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# The Importance of National Space Legislation for the Peaceful Uses of Outer Space

Prof. Irmgard Marboe

University of Vienna  
Faculty of Law

Department of European, International and Comparative Law

UNCOPUOS Legal Subcommittee  
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**Why should States have national legislation regulating outer space activities?**

**What is the role of UNCOPUOS in this regard?**

**What should be the contents of national space legislation?**

# **Why should States have national legislation regulating outer space activities?**

**1) International space law**

**2) National interests**

## **1) International space law**

- **International space law contains several obligations for States carrying out space activities (registration, responsibility, liability, ...)**
- **Privatization, commercialization of space activities as well as international cooperation have increased in recent years**
- **Private/commercial/non-governmental entities are not bound by international (space) law**
- **Implementation of international space law is needed to ensure that international space law is complied with at all levels**

# **What are the obligations of States under international space law?**

## **(1) Registration of space objects**

- **The “launching State” must register**
- **= The State “which launches or procures the launching” or “from whose territory or facility a space object is launched”**
- **→ up to four possible launching States**
- **Only ONE State should register**

## **What are the obligations of States under international space law? (cont'd)**

### **(2) Liability of the launching State(s)**

- **Absolute and unlimited liability for damage caused on Earth or on an aircraft in flight by a space object**
- **Fault liability for damage caused by a space object elsewhere**
- **Joint and several liability of all of the four possible launching States**

## **What are the obligations of States under international space law? (cont'd)**

### **(3) Duty of authorization and supervision**

**“The activities of non-governmental entities in outer space, including the moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty.”**

**(Art. VI Outer Space Treaty)**

## **What are the obligations of States under international space law? (cont'd)**

### **(4) Others:**

**no placement of weapons of mass  
destruction in Earth orbit, facilitate and  
encourage international cooperation, paying  
due regard to the interests of other countries,**

**...**

**National space legislation is the tool to implement the international obligations of States at the national level and to make sure that also private/commercial/non-governmental entities carrying out space activities comply with international space law.**

## **2) National interests**

- **Ensure safety of space activities**
- **Ensure that the State knows about space activities carried out in its territory or by its citizens/entities**
- **Ensure that space activities carried out by private/commercial/non-governmental entities do not run counter the State's security, foreign policy, etc. interests**
- **Ensure that, if the State becomes liable under international law, it has a right of recourse against the operator of the space object**
- **Ensure that the operator has an insurance**

**National space legislation is the tool to ensure that private/commercial/non-governmental entities carry out space activities in accordance with the national interests of the State.**

## **What is the role of UNCOPUOS in this regard?**

**In view of increasing privatization, commercialization and international cooperation, the LSC introduced several new agenda items under a work plan:**

- 1) “Review of the concept of the ‘launching State’” (2001-2004)**
- 2) “Practice of States and international organizations in registering space objects” (2004-2007)**
- 3) “General Exchange of information on national legislation relevant to the peaceful exploration and use of outer space” (2008-2012)**

## **1) Review of the concept of the ‘launching State’**

**GA Resolution 59/115 of 10 December 2004**

**“Application of the concept of the ‘launching State’:**

**“1. *Recommends* that States conducting space activities, [...] consider enacting and implementing national laws authorizing and providing for continuing supervision of the activities in outer space of non-governmental entities under their jurisdiction;”**

## **2) Practice of States and international organizations in registering space objects**

**GA Resolution 62/101 of 17 December 2007**

**“Recommendations on enhancing the practice of  
States and international intergovernmental  
organizations in registering space objects”:**

**“*Bearing in mind* the benefits for States of [...] implementing and observing the provisions of the  
Registration Convention”**

### **3) General Exchange of information on national legislation relevant to the peaceful exploration and use of outer space**

**“Report of the Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space on the work conducted under its multi-year workplan” of 3 April 2012 (A/AC.105/C.2/101):**

- I. Summary of the work conducted by the Working Group under its multi-year workplan**
- II. Findings of the Working Group**
- III. Conclusions**

## **‘Findings of the Working Group’**

**Reflect discussion on 9 questions:**

- 1) Reasons for States to enact national space legislation or the reasons for the absence of such legislation**
- 2) Scope of space activities targeted by national regulatory framework**
- 3) Scope of national jurisdiction over space activities**
- 4) Competence of national authorities in the authorization, registration and supervision of space activities**

- 5) Conditions to be fulfilled for registration and authorization**
- 6) Compliance and monitoring**
- 7) Regulations concerning liability**
- 8) Regulation by States of transfers of ownership of space objects and of transfers of authorized space activities to third parties**
- 9) The participation of private individuals in space flights and the treatment in service-provider contracts of issues of liability and responsibility for collisions of satellites in outer space**

## **What should be the contents of national space legislation?**

**See the ‘Conclusions’ of the Working Group and the ‘Draft recommendations on national legislation relevant to the peaceful exploration and use of outer space’:**

- 1) Scope of application:** launching, return, operation of a launch or re-entry side, operation and control of space objects in orbit, as well as other issues (design and manufacture, application of space science and technology, exploration and research)
- 2) Nationality criterion:** “launching State” and/or “responsible State” → national territory, citizens and legal entities established, registered or seated in the territory; however, forebear “duplicative requirements”

**3) Authorization:** the competent national authority/ies and conditions for granting, modifying, suspending and revoking authorization should be set out clearly

**4) Conditions for authorization:** consistent with int'l obligations (UN treaties and other instruments) and paying due regard to national security and foreign policy interests; ensuring safety and minimizing risks to persons, environment or property; complying with technical standards and space debris mitigation guidelines, in particular with UNCOPUOS Guidelines

- 5) **Supervision and monitoring:** for example, on site inspections, reporting requirement; enforcement mechanisms may include administrative measures, sanctions (penalties)
- 6) **Registration:** national register should be maintained by an appropriate national authority; operators be requested to submit information to enable the State to submit it to the SG of UN, in accordance with Registration Convention (1972) and with UN GA Res on Registration Practice (2007); also change in main characteristics

- 7) **Recourse:** consider ways of seeking recourse from operators if the State's international liability has become engaged; to ensure appropriate coverage, insurance requirements could be introduced
- 8) **Transfer of ownership or control:** continuing supervision of non-governmental entities should be ensured; authorization requirements or submission of information on the change in status

**See also Annex of Report of the Working Group (A/AC.105/C.2/101)**

**“National space legislation: regulative categories – set of elements for consideration by States in enacting national space legislation”**



## Annex: National space legislation: regulative categories – set of elements for consideration by States in enacting national space legislation

Regulative Category	Corresponding International Obligation/Norm	Elements
Scope of application	n/a, (partly Art. VI OST international responsibility for “national activities”)	<ul style="list-style-type: none"><li>– activities (<i>ratione materiae</i>)</li><li>– jurisdiction (<i>ratione loci/personae</i>)</li></ul>
Authorization of activities of non-governmental entities	Art. VI OST GA resolution A/RES/59/115	<ul style="list-style-type: none"><li>– licensing procedure</li><li>– change of status: modification/suspension/revocation of license</li><li>– conditions for granting licenses connect to other relative categories: registration, liability, safety</li></ul>
Continuing supervision of activities of non-governmental entities	Art. VI OST	<ul style="list-style-type: none"><li>– mechanisms of supervision</li><li>– role and competencies of supervising authorities (during normal operation and in case of incidents)</li></ul>
Registration	Art. VIII OST; Art. II, IV REG; GA resolution 1721 (XVI) B; GA resolution A/RES/62/101	<ul style="list-style-type: none"><li>– establishment of national registry</li><li>– obligation to submit information to competent authority</li><li>– submission of data to the UN</li></ul>
Liability and insurance	Art. VI, VII OST; Art. II, III, LIAB	<ul style="list-style-type: none"><li>– obligation of insurance and financial responsibility</li><li>– amount of insurance coverage (minimum requirements/caps)</li><li>– state indemnification</li></ul>
Safety	Art IX OST; NPS Principles; COPUOS Space Debris Mitigation Guidelines	<ul style="list-style-type: none"><li>– avoidance of harmful contamination of outer space and adverse change to the environment of the Earth</li><li>– implementation of space debris mitigation</li></ul>
Transfer of ownership	Art. VI, VII, VIII OST, REG, LIAB, GA resolution A/RES/62/101	<ul style="list-style-type: none"><li>– requirement of permit for selling of satellites to (foreign persons)</li></ul>

## **In addition: Schematic overview over NSL**

- I. Summary of the schematic overview over national space legislation**
- II. Table**

**To be updated regularly: “Living instrument”**

**April 2013: A/AC.105/C.2/2013/CRP.7**

State and Legislation	Scope of application	Authorization	Supervision	Registration	Liability	Safety	Transfer of ownership
<b><u>Australia</u></b>  - <i>Space Activities Act 1998 (No. 123, 1998)</i> - <i>Statutory Rules No. 186 Space Activities Regulations 2001</i>	Material scope: launch (and attempted launch) of a space object into outer space, return (and attempted return) of a space object from outer space and operation of a launch facility  Territorial jurisdiction: activities carried out from Australian territory including external territories (Sec. 3 Space Activities Act)  Personal jurisdiction: activities carried out by Australian nationals (Sec. 3 Space Activities Act); an “Australian national” is defined as (a) an Australian citizen, (b) a body incorporated by or under the law of the Commonwealth of Australia, or (c) the Commonwealth, or a state or territory (Sec. 8 Space Activities Act)	A <i>space license</i> (Sec. 18 Space Activities Act; Div. 2.4 Space Activities Regulations) is required for the operation of a launch facility in Australia and to launch a particular type of launch vehicle from such facility. A <i>launch permit</i> (Sec. 26 Space Activities Act; Div. 3.2 Space Activities Regulations) is required for the launch of a particular space object or series of similar such launches from a specified launch facility using a specified launch vehicle as well as for the return of such space objects to a specified place in Australia. A <i>launch permit</i> can only be granted to the holder of a <i>space license</i> . An <i>overseas launch certificate</i> is required for the launch of a particular space object or series of similar such launches from a specified launch facility outside Australia using a specified kind of launch vehicle (Sec.35 Space Activities Act).	A Launch Safety Officer is appointed for each licensed launch facility, ensuring that all the conditions of space licenses and launch permits are fully complied (Sec. 50-58 Space Activities Act).  In the case of an accident involving a space object, all relevant authorizations are stopped and an investigator is appointed in order to investigate the accident (Sec. 84-103 Space Activities Act).  A body incorporate or an individual are guilty of an offence if they undertake unauthorized launch (and attempted launch) of a space object into outer space or return (and attempted return) of a space object from outer space (Sec. 11-14 Space Activities Act).  A person who fails to comply with a direction that the Launch Safety Officer for a licensed launch facility gives, is guilty of an offence (Sec. 52 Space	The Minister must keep a register of space objects (Sec. 76 Space Activities Act).  The holder of a launch permit is required to submit after the launch of a space object information referred to in subparagraph 1 (d) of Article IV of the Registration Convention (Div. 3.2 (1) Space Activities Regulations)  In keeping the Register, the Minister must have regard to the Registration Convention and any other international agreement or arrangement relating to the registration of space objects and to which Australia is a party (Sec. 76 para. 3 Space Activities Act).	A <i>launch permit</i> requires to satisfy either insurance requirements or show direct financial responsibility for launch or return.  The insurance requirements are met if the applicant is insured to the maximum probable loss against any liability incurred for third party damage. The maximum probable loss is determined in accordance with Sec. 7.02 Space Activities Regulations.  Australia is not required to take out insurance, rather the holder of the authorization is required to take out insurance for the benefit of Australia (Sec. 48 Space Activities Act).	A <i>space license</i> , a <i>launch permit</i> and an <i>overseas launch certificate</i> can only be granted if the probability is low that the construction and operation of the launch facility causes substantial harm to public health or public safety or causes substantial damage to property (Sec. 18, 26 and 35 Space Activities Act).	A <i>space license</i> , a <i>launch permit</i> and an <i>overseas launch certificate</i> can be transferred (Sec. 22-25, 31-34 and 38-41 Space Activities Act).

State and Legislation	Scope of application	Authorization	Supervision	Registration	Liability	Safety	Transfer of ownership
		The <i>space license</i> , <i>launch permit</i> and <i>overseas launch certificate</i> are issued under the authority of the Minister for Industry, Finance and Resources upon the fulfillment of certain criteria (Sec. 18, 26, 29 and 35 Space Activities Act). The authorizations can be transferred and suspended (Sec. 22-25, 31-34 and 38-41 Space Activities Act).	Activities Act). A person operating without authorization a launch facility are liable to a civil penalty (Sec. 15 Space Activities Act). Further civil penalty provisions are set forth in Part 6 Space Activities Act.				
<b><u>Belgium</u></b>  - <i>Law on the activities of launching, flight operations or guidance of space objects of 17 September 2005</i> - <i>Royal Decree implementing certain provisions of the Law of 17 September 2005 on the activities of launching, flight operations and guidance of space objects</i>	Material scope, Territorial and Personal jurisdiction: activities of launching, flight operations and guidance of space objects carried out by natural or legal persons in the zones placed under the jurisdiction or control of the Belgian State or using installations, personal or real property, owned by the Belgian State or which are under its jurisdiction or its control (Art. 1, § 1, Law on the activities of launching...)  When provided for under an international	Authorization of the Minister is required (Art. 4, § 1, Law on the activities of launching...)  “Minister” means the Minister with responsibility for space research and its applications in the framework of international cooperation (Art. 3, 6°, Law on the activities of launching...)  The King may determine the conditions for granting authorizations (Art. 5, § 1, Law on the activities of launching...)	The King shall lay down the conditions applying to the control and supervision of the activities covered by this law (Art. 6, Law on the activities of launching...)  The Minister may also designate experts charged with controlling the activities carried out by the operator. The latter must do everything possible to facilitate any inspections and checks, at all times, with regard to the activities that he carries out pursuant to this law (Art. 10, § 1, Law on	A National Register of Space Objects shall be created and all space objects for which Belgium is the launching State shall be entered, except when the registration is made by another State or an international organization, in accordance with the Convention on Registration of Space Objects. The conditions regarding the form and publication of the Register and the way it is kept shall be determined by the King (Art. 14, § 1, Law on the activities of	When the Belgian State is liable, pursuant to Article VII of the Outer Space Treaty, the provisions of the Convention on International Space Liability or the provisions of this law, for reparation, it shall have the right to institute a counterclaim against the operator(s) involved up to the amount of the compensation determined in accordance with §2 and §3 (Art. 15, § 1, Law on the activities of launching...)  An operator who fails	The operator must inform immediately the crisis centre designated by the King of any manoeuvre, any malfunctioning or any anomaly of the space object, likely to result in a danger for persons on the ground, aircraft in flight or other space objects, or to cause any damage (Art. 16, § 1, Law on the activities of launching...)  Without prejudice to measures concerning the safety and protection of goods and persons, any space object which is found on the Belgian territory	The transfer to a third party of authorized activities or real or personal rights, including guarantee rights, which transfers the effective control of the space object may not be carried out without the Minister’s prior authorization (Art. 13, § 1, Law on the activities of launching...)  The Minister may attach to the transfer authorization conditions which are binding on either the transferee operator, or the transferor operator, or both (Art. 13, § 4,

**See also: ILA “Model Law”**

**“Sofia Guidelines on a Model Law for National Space Legislation”**

- Adopted at the Sofia Conference of the International Law Association in 2012
- 14 articles with comments
- Available at the ILA website: [www.ila-hq.org](http://www.ila-hq.org), download: “final\_report\_sofia\_2013-5.pdf”
- See also A/AC.105/C.2/2013/CRP.6

## Conclusions

- NSL is required to authorize and supervise non-governmental entities conducting space activities
- Inclusion of governmental space activities is also possible
- Competent authorities for authorization, supervision and registration are necessary
- Conditions for authorization/registration are the most important tool for implementing int'l obligations and pursuing national interests
- A recourse system and insurance is useful
- Possible changes of ownership or control should be considered

## **Future perspectives**

- Adoption of recommendations on national space legislation
- Analysis of different forms of international cooperation between States and non-governmental entities
- A logical consequence in view of the increasing privatization, commercialization and international cooperation in the space arena
- Ensure compliance with international space law and respect for national interests also when space activities are carried out through international agreements