United Nations/Austria Symposium

Access to Space: Holistic Capacity-Building for the 21st Century

Graz, Austria, 3-7 September 2017

Session 6

Workshop on specific tools for Space Law Capacity-Building

Perspectives of the future Space Law Compendium as an outcome of UNISPACE+50

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UNISPACE+50 thematic priorities – the context of the legal regime for outer space and of the Space Law Compendium

- 1. Global partnership in space exploration and innovation
- 2. Legal regime of outer space and global space governance: current and future perspectives
- 3. Enhanced information exchange on space objects and events
- 4. International framework for space weather services
- 5. Strengthened space cooperation and global health
- 6. International cooperation towards low-emission and resilient societies
- 7. Capacity-building for the 21st Century

Thematic priority 2: Objective and Mechanism

Legal regime of outer space and global space governance: current and future perspectives

Objective: Promote the **universality** of the 5 UN Space Treaties
State of affaires / Relation to other international instruments / Effectiveness / Identifying areas of additional regulation

- (a) Developing the questionnaire Perspective up to 2018
- (b) Studying potential future legal and institutional initiatives Space law as a relevant part of global space governance
- (c) Studying legal mechanisms to foster an internat. regime of responsibility/liability
- Perspectives of space traffic management
- Enhanced information on objects and events
- Avoidance of in-orbit-collisions and interference
- (d) Identifying by 2018 criteria for a guidance document 2020
- (e) Considering means of strengthen the LSC Closer cooperation with STSC

Mechanism: WG Status and Application of the Five United Nations Treaties

02 Legal regime of outer space and global space governance: current and future perspectives

Objectives:

Promote the universality of the five United Nations treaties on outer space. Assess the state of affairs of those treaties and their relationship with other relevant international instruments, such as principles, resolutions and guidelines governing space activities. Analyse the effectiveness of the legal regime of outer space in the twenty-first century, with a view to identifying areas that may require additional regulation.

Conduct an evaluation by:

a) Developing the questionnaire of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space to encompass an assessment of the legal regime of outer space as a pillar of global space governance. The questionnaire should be used in the period leading up to 2018 to assist the Legal Subcommittee in addressing the status and scope of, and assessing and, as appropriate, addressing possible gaps in, the legal regime of outer space;

02 Legal regime of outer space and global space governance: current and future perspectives

(b) **Studying** potential future legal and institutional initiatives intended to ensure that outer space is explored and used for peaceful purposes and that access to outer space remains open and free for the benefit of all countries, in order to ensure that international space law is a relevant part of global space governance in the twenty-first century in the light of the significant scientific developments and technical advances that have affected space activities;

(c) **Studying** legal mechanisms to foster an international regime of responsibility and liability to cope with present and future challenges to the safety, security and sustainability of outer space activities and safety of space operations, the perspectives of traffic space management and an enhanced exchange of information on space objects and events. Specific consideration is to be given to current practical concerns of the international community, such as in-orbit collisions and interferences. In particular, there should be an assessment of the need for enhanced registration notification procedures their and institutional requirements the under registration and notification platform maintained by the Office for Outer Space Affairs;

02 Legal regime of outer space and global space governance: current and future perspectives

(d) Identifying, by 2018, approaches and possible criteria for developing, by 2020, a **guidance document** to be issued by the Committee on the Peaceful Uses of Outer Space with essential information on the state of affairs of the legal regime governing outer space, including relevant instruments applied through national frameworks regulatory and international mechanisms for cooperation. Such a document should serve as valuable guidance for States wishing to become a party to the five United Nations treaties on outer space;

(e) Considering means to strengthen the Legal Subcommittee as the prime multilateral body with a mandate to promote the progressive development of international space law, including procedural and institutional improvements and closer cooperation with the Scientific and Technical Subcommittee

Thematic priority 2: Legal regime of outer space and global space governance: current and future perspectives

Working method: 3 clusters (A/AC.105/1122, Annex I, para. 7)

Cluster 1:

Use **set of questions** of the working group to assess state of affairs of the 5 UN treaties, analyse effectiveness, status, scope and possible gaps in the legal regime. Assess customary law perspectives relating to international space law, as well as substantive, operational and conceptual gaps in the legal regime.

Cluster 2:

Observe progress of LTS Working Group of STSC, as well as thematic priority 3 (Enhanced information exchange on space objects and events), with a view of connecting these results with objectives (c) of thematic priority 2. Also important in the context of strengthening LSC and establishing closer cooperation with STSC.

Thematic priority 2: Legal regime of outer space and global space governance: current and future perspectives

Working method: 3 clusters (A/AC.105/1122, Annex I, para. 7)

Cluster 3:

Identify **approaches and criteria for developing a guidance document** with the aim of promoting the universality of the five United Nations treaties on outer space:

- Explore ways and means to encourage COPUOS Member States to become parties to the OST
- Promote the increase of membership of COPUOS
- Develop the document in combination with other tools (e.g. online tools on the UNOOSA website, issuance of a report in the six official UN languages)
- Observe progress and outcome of past LSC working groups (e.g. concept of "launching state", registration practice, national space legislation, etc.)
- Consider capacity-building and technical assistance of UNOOSA in the field of international space law and policy as fundamental tools in these efforts

Thematic priority 2: Legal regime of outer space and global space governance: current and future perspectives

Timeline for Cluster 3 guidance document (A/AC.105/1122, Annex I, para. 8)

2018: Identify and agree on the key points for the guidance document and the online tool under cluster 3, including on efforts to strengthen capacity-building and assistance, on the basis of a proposed outline to be presented by the Chair in close consultation with the Secretariat

2019: On the basis of a proposal by the Chair, in close consultation with the Secretariat, review the draft guidance document and tools for the universality of the five United Nations treaties on outer space, in particular on the enhancement of accession to the Outer Space Treaty and membership of the Committee

2020: Finalize the guidance document and tools under cluster 3. Decide on any further consideration of topics identified under clusters 1-3, as appropriate, and identify the most suitable mechanism within the Legal Subcommittee for this purpose

Working Group on the Status and Application of the Five United Nations Treaties on Outer Space

- Established in 2001 by the LSC with a mandate including "the status of the treaties, review of their implementation and obstacles to their universal acceptance, as well as promotion of space law" (A/AC.105/763, para. 118)
 Reports annually on the status of intern. agreements relating to activities in outer space
- Reviews the status of the five United Nations treaties on outer space through a set of questions, aimed at highlighting possible shortcomings, uncertainties and ambiguities in the treaties and draw the State Parties' attention to it. Current topics include the legal regime and global space governance, provisions related to the moon and other celestial bodies, international responsibility and liability,

 Constitutes the mechanism for UNISPACE+50 thematic priority 2 (Legal regime of outer space and global space governance: current and future perspectives)

registration of space objects and

international customary law in outer space

Questionnaire on Status and Application of the 5 Treaties

- The legal regime of outer space and global governance
- UN Treaties / provisions related to Moon and other celestial bodies
- International responsibility and liability

Is there a need for traffic rules in outer space as a prerequisite of a fault-based liability regime?

Registration of space objects

Does the concept of mega constellations raise legal and / or practical questions? Is there a need for an adapted registration form?

Is there a possibility to introduce a registration 'on behalf' of a State?

STSC WG: 12 agreed upon LTS guidelines

Between the 12 agreed upon guidelines are inter alia the following topics:

- Adopt, revise and amend, as necessary, national regulatory frameworks for outer space activities
- Supervise national space activities
- Promote the collection, sharing and dissemination of space debris monitoring information
- Sharing of operational space weather data and forecasts
- Research/support of ways to support sustainable exploration and use of outer space
- Investigate/consider new measures to manage the space debris population in the long term

LTS open issues / further guidelines under discussion

Guideline topics for further discussion are inter alia:

- Enhance the practice of registering space objects
- Commitments in national policy of conducting space activities solely for peaceful purposes
- No intentional modification of natural space environment
- Policies precluding interference with foreign objects (unauthorized access)
- Information on space objects and orbital events
- Safety and security of terrestrial infrastructure
- Criteria and procedures for active removal of space objects from orbit
- Criteria and procedures for active removal under exceptional circumstances (spec. non-registered objects)
- Normative and organizational frameworks for ensuring effective and sustained implementation of the guidelines

Relationship Questionnaire / Treaty Articles

Set of questions of the WG 5 TRE

- The legal regime of outer space and global space governance
- 1.1. ...
- 1.2. ...
- 2. United Nations treaties on outer space and provisions related to the Moon and other celestial bodies
- 3. International responsibility and liability
- 4. Registration of space objects
- 5. International customary law in outer space

Where is the need for...?

Treaty Articles

Relationship LTS Guidelines / Treaty Articles

LTS guidelines

- 1. Adopt, revise and amend, as necessary, national regulatory frameworks for outer space activities
- 2. Consider a number of elements when developing, revising or amending, as necessary, national regulatory frameworks for outer space activities
- 3. Supervise national space activities
- 4. Ensure the equitable, rational and efficient use of the radio frequency spectrum and the various orbital regions used by satellites

12. ...

Where are the specific treaty provisions being translated into operational form by the LTS guidelines?

Treaty Articles



The way forward to a 2020 Guidance Document Basics – Methods - Vision

Looking at the existing substance

Interpretation in the spirit of the treaties

Using the existing approaches for capacity building

Comparing the existing tools of documentation

Analysing gaps and needs for the future

Having a vision for the future

Making the realistic steps in the upcoming years



Perspectives on the further development of the legal framework of space activities

Two-tiered approach to further develop the legal framework of space activities:

- Preserve, strengthen and universalize the legal framework established by the five United Nations treaties on outer space, containing the basic principles governing space activities, as the overarching structure of international space law
- Further develop the legal regime organizationally and regulatory through guidelines, technical standards, "best practices", etc. in order to move towards an operative-administrative system under the treaties, able to adopt to changing conditions

Aspects on future institutional developments Pending ideas for future challenges

Strengthening COPUOS and UNOOSA

The Committee further noted that UNISPACE+50 offered a unique opportunity for countries to reflect on the achievements of the more than 50 years of space exploration and look towards the future, strengthening the mandates of the Committee on the Peaceful Uses of Outer Space, its subsidiary bodies and the Office for Outer Space Affairs, as unique platforms for international space cooperation... (COPUOS Report 2017, A/72/20, para. 323)

International space monitoring platform (Proposal of the Russian Federation)

It is possible to envisage a whole range of States and other legal entities joining forces on a multilateral and/or bilateral basis to analyse and exchange specific information. [...] Hypothetically, **the most feasible idea seems to be the creation of a single monitoring centre**... (Working paper at COPUOS in 2012, A/AC.105/2012/CRP.19, para. 30)

Global space organization

There is no single global institution which fully oversees all space-related matters, which has the authority to take effective decisions and actions on behalf of humankind as well as to exercise coordination over all activities in the space sector on a global scale. [...] [I]t makes sense that a single international organisation is created to regulate space activities in holistic manner in consultation and collaboration with other specialised agencies of the UN and other stakeholders. (Prof. Dr. Ram Jakhu, Presentation at the High-Level Forum Preparatory Meeting, Vienna, 2015)

UN Space Law Workshop 2016: Contribution of Space Law and Policy to Space Governance and Space Security in the 21st Century

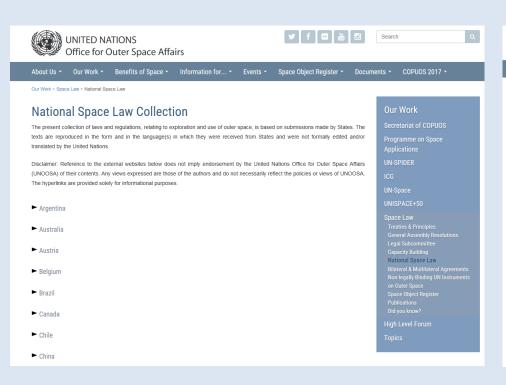


Capacity-Building in space law



- Access to space law
- Common interpretation

Already existing instruments





UN-SPIDER Knowledge Portal



 Online tool providing resources for disaster management and emergency response

• ...

• ...

Knowledge portal for space law?



- Online portal for space law resources
- Existing resources on UNOOSA's website:
- Space debris compendium
- National space law collection
- ITU/UNOOSA Small satellite guidance document

Universalisation of the UN Space Treaties

The Outer Space Treaty and the four special treaties as a comprehensive framework

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Assistance/ Return (Art. V) \rightarrow ARRA into force 03 Dec1968 Liability (Art. VII) \rightarrow LIAB into force 01 Sept 1972 Registration (Art. VIII) \rightarrow REG into force 15 Sept 1976 Moon Regime (Art. IV, XII) \rightarrow MOON into force 11 July 1984
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• Status quo of ratification / signature (1st Jan. 2017)

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OST (1967) > 105 Ratifications / 25 Signatures
ARRA (1968) > 95 Ratifications / 24 Signatures
LIAB (1972) > 94 Ratifications / 21 Signatures
REG (1976) > 63 Ratifications / 4 Signatures
MOON (1984) > 17 Ratifications / 4 Signatures
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Open issue: Consensus by Ressources and exploitation
 Operative implementing instruments in specific areas



The 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (OST)

Preamble

Article I Freedom of Exploration and Use

and the Benefits Clause

Article II Non-Appropriation

Article III Application of International Law
Article IV Military Uses of Outer Space
Article V Rescue and Return of Astronauts

and Space Objects

Article VI International Responsibility

Article VII Liability

Article VIII Registration, Jurisdiction and

Control, Ownership

Article IX Principle of Due Regard and

Protection of the Space Environment

Article X Observation of Flight of Space

Objects

Article XI Provision of Information

Article XII Visits of Stations by Other States
Article XIII International Intergovernmental

Organizations

Article XIV-XVII Miscellaneous Clauses (Signature,

Ratification, Withdrawal)

Outer Space Treaty (OST)

Rescue Agreement (ARRA)

Liability Convention (LIAB)

Registration Convention (REG)

Moon Agreement (MOON)

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OST

- Principles
- Basic Rights and Obligations
- Role of IGOs

General Part

- Definitions
- Institutional Framework
- Guidelines and administrative procedural rules

Outer Space Treaty and Implementing Agreements

The 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (OST)

Preamble Article I Freedom of Exploration and Use and the Benefits Clause Article II Non-Appropriation Article III Application of International Law Article IV Military Uses of Outer Space Article V Rescue and Return of Astronauts and Space Objects Article VI International Responsibility Article VII Article VIII Registration, Jurisdiction and Control, Ownership Article IX Principle of Due Regard and Protection of the Space Environment Article X Observation of Flight of Space Objects Article XI Provision of Information Article XII Visits of Stations by Other States Article XIII International Intergovernmental Organizations Article XIV-XVII Miscellaneous Clauses (Signature,

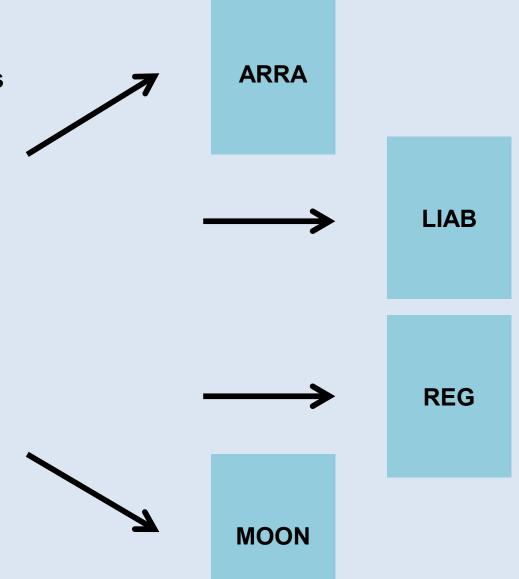
Assistance/ Return (Art. V)

Ratification, Withdrawal)

Liability (Art. VII)

Registration (Art. VIII)

Moon regime (Art. IV, XII)



The 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (ARRA)

Article 1 Notification of Accidents/ Distress/ Emergency or Unintended Landing Article 2 Rescue and Assistance/ Territory under Jurisdiction of Contracting Party
under Jurisdiction of Contracting
Article 3 Assistance and Rescue/Territory not under Jurisdiction of Contracting Party
Article 4 Prompt Return of Personnel
Article 5 Notification, Recovery and Return of Space Objects
Article 6 Launching Authority
Article 7 Signature/Ratification/Accession/ Entry into Force
Article 8 Proposed Amendments
Articles 9-10 Final Provisions

ARRA

- Notification of Accidents
- Rescue and Assistance
- Prompt Return

The 1972 Convention on International Liability for Damage Caused by Space Objects (LIAB)

Preamble

Article I Definitions
Article II Absolute Liability
Article III Fault Liability

Article IV Damage Caused Jointly by Two or

More Space Objects/ Third Party

Liability

Article V Joint Launch/ Joint and Several

Liability

Article VI Exoneration from Absolute Liability
Article VII No Application to Nationals and

Foreign Participants in Launching

State(s)

Article VIII Eligibility of Claimant States
Article IX Diplomatic Channels
Article X Term for Claims

Article XI Relation to National Jurisdiction
Article XII Determination of Compensation
Article XIII Currency of Compensation
Article XIV Lack of Settlement/ Claims

Commission

Article XV Composition of the Claims

Commission

Article XVI Lack of Appointment/ Vacancy/

Procedures

Article XVII Joint and Collective Appointment

Article XVIII Content of the Decision
Article XIX Final and Binding Decision

Article XX Expenses

Article XXI Large-Scale Danger

Article XXII International Intergovernmental

Organizations

Article XXIII Relation to International Agreements

Article XXIV Signature/ Ratification/ Accession/

Entry into Force

Article XXV Proposed Amendments
Article XXVI Review/ Revision
Articles XXVII-XXVIII Final Provisions

LIAB

- Absolute Liability
- Fault Liability
- Diplomatic Channels
- Procedures

The 1975 Convention on Registration of Objects Launched into Outer Space (REG)

Preamble

Article I Definitions

Article II National Registries/ Registration

Obligation

Article III UN Register/ Registration Obligation

Article IV Information by Each State of

Registry

Article V Designator or Registration Number

Article VI Request for Identification/

Assistance

Article VII International Intergovernmental

Organizations

Article VIII Signature/ Ratification/ Accession/

Entry into Force

Article IX Proposed Amendments

Article X Review/ Revision
Article XI-XII Final Provisions

REG

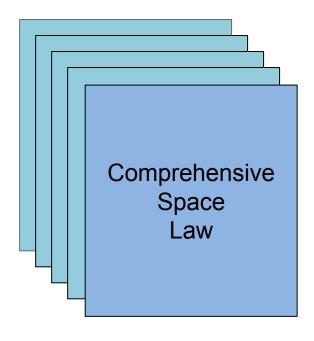
- Registration
- National Registries
- UN Register

The 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (MOON)

Preamble	
Article 1	Scope of Application
Article 2	International Law/ Cooperation
Article 3	Peaceful Purposes/ Demilitarization
Article 4	Province of All Mankind
Article 5	Mission Information/ Scientific
	Community
Article 6	Scientific Investigations/ Samples/
	Minerals
Article 7	Environment/ Radioactive Materials
Article 8	Exploration and Use/ Consultations
Article 9	Stations/ Free Access
Article 10	Safeguard of Life and Health
Article 11	Common Heritage of Mankind/
	International Regime
Article 12	Jurisdiction and Control/Ownership/
	Emergency
Article 13	Crash, Forced or Unintended
	Landing
Article 14	International Responsibility/ Liability
Article 15	Verification/ Access/ Consultations/
	Dispute Settlement
Article 16	International Intergovernmental
	Organizations
Article 17	Proposed Amendments
Article 18	Review/ Revision
Article 19	Signature/Ratification/Accession/
	Entry into Force
Articles 20-21	Final Provisions

MOON

- Demilitarization
- Common Heritage
- Space Resources
- International Regime for Exploitation



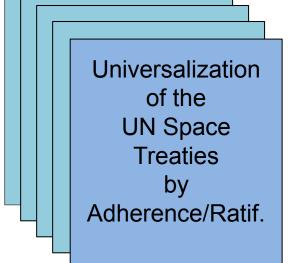
UN-Guidelines / Resolutions

Operative-Administrative Rules

as a living document with an institutionalized procedere

National Implementation

First steps for the future



UN-Guidelines / Resolutions

LTS Guidelines

Operative-Administrative Rules

as a living document with an institutionalized procedere

Implementation, review and updating of the Guidelines
Discussion on Space Traffic Management

National Implementation

Interaction between Guidelines and National Implementation

LTS Guidelines and (national) implementation

National Implementation of the first set of Guidelines, e.g.

The **UK's implementation** of the first set of guidelines on LTS of Outer Space Activities (STSC 2017, CRP. 21)

General presentation of **French** activities and views for LTS of outer space, in relation with the **implementation** of the first set of guidelines (STSC 2017, CRP. 26)

LTS Guidelines – Implementation and updating

(A/AC.105/C.1/L.354 of 20 June 2016: Guideline 29; A/AC.105/L.308, unedited version of 15 Feb. 2017: Chapter E 23-26)

- (24) The UN should be regarded...as the principal forum for continued **instituionalized dialogue** on issues related to the implementation of the guidelines.
- (25) ...the guidelines should be **periodically reviewed and revised** to ensure that they continue to provide effective guidance to States...



Comparative Example

Following the ITU mechanism for revisions of the Administrative Regulations by the World Conferences:



- By ratifying the Constitution the State accepts also the binding mechanism of the Administrative Regulations
- the revisions are only binding for those states which accept them in an explicit way
- For members states that do not agree to the revisions:
 - » the revision is applicable in a provisional manner to all member states which have signed the final act of the conference, except if they have explicitly contradicted them
 - » such provisional application shall continue for a Member State until it notifies the Secretary-General of its decision concerning its consent to be bound by any such revision
 - » if a Member State fails to notify the Secretary-General of its decision concerning its consent to be bound within thirty-six months following the date or dates of entry into force of the revision, that Member State shall be deemed to have consented to be bound by that revision

UNGA Resolution 1962 (XVIII) of 13 Dec. 1963 – Declaration of Legal Principles ...

- Basic Principles governing the Activities of States in the Exploration and Uses of Outer Space:
 - 1.Province of all mankind
 - 2. Freedom for exploration and use
 - 3. Non-Appropriation
 - 4. Use in accordance with international law/ UN Charter
 - 5.International Responsibility for national activities
 - 6. Cooperation, mutual Assistance, Consultations
 - 7. Registration as connecting point for jurisdiction and control
 - 8. Liability for launching States
 - 9. Assistance for astronauts in distress
- Principles are implemented by the OST and generally accepted / customary international law
- Todays challenge: Safeguarding the consent on those Principles, strenghen awareness and knowledge, add operational tools for its adaptation to challenges of the 21st Century



The way forward to a 2020 Guidance Document

In the frame of the UNISPACE+50 process, until 2018, approaches and possible criteria should be identified

for an **UNCOPUOS Guidance Document** by 2020 with essential information

- on the state of affaires of the legal regime governing outer space
- incl. relevant instruments applied through national regulatory frameworks and international mechanisms for cooperation.

Goal:

Guidance for States wishing to become a party to the 5 UN Space Treaties

Perspective 2030: Implementing provisions for the UNCOPUOS Guidance Document thereby creating Space Traffic Management rules

