats through responsible behaviours
- International cooperation in the peaceful uses of outer space

To address the potential for conflict in and from outer space, States are working at the United Nations General Assembly in different areas. These areas include the prevention of an arms race in outer space, the development of transparency and confidence-building measures, the characterisation of responsible behaviours in outer space, and the promotion of international cooperation in the peaceful uses of outer space.

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Ongoing processes within the United Nations

- 2nd Working-Group of COPUOS Scientific and Technical Subcommittee on the **Long-term Sustainability** of Outer Space Activities (2022-2026)
- Open-Ended Working-Group of the UN General Assembly on Reducing Space Threats through Norms, Rules and Principles of **Responsible Behaviours** (2022-2023)

Two specific processes have been put on track recently. The first one is the continuation of the work of COPUOS under long-term sustainability with a triple objective: promoting the implementation of the 21 guidelines adopted in 2019, addressing emerging challenges on the long-term sustainability, and enhancing awareness-raising and capacity-building. The second process is a new working group of the General Assembly aiming at developing a common understanding of what constitutes responsible behaviours in outer space and at making recommendations on possible norms, rules, and principles of responsible behaviours.

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Take-away

- Space actors must abide by their national legislations.
- They are encouraged to voluntary implement the guidelines developed by the United Nations.
- States are working within the United Nations to maintain security, safety and sustainability in outer space.

Allow me to summarize some takeaway for you. Space actors must abide by their national legislation. They are encouraged to voluntarily implement the relevant guidelines developed by the United Nations. States are working within the United Nations to maintain security, safety, and sustainability in outer space. With that, I thank you for your attention and wish you all the very best.

Notes

Summary

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