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Satellite regulation

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Space-based technology has enabled the development of new methods of connectivity. Satellites are increasingly being used to provide telecommunications services, from providing internet connectivity and global positioning systems to telephone services and television broadcasting.

Despite an increasing number of private and non-governmental entities launching and operating satellites, legal responsibility for satellite activities still predominantly lies with the countries in which those activities originate.

International regulations relating to satellite activities

At a high level, space activities are governed by the [Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies](#) (“Outer Space Treaty”). Under Article 6 of the Outer Space Treaty, member states are responsible for any national activities in outer space, regardless of whether the activities are undertaken by governmental or non-governmental entities. In particular, activities of non-governmental entities must be authorized and continuously supervised by member states.

Furthermore, each member state that launches or procures the launching of an object (including satellites) into outer space, and each member state from whose territory or facility an object is launched, will be liable for any damage caused by that object or its component parts.

The [Convention on Registration of Objects Launched into Outer Space](#) (“Registration Convention”) requires that the launching state must maintain a register of space objects launched into Earth orbit or beyond. The launching state must also provide the Secretary-General with information about each space object in its register.

As of 2024, 115 countries have ratified the Outer Space Treaty and 72 countries have ratified the Registration Convention. The status of all international agreements relating to activities in outer space as at 1 January 2020 may be found on the [website](#) of the United Nations Office for Outer Space Affairs (“UNOOSA”).

A number of countries have also enacted, or are proposing to enact, national legislation to give effect to these treaties. The authorization of space activities is a particular area of focus, with a trend towards the adoption of a transparent and non-discriminatory authorization framework (see, for example, [the Australian Space \(Launches and Returns\) Act 2018](#) (Cth), and [Luxembourg’s legal framework](#)). Several countries, including the United States of America and Luxembourg, have also developed national legal frameworks on the exploration and use of space resources.

Frequency and orbital coordination

Communication with satellites requires use of radio spectrum. The [International Telecommunication Union](#) (“ITU”), a specialized agency of the United Nations, coordinates the global use of spectrum frequency and orbital allocation in order to reduce the occurrence of harmful interference between satellites.

The ITU only deals with the administrations of each of its 193 member countries, rather than with individual satellite operators. Among other things, the ITU facilitates global coordination of satellite operation by requiring state administrations to submit advance publication information and coordination data every time a new satellite is planned. This information is then published fortnightly in the International Frequency Information Circular (“IFIC”). Foreign administrations (often acting on behalf of satellite operators) will then have the opportunity to respond to information published in the IFIC and seek coordination with the state administration responsible for the satellite.

A brief snapshot of domestic satellite regulation in a selection of countries is provided below.

Australia

Australia is a member state of the [International Telecommunication Union](#) (“ITU”) and is bound by its legal instruments. The [Australian Communications and Media Authority](#) (“ACMA”) acts as the Australian administration for the ITU’s international process of managing frequencies for satellite communications.

In order for a satellite to provide radiocommunications services to or from Australia, it must have undergone international frequency coordination in accordance with the ITU Radio Regulations and the radiocommunications link must be authorized by a relevant radiocommunications license issued by the ACMA. A potential satellite operator must submit an application to the ACMA, which will be assessed before being filed with the ITU. The application fee is AU\$35,956 for a new satellite operator as at 18 June 2020.

Australia has also implemented domestic legislation giving effect to the Outer Space Treaty and the Registration Convention. The [Space \(Launches and Returns\) Act 2018](#) (Cth) sets out the authorization, liability and regulatory regimes of space activities in Australia. A permit or authorization certificate is required to launch space objects from Australia, or from a place outside Australia where the space object is owned or launched by an Australian national. Similar authorization is required for the return of space objects. The Minister for Industry, Science and Technology must also keep a register of all space objects. Further rules relating to satellite launches can be found in the [Space \(Launches and Returns\) \(General\) Rules 2019](#)

(Cth).

The [Satellite and Space Systems page](#) on the ACMA website provides a broad overview of the different satellite network services offered by ACMA.

The [Australian Procedures for the Coordination and Notification of Satellite Systems manual](#) gives practical guidance to the satellite industry about the procedures the ACMA will normally take in relation to satellite filing and coordination in Australia.

The [Regulating Australian space activities page](#) on the Department of Industry, Science, Energy and Resources website provides more information on the Space (Launches and Returns) Act 2018 (Cth) and the authorization and regulatory regimes.

Nepal

Nepal is a member state of the [International Telecommunication Union](#) (“ITU”) and is bound by its legal instruments. The [Ministry of Communication and Information Technology](#) (“MoCIT”) acts as the Nepalese administration and the [Nepal Telecommunications Authority](#) (“NTA”) acts as the regulator.

Under the [Radio Communication \(License\) Rules 2049 \(1992\)](#), the NTA (as authorized by MoCIT) may issue a satellite communication system license to a person or team involved in expedition research and other similar activities. The license may be held and used only for the prescribed purpose during a specified period.

In October 2016, the NTA published an [Invitation for Expression of Interest](#) for competent international firms to undertake the launching and operating of satellites in the orbital slots allocated to Nepal by the ITU. In 2019, the NTA signed an agreement with French aerospace manufacturer [Thales Alenia Space](#) to build a satellite telecommunications system. The satellite will be positioned at one of the orbital slots reserved for Nepal by the ITU and is expected to be launched by 2022.

Spain

The use of the Kingdom of Spain’s rights over orbit / spectrum resources is subject to international law and, in particular, to the legal instruments of the [International Telecommunication Union](#) (“ITU”), of which Spain is a member state.

The main national satellite regulations in Spain are included in [Law 9/2014 of 9 May](#), on General Telecommunications and [Royal Decree 123/2017 of 24 February](#), approving the Regulation on the use of the radio spectrum.

In summary, such regulations consider the radio spectrum as a public good, including the orbit / spectrum resources necessary for the use of radio frequencies through satellite networks. These resources are legally reserved to the State, which may either directly manage their use or grant administrative concessions to private operators for the exclusive use of such resources.

[Spain Spectrum Orbit Resources](#) (in Spanish)

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