

National mechanism(s):

- Liechtenstein Act from 5th October 2023 on the Authorization of Space Activities and the Registration of Space Objects (Space Act; Liechtenstein Law Gazette Volume 2023 No. 443 issued on 6th December 2023).
- Liechtenstein Ordinance dated 4th December 2023 on the Authorization of Space Activities and the Registration of Space Objects (Space Ordinance; Liechtenstein Law Gazette Volume 2023 No. 456 issued on 8th December 2023).

Description:

- The Liechtenstein Space Act is the legal basis for space activities conducted or initiated to be conducted on the territory of Liechtenstein, on movable or immovable assets registered in Liechtenstein or otherwise subject to Liechtenstein legislation, or from an operator who has Liechtenstein citizenship or is a legal entity that has its registered office or is registered in Liechtenstein.
- In its Art. 1 subparagraph 2, letter d, the Act states that it serves, among other purposes, particularly “the preservation of the long-term usability of space and the prevention of space debris”.
- In its Art. 5 subparagraph 1, letter g, the Act provides that one of the conditions for the authorisation of a space activity is that “adequate measures have been taken to prevent space debris, in particular mission debris”.
- The Report and Motion to the Liechtenstein Space Act explains the meaning and scope of Art. 5 subparagraph 1, letter g as follows:

“According to item g, it will be checked whether measures have been taken to avoid space debris, especially mission residues. The avoidance of space debris is a major concern of all states and space agencies and is also in the interest of operators of space activities. Therefore, the obligation to avoid space debris plays a significant role in the conditions for approval. In addition, the obligation to avoid space debris remains a continuous obligation of the operator even after approval. An important standard in this regard are the internationally recognized guidelines for the avoidance of space debris. These include, in particular, the Space Debris Mitigation Guidelines 2002 of the Inter-Agency Space Debris Mitigation Committee (IADC). This committee represents the major space agencies, such as NASA (USA), ESA (Europe), Roscosmos (Russia), CNES (France), ISRO (India), and Jaxa (Japan). It is an international forum for the global coordination of activities related to artificial and natural space debris. The main goal is to exchange information about research on space debris, enable cooperation in the field of space debris research, review possibilities for collaboration, and identify ways to prevent space debris. The UNCOUOS Space Debris Mitigation Guidelines from 2007 expressly refer to them but are somewhat less precise in some details. The IADC Space Debris Mitigation Guidelines 2002 particularly include the following provisions: "Limit Debris Released during Normal Operations", "Minimise the Potential for On-Orbit Break-ups", "Post Mission

Disposal", and "Prevention of On-Orbit Collisions". "Mission residues" refer to those residues that arise during the ordinary operation of space activities. This concerns solid and liquid residues that can cause great damage to other space objects as space debris."

- The Liechtenstein Space Ordinance contains several details further specifying the requirements set forth in the Liechtenstein Space Act. As condition for the authorization of a space activity the Ordinance provides in Art. 5 subparagraph 1, letter g, that the application must include the following information and documents to demonstrate corresponding measures to prevent space debris in accordance with Article 5(1) lit. g of the Act:
 1. A report on measures taken in accordance with the state of the art and considering internationally recognized guidelines, such as those of the Inter-Agency Debris Coordination Committee (IADC), especially:
 - aa) to prevent space debris and mission residues during normal operations;
 - bb) to prevent the disintegration of the space object in orbit;
 - cc) for the removal of the space object after the end of space activity, either through controlled re-entry or descent or by placing it in a sufficiently high orbit ("graveyard orbit"). For non-maneuvrable space objects, the orbit should be chosen so that they are expected to remain in orbit for no longer than 25 years after the end of their operation;
 2. An overview of measures taken to avoid collisions with other space objects in outer space“.

Applicability:

- The Liechtenstein Space Act and Space Ordinance apply to space activities conducted or initiated to be conducted:
 - a) on the territory of Liechtenstein;
 - b) on movable or immovable assets registered in Liechtenstein or otherwise subject to Liechtenstein legislation; or
 - c) from an operator who:
 1. has Liechtenstein citizenship; or
 2. is a legal entity that has its registered office or is registered in Liechtenstein.
- The provisions regarding space debris are mandatory.

Relation to international mechanism(s):

- The IADC Space Debris Mitigation Guidelines are explicitly referred to in the Ordinance and Report and Motion to the Liechtenstein Space Act in order to specify what is meant by “adequate measures to prevent space debris” in Art. 5 subparagraph 1, letter g. This means that during the authorisation process, particular attention will be paid to these guidelines by the authority. Operators not complying with these guidelines risk not obtaining an authorisation for their planned space activity.

Link to other national mechanisms:

- None.

References:

- The Liechtenstein Space Act (English translation):
https://www.llv.li/serviceportal2/amtsstellen/amt-fuer-kommunikation/20231212_space-act_en_unofficial-translation.pdf
- German Original Liechtenstein Space Act (published in the official Liechtenstein Law Gazette):
https://gesetze.li/konso/2023443000?search_text=wrg&search_loc=text&lrnr=&lgblid_von=&observe_date=14.01.2024
- The Liechtenstein Space Ordinance (English translation):
https://www.llv.li/serviceportal2/amtsstellen/amt-fuer-kommunikation/20231212_space-ordinance_en_unofficial-translation.pdf
- German Original Liechtenstein Space Ordinance (published in the official Liechtenstein Law Gazette):
https://gesetze.li/konso/2023456000?search_text=wrv&search_loc=text&lrnr=&lgblid_von=&observe_date=14.01.2024
- Report and Motion to the Liechtenstein Space Act (German):
<https://bua.regierung.li/BuA/default.aspx?nr=40&year=2023&erweitert=true>