Development of National Space Legislation

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Why develop national space legislation (NSL)?

Are there examples/models of NSL?

Possible contents of NSL:
The work of the LSC of UNCOPUOS
Why develop national space legislation?

- 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

(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”
- Only ONE State should register
Obligations of States regarding outer space activities (con’t)

(2) 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)

(3) Duty of 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)
Examples: 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)
- **Italy:** Law No 23 on the implementation of the Convention on International Liability for Damages caused by Space Objects (1983)
- **United Kingdom:** Outer Space Act (1986)
- **Spain:** Royal Decree No 278 on the Establishment in Spain of a Registry of Objects Launched into Outer Space (1995)
Europe II

- **Belgium**: Law on the Activities of Launching, Flight Operations or Guidance of Space Objects (2005), Implementing Royal Decree (2008)
- **The Netherlands**: Rules Concerning Space Activities and the Establishment of a Registry of Space Objects (Space Activities Act) (2007)
- **France**: Space Operations Act (2008), Implementing Decrees (2009)
- **Austria**: Outer Space Act (2011)
America


- **Canada**: Canadian Space Agency Act (1990)

- **Brazil**: - 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)
Asia

- **Japan**: - Law concerning Japan Aerospace Exploration Agency (2002)
  - Basic Space Law (2008)
- **Hong Kong**: Outer Space Ordinance (1997)
  - Resolution on Licensing Space Operations (1996)...
- **Ukraine**: The Law on Space Activity (1996)
- **Republic of Korea**: Space Development Promotion Act (2005)
  - Space Liability Act (2007)
- **Kazakhstan**: National Space Law (2012)
Africa
  • South Africa: Space Affairs Act (1993)

Australia
  • Australian Space Activities Act (1998)

General
See national legislation database: [www.unoosa.org](http://www.unoosa.org)

ILA “Model Law” for NSL: Sofia Guidelines 2012
Possible contents of NSL: the work of the LSC of UNCOPUOS

- “General Exchange of information on national legislation relevant to the peaceful exploration and use of outer space”
  adopted as a new agenda item “under a workplan” in 2007

- Multi-year programme of work (2008-2012)
- Establishment of a Working Group in 2008
- Adoption of Working Group Report in 2012
- Establishment of a “regular item” from 2013 onward
Multi-year programme of work (2008-2012)

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 (2008-2012) (cont’d)

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

2011: Working group continues to examine responses received and drafting its report, including conclusions;

2012: Working group finalises report to Legal Subcommittee.

I) Summary of the work conducted by the Working Group under its multi-year workplan

II) Findings of the Working Group

III) Conclusions

Annex: 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

<table>
<thead>
<tr>
<th>Regulative Category</th>
<th>Corresponding International Obligation/Norm</th>
<th>Elements</th>
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<tbody>
<tr>
<td>Scope of application</td>
<td>n/a, (partly Art. VI OST international responsibility for “national activities”)</td>
<td>activities (ratione materiae)</td>
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<td>jurisdiction (ratione loci/personae)</td>
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<td>Authorization of activities of non-governmental entities</td>
<td>Art. VI OST GA resolution A/RES/59/115</td>
<td>licensing procedure</td>
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<td>change of status: modification/suspension/revocation of license</td>
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<td>conditions for granting licenses connect to other relative categories: registration, liability, safety</td>
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<td>Continuing supervision of activities of non-governmental entities</td>
<td>Art. VI OST</td>
<td>mechanisms of supervision</td>
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<td>role and competencies of supervising authorities (during normal operation and in case of incidents)</td>
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<td>Registration</td>
<td>Art. VIII OST; Art. II, IV REG; GA resolution 1721 (XVI) B; GA resolution A/RES/62/101</td>
<td>establishment of national registry</td>
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<td>obligation to submit information to competent authority</td>
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<td>submission of data to the UN</td>
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<td>Liability and insurance</td>
<td>Art. VI, VII OST; Art. II, III, LIAB</td>
<td>obligation of insurance and financial responsibility</td>
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<td>amount of insurance coverage (minimum requirements/caps)</td>
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<td>state indemnification</td>
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<td>Safety</td>
<td>Art IX OST; NPS Principles; COPUOS Space Debris Mitigation Guidelines</td>
<td>avoidance of harmful contamination of outer space and adverse change to the environment of the Earth</td>
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<td>implementation of space debris mitigation</td>
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<td>Transfer of ownership</td>
<td>Art. VI, VII, VIII OST, REG, LIAB, GA resolution A/RES/62/101</td>
<td>requirement of permit for selling of satellites to (foreign persons)</td>
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</tbody>
</table>
In addition: Schematic overview over NSL

I. Summary of the schematic overview over national space legislation

II. Table

To be updated regularly: “Living instrument”

March 2012: A/AC.105/C.2/2012/CRP.8, A/AC.105/C.2/2012/CRP.8, Add.1
### Schematic overview of national space legislation

<table>
<thead>
<tr>
<th>State and Legislation</th>
<th>Scope of application</th>
<th>Authorization</th>
<th>Supervision</th>
<th>Registration</th>
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<th>Safety</th>
<th>Transfer of ownership</th>
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<tr>
<td><strong>Argentina</strong></td>
<td>- National Decree No. 995/91, Creation of the National Commission on Space Activity (CONAE) (Art. 2 Decree No. 995/91)</td>
<td>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).</td>
<td>A national registry is established under the direct authority of CONAE (Art. 1 Decree No. 125/95). Operators and owners shall effect registration of their space objects in the national registry (Art. 2 National Decree No. 125/95). The following data must be provided, inter alia, for inclusion in the national registry: 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).</td>
<td>Information on the insurance arrangement shall be provided for inclusion in the national registry (Art. 5 Decree No. 125/95).</td>
<td>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).</td>
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<td><strong>Australia</strong></td>
<td>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</td>
<td><em>A space license</em> (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. <strong>Launch permit</strong> (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 <strong>launch permit</strong> can only be granted to the holder of a <strong>space license</strong>. An <strong>overseas launch certificate</strong> 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).</td>
<td><em>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).</em></td>
<td>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)</td>
<td><strong>A launch permit</strong> requires to satisfy either insurance requirements or show direct financial responsibility for launch or return. The holder of a launch permit and an <strong>overseas launch certificate</strong> 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).</td>
<td>A space license, a <strong>launch permit</strong> and an <strong>overseas launch certificate</strong> can be transferred (Sec. 22-25, 31-34 and 38-41 Space Activities Act).</td>
<td>A space license, a <strong>launch permit</strong> and an <strong>overseas launch certificate</strong> 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).</td>
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<td>Belgium</td>
<td>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 agreement (Art. 5, § 1, Law on the activities of launching...)</td>
<td>The space license, launch permit and overseas launch certificate 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).</td>
<td>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 launching...)</td>
<td>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 must be landed (Art. 13, § 4, Law on the activities of launching...)</td>
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<td>Activities Act). A person operating without authorization a launch facility are liable to a civil penalty (Art. 15 Space Activities Act). Further civil penalty provisions are set forth in Part 6 Space Activities Act.</td>
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Irmgard Marboe
Findings of the Working Group

- 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.
Findings of the Working Group (cont’d)

(a) Reasons to enact national space legislation:

■ The need to fulfill 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.
Findings of the Working Group (cont’d)

(b) Scope of activities targeted/scope of application of the law:

- 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.
Findings of the Working Group (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.
Findings of the Working Group (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 license;
- 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.
Findings of the Working Group (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.
Findings of the Working Group (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.
Findings of the Working Group (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 fulfillment of obligations under a license.

- Set of administrative measures for minor violations and a sanctions regime, including penal sanctions in some cases, for more serious offences.
Conclusions/recommendations of the LSC 2012:

- Appendix to the Report of the Chair of the WG on NSL, April 2012, A/AC.105/1003, Annex III

- June 2012: Revised version to be considered in 2013, A/AC.105/2012/CRP.21
Recommendations of LSC (as of 2012)

■ Preamble:
“Noting … the need for a practical regulatory system for private sector involvement … some States also include national space activities of a governmental character …”

■ One operative paragraph:
“Recommends the following elements for consideration by States when enacting regulatory frameworks for national space activities, in accordance with their domestic law, as appropriate, taking into account the specific needs of the State concerned: (…)”

■ Eight “elements”
Recommendations of LSC (cont’d)

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, national citizens; however, forebear “duplicative requirements”
Recommendations of LSC (cont’d)

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 States 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
Conclusions

- NSL is required to authorise and supervise private operators
- Inclusion of governmental space activities also possible
- Identify competent authorities for authorisation, supervision and registration
- Conditions of authorisation are the most important tool to control the space activities and to implement int‘l obligations and to pursue national interests
- Provide for a recourse system and insurance requirements
- Consider possible changes of ownership or control