



universität
wien

The Work of the Legal Subcommittee of UNCOPUOS on National Space Legislation

UN/Thailand/ESA Workshop on Space Law
Bangkok, 17 November 2010

Irmgard Marboe

University of Vienna
Faculty of Law

Department of European, International and Comparative Law

National Space Legislation in UNCOPUOS

Why is National Space Legislation an issue?

What has UNCOPUOS done so far?

The way forward?

Why is National Space Legislation an issue?

- **The Outer Space treaties and UNGA Res are addressed to States**
- **Privatisation and commercialisation of space activities have increased in recent years**
- **How to ensure safety and sustainability of space activities, in particular with regard to the problem of space debris?**
- **How to deal with damage caused by private space activities?**

Obligations of States regarding outer space activities

- **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”**
 - **Only ONE State should register**

Obligations of States regarding outer space activities (con't)

- **Liability of the launching State**
 - **Absolute and unlimited liability for damages caused on Earth or on an aircraft in flight by a space object**
 - **Fault liability for damage caused by a space object elsewhere**

Obligations of States regarding outer space activities (con't)

- **Authorisation 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)

State Practice: Europe I

- **Norway:** Act on launching objects from Norwegian territory etc. into outer space (1969)
- **Sweden:** Act on Space Activities (1982), Decree on Space Activities (1982)
- **United Kingdom:** Outer Space Act (1986)
- **Spain:** Royal Decree 278/1995, 24 February 1995, establishing in the Kingdom of Spain of the Registry foreseen in the Convention adopted by the UN GA on 2 November 1974

State Practice: Europe II

- **Belgium:** Law on the Activities of Launching, Flight Operations or Guidance of Space Objects (2005)
- **The Netherlands:** Rules Concerning Space Activities and the Establishment of a Registry of Space Objects (Space Activities Act) (2007)
- **France:** Space Operations Act (2008)
- **Germany, Italy, Czech Republic, Austria, ...**

State Practice: America

- **USA:** - Commercial Space Launch Act (1984)
 - Land Remote Sensing Policy Act (1992)
 - Commercial Space Act (1998)
 - ...
- **Canada:** Canadian Space Agency Act (1990)
- **Brasil:** - Law No. 8.854 of 10 February 1994, Law Establishing the Brazilian Space Agency
 - Resolution No. 51 Resolution on Commercial Launching Activities from Brazilian Territory (2001)

State Practice: Asia

- **Japan:** - Law Concerning The National Space Development Agency Of Japan (1969)
 - Law concerning Japan Aerospace Exploration Agency (2002)
 - Basic Space Law (2008)
- **Hong Kong:** Outer Space Ordinance (1997)
- **Russia:** Federal Law on Space Activity (1993)
- **Ukraine:** The Law on Space Activity (1996)
- **South Korea:** Space Affairs Act (1993)

State Practice: Africa

- **South Africa:** Space Affairs Act (1993)

State Practice: Australia

- Australian Space Activities Act (1998)

What has UNCOPUOS done so far?

- **Application of the Concept of the Launching State (UNGA Res 59/110 of 10 December 2004)**
- **Recommendations on enhancing the practice of States and international intergovernmental organization in registering space objects (UNGA Res 62/101 of 17 December 2007)**

New Agenda Item on National Space Legislation in 2007

- **“General Exchange of information on national legislation relevant to the peaceful exploration and use of outer space” adopted as a new agenda item in 2007**
- **Multi-year programme of work (2008-2011)**
- **Establishment of a Working Group in 2008**
- **Working Group sessions in 2009 and 2010**

Multi-year programme of work (2008-2011)

- 2008: Request to Member States for national legislation relating to governmental and non-governmental space activities.
Presentations by Member States of reports on their national legislation;**
- 2009: Examination, in a working group, of the responses received in order to develop an understanding of the manner in which Member States have regulated governmental and non-governmental space activities;**

Multi-year programme of work (2008-2011) (cont'd)

2010: Working group continues to examine responses received and begins drafting its report, including conclusions;

2011: Working group finalizes report to Legal Subcommittee.

Documents received

- **Replies from Czech Republic, Germany, Nicaragua, Ukraine and Morocco (A/AC.105/912)**
- **Replies received from China, Czech Republic, Germany, Mongolia, Republic of Korea and Turkey (A/AC.105/932)**
- **Replies received from Poland and Saudi Arabia (A/AC.105/C.2/2009/CRP.9)**
- **Reply received from the United States (A/AC.105/C.2/2008/CRP.9)**
- **Replies received from Brazil, Colombia, Germany and the Netherlands (A/AC.105/C.2/2008/CRP.14)**

Documents prepared by the Secretariat under the previous agenda item “Review of the concept of the launching State”

- **Review of existing national space legislation illustrating how States are implementing, as appropriate, their responsibility to authorize and provide continuing supervision of non-governmental entities in outer space, containing legislation in Argentina, Australia, Japan, Russian Federation, South Africa, Sweden, Ukraine, UK, US (A/AC.105/L.224 of 22 January 2001)**
- **Review of the concept of the “launching State” (A/AC.105/768 of 21 January 2002)**

Questions and items of discussion in the Working Group

- 1) Why did your Government enact national space legislation? If your Government has not yet enacted national space law legislation, what are the reasons for the absence of such legislation?
- 2) What kind of activities are covered? (e.g. launching, operation of space objects, space research, application of space technology, remote sensing);

Items of Discussion in Working Group (cont'd)

- 3) What is the “national-requirement”? (personal or territorial jurisdiction? i.e. activities carried out by natural or legal persons of the State’s nationality, or in the territory of the State, or others);
- 4) What are the national authorities competent for registration, authorization and supervision in Member States? (government, ministry, space agency, relationship between them);

Items of Discussion in Working Group (cont'd)

- 5) What are the conditions to be fulfilled for registration and authorization? (e.g. safety of persons, property, public health, protection of environment, space debris mitigation, financial security, strategic and economic interest of the State, intern'l obligations of the State);
- 6) Is there any regulation concerning liability? (transfer of liability, limitation of liability, recourse, insurance requirements);
- 7) How is compliance monitored? (supervision, control, sanctions).

2009 Working Group Report (A/AC.105/935)

- National regulatory frameworks represented different legal systems with either unified acts or a combination of national legal instruments, ranging from administrative regulations to decrees and laws;
- States had adapted their national legal frameworks according to their specific needs and practical considerations;
- National legal requirements depended to a high degree on the range of space activities conducted and the level of involvement of the private sector.

2009 Working Group Report (A/AC.105/935) (cont'd)

(a) Reasons to enact national space legislation:

- The need to fulfil obligations under treaties to which a State had become a party;
- The need to achieve consistency and predictability in the conduct of space activities under the jurisdiction of the State;
- The need to provide a practical regulatory system for private sector involvement;
- The need for improved national coordination and the integration of a wider range of national activities.

2009 Working Group Report (A/AC.105/935) (cont'd)

(b) Scope of activities targeted:

- Launching of objects into outer space;
- Operation of a launch or re-entry site;
- Operation and guidance of space objects;
- In some cases the design and manufacturing of spacecraft;
- Application of space science and technology such as that used for Earth observation and telecommunications;
- Exploration activities and research.

2009 Working Group Report (A/AC.105/935) (cont'd)

(c) National jurisdiction:

- Space activities carried out from the national territory;
- Certain launches outside the national territory in which nationals were involved, such as citizens and non-governmental entities established or incorporated under the laws of the State in question;
- In some cases a more complex jurisdictional system was applied to regulate private sector involvement with a view to balancing public and private interests.

2009 Working Group Report (A/AC.105/935) (cont'd)

(d) Competence of national authorities:

- Different national authorities involved, ranging from space agencies and other similar authorities up to ministerial-level authority;
- In some cases involving different governmental entities for different activities requiring a licence;
- In some cases separate procedures for the licensing of operators conducting space activities and for the authorization of specific projects and programmes;
- Broad variety of means of registering space objects with a national registry, including through a government ministry or through a space agency or similar authority.

2009 Working Group Report (A/AC.105/935) (cont'd)

(e) Conditions for registration and authorization:

- Ensuring the safety of space activities, in particular laws governing the launch of objects into outer space;
- Ensuring that the launch does not create a significant risk of personal injury, environmental damage or damage to property;
- Conditions concerning safety and technological standards closely linked to States' concern about meeting space debris mitigation requirements;
- Other conditions related to the professional and financial qualifications of the applicant;
- National security and foreign policy interests.

2009 Working Group Report (A/AC.105/935) (cont'd)

(f) Liability:

- Several States established ways of seeking recourse from operators, which was achieved in most cases by introducing a national liability regime for space operations, if necessary, in addition to general tort law or environmental liability;
- Broad range of solutions for liability obligations and indemnification procedures, as well as insurance requirements.

2009 Working Group Report (A/AC.105/935) (cont'd)

(g) Compliance and monitoring:

- Most States apply procedures for the supervision and monitoring of licensed space activities, whether a system of in situ inspections or a more general reporting requirement for the fulfilment of obligations under a licence.
- Set of administrative measures for minor violations and a sanctions regime, including penal sanctions in some cases, for more serious offences.

2010 Working Group Report (A/AC.105/942)

(a) Reasons for enacting space legislation:

- In some cases it was difficult to draw a precise line to distinguish governmental activities from non-governmental activities
- Some States saw a need to regulate space activities of a governmental or public character in order to establish a reliable and organized legal framework for national space activities
- The increasing number of private actors carrying out space activities could lead to involvement of other States than the traditional space-faring nations

2010 Working Group Report (A/AC.105/942) (cont'd)

(b) Scope of space activities:

- Different scope of application reflected the differences between performing launch operations or mainly operating space objects in outer space
- In view of the complex nature of space activities the operator of a space object often needed authorizations from more than one State

2010 Working Group Report (A/AC.105/942) (cont'd)

(c) National jurisdiction:

- Territorial and personal jurisdiction was considered to be an important means of ensuring that space activities were in compliance with the respective standards and rules, wherever those activities take place, including on the high seas

2010 Working Group Report (A/AC.105/942) (cont'd)

(d) Conditions for authorization:

- Ensuring the safety of space activities was observed to be an important policy underpinning most national space laws
- This includes the avoidance of risk of personal injury, environmental damage or damage to property
- Space debris mitigation measures developed at the national or international level also play an important role in national authorization procedures

2010 Working Group Report (A/AC.105/942) (cont'd)

(e) Liability and insurance:

- Existence of a broad range of solutions for liability obligations and indemnification procedures
- General liability and insurance requirements were often laid down in laws complemented by secondary level of regulations that went into greater detail

2010 Working Group Report (A/AC.105/942) (cont'd)

(f) Transfer of ownership and control:

- The effect on international law of changes in the operation rather than the private or commercial law aspects were of concern of the Working Group
- Close link of jurisdiction of the States concerned, in particular where non-governmental actors were involved

The way forward?

Structure of Final Working Group Report:

(A/AC.105/942, p. 34)

- I) Summary of the work conducted by the Working Group under its multi-year workplan**
- II) Overview over national space legislation**
- III) Findings of the Working Group**
- IV) Conclusions**

Annex I.

**National space legislation: regulative categories
(set of elements for consideration by States in
enacting national space legislation)**

Annex II.

Schematic overview of national space legislation



Annex 1. Draft set of main 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">– activities (<i>ratione materiae</i>)– jurisdiction (<i>ratione loci/personae</i>)
Authorization of activities of non-governmental entities	Art. VI OST GA resolution A/RES/59/115	<ul style="list-style-type: none">– licensing procedure– change of status: modification/suspension/revocation of license– conditions for granting licenses connect to other relative categories: registration, liability, safety
Continuing supervision of activities of non-governmental entities	Art. VI OST	<ul style="list-style-type: none">– mechanisms of supervision– role and competencies of supervising authorities (during normal operation and in case of incidents)
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">– establishment of national registry– obligation to submit information to competent authority– submission of data to the UN
Liability and insurance	Art. VI, VII OST; Art. II, III, LIAB	<ul style="list-style-type: none">– obligation of insurance and financial responsibility– amount of insurance coverage (minimum requirements/caps)– state indemnification
Safety	Art IX OST; NPS Principles; COPUOS Space Debris Mitigation Guidelines	<ul style="list-style-type: none">– avoidance of harmful contamination of outer space and adverse change to the environment of the Earth– implementation of space debris mitigation
Transfer of ownership	Art. VI, VII, VIII OST, REG, LIAB, GA resolution A/RES/62/101	<ul style="list-style-type: none">– requirement of permit for selling of satellites to (foreign persons)



Annex 2. Schematic overview of national space legislation

State and Legislation	Scope of application	Authorization	Supervision	Registration	Liability	Safety	Transfer of ownership
<p><u>Argentina</u></p> <p>- National Decree No. 995/91, Creation of the National Commission on Space Activities (28 May 1991)</p> <p>- National Decree No. 125/95, Establishment of the National Registry of Space Objects Launched into Outer Space (25 July 1995)</p>			<p>Space activities are monitored, managed and administered by the National Commission on Space Activity (CONAE) (Art. 2 Decree No. 995/91), including competencies of legal enforcement (Art. 4 Decree No. 995/91).</p>	<p>A national registry is established under the direct authority of CONAE (Art. 1 Decree No. 125/95).</p> <p>Operators and owners shall effect registration of their space objects in the national registry (Art. 2 National Decree No. 125/95).</p> <p>The following data must be provided, <i>inter alia</i>, for inclusion in the national registry:</p> <p>information on possible joint launches with one or more other launching states, on the identification of the launch service provider, on date and location of the launch, on the insurance arrangement and on precautions for non-pollution of outer space and end-of-life (Art. 5 Decree No. 125/95).</p>	<p>Information on the insurance arrangement shall be provided for inclusion in the national registry (Art. 5 Decree No. 125/95).</p>	<p>Information on precautions taken with regard to non-pollution of outer space, including celestial bodies (in particular pertaining to mechanisms for placement in a transfer orbit at the end of the useful life of the space object) and the anticipated date of disintegration, recovery or loss of contact with the space object shall be provided for inclusion in the national registry (Art. 5 Decree No. 125/95).</p>	

State and Legislation	Scope of application	Authorization	Supervision	Registration	Liability	Safety	Transfer of ownership
Australia - <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.				
<u>Belgium</u> - <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,

Task for the Secretariat:

- Prepare, in consultation with the Chairperson, for consideration by the Working Group at its next session, *a paper providing a schematic overview of existing national regulatory frameworks* based on information received from Member States.

Views of delegations

- Summarize and synthesize the findings of the Working Group in order to develop a better understanding of the manner in which States regulated space activities; of assistance to Member States in drafting and developing their respective national space laws; representing a valuable contribution to capacity-building in space law and be of particular interest to developing countries.
- Such information could also provide a basis for harmonization of national space legislation.
- **Others?**