An Introduction to the Questionnaire on Small Satellites of the Legal Subcommittee

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UNITED NATIONS
Office for Outer Space Affairs

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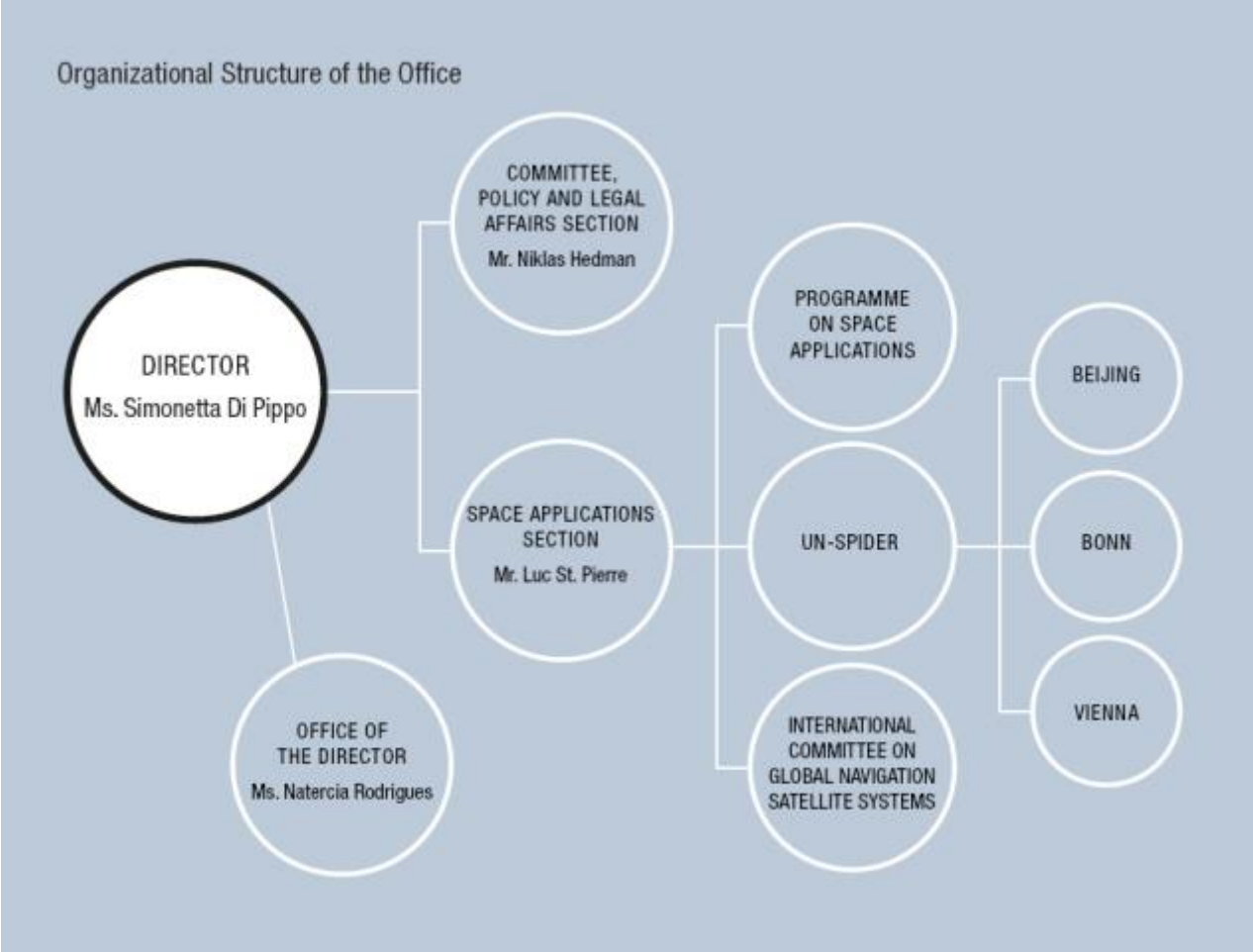
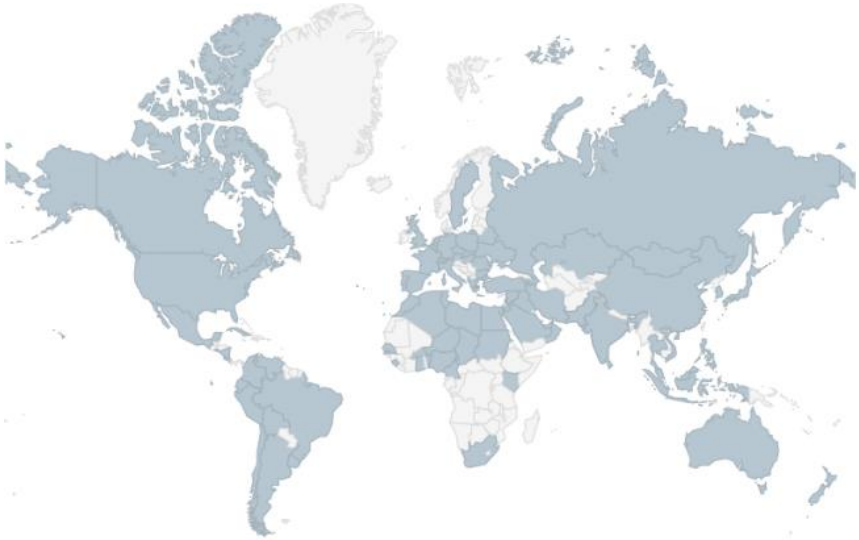
UNOOSA Structure



Committee, Policy and Legal Affairs (CPLA)

CPLA provides **substantive secretariat services to the Committee on the Peaceful Uses of Outer Space (COPUOS)**, its Scientific and Technical Subcommittee and Legal Subcommittee and related working groups.

Committee on the Peaceful Uses of Outer Space



1959: COPUOS established by Resolution 1472 (XIV).
It has expanded the number of members from 1959: **24** 2018: **87.**

- UN committee reviews peaceful use of outer space, **encourages space research** programmes, and **studies legal issues** arising from exploration of space
- COPUOS has created **5 treaties and 5 principles** of outer space
- The Committee's membership has continued to expand (**87 members representing over 6 billion people**)
- Two subcommittees: Scientific and Technical and Legal Subcommittees

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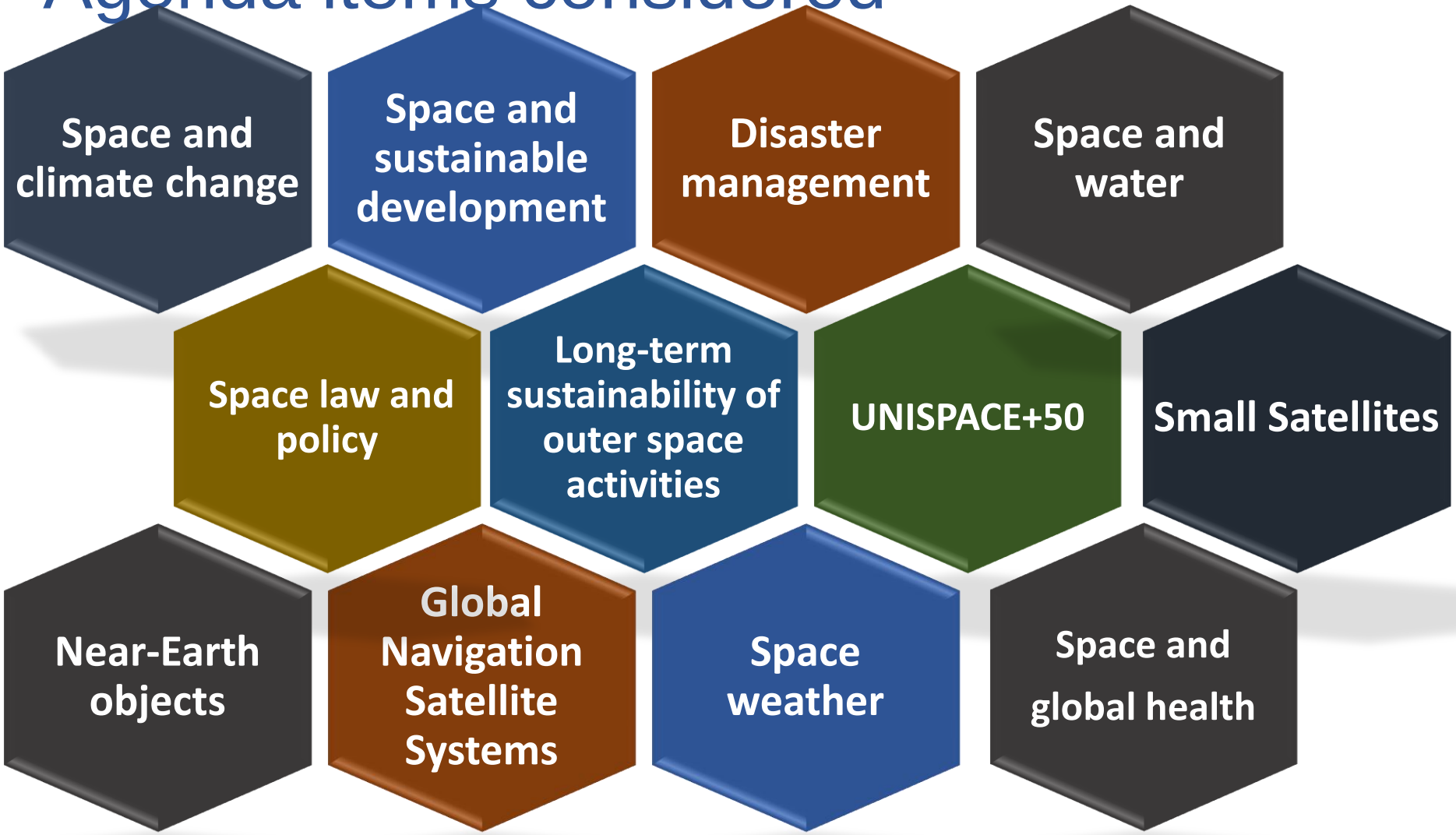
Scientific and Technical Subcommittee (STSC) and Legal Subcommittee (LSC)

The **Scientific and Technical Subcommittee (STSC)** considers questions related to the scientific and technical aspects of space activities.
Topics for discussion include **space weather**, **near-Earth objects**, the use of **space technology for socioeconomic development**, and for **disaster management support**, **global navigation satellite systems**, and the **long-term sustainability** of outer space activities.

The **Legal Subcommittee (LSC)** considers **legal questions** related to the exploration and use of outer space.
Topics include the status and application of the **five United Nations treaties on outer space**, the definition and delimitation of outer space, national space legislation, legal mechanisms relating to **space debris mitigation**, and **international mechanisms for cooperation** in the peaceful exploration and use of outer space

Agenda items considered



Annual Cycle of COPUOS

COPUOS
(20-29 June, 2018)

STSC
(29 Jan- 9 Feb, 2018)

LSC
(9-20 Apr, 2018)

A/RES/72/XX
"International cooperation in the peaceful uses of outer space"

Delegates
87 mS

Report: A/73/XX

Agenda Items

1. General exchange of views
2. Info on activities of intl organizations
3. Status and application of the 5 UN treaties
4. Definition/delimitation of outer space +GSO
5. National legislation
6. Capacity-building in space law
7. Use of nuclear power sources
8. Space debris mitigation
9. Non-legally binding Instruments
10. Space traffic Management
11. **Application of Intl law to small satellites activities**
12. Space resources
13. Draft provisional agenda

All UN MS

Fourth Committee
of the General Assembly
(October, 2018)

General Assembly
(Dec, 2018)

Consideration in the LSC

- In 2016, LSC begun its consideration of “General exchange of views on the application of international law to small satellites activities”.

- To provide valuable opportunities for addressing a number of topical issues relating to international and national policy and regulation measures regarding the use of small satellites by various actors.

Questionnaire

- In 2016, LSC requested the Secretariat to prepare a questionnaire containing a set of questions addressing the practice of the development and use of small satellites, as well as policy and legal aspects of their use.

- The Secretariat presented the draft questionnaire on small-satellite activities during 2017 session and was considered under the Working Group on the status and application of the five United Nations treaties on outer space

- Adopted by the LSC in 2017 (A/AC.105/1122).

6 areas of questions

1. Overview of small satellites activities
2. Licensing and authorization
3. Responsibility and liability
4. Launching State and liability
5. Registration
6. Space debris mitigation in the context of small-satellite activities

The intention of the questionnaire is to raise awareness among member States by drafting the reply

1. Overview of small-satellites activities

1.1 Are small satellites serving the needs of your society? Has your country determined whether small satellites could serve an identified technological or development need?

1.2 Is your country involved in small-satellite activities such as designing, manufacturing, launching and operating? If so, please list projects, as appropriate. If not, are there future plans to do so?

1.3 Which kind of entity in your country is carrying out small-satellite activities?

1.4 Is there a focal point in your country responsible for coordinating small-satellite activities as part of your national space activities?

1.5 Are small-satellite activities carried out in the framework of international cooperation agreements? If so, what type of provisions specific to small-satellite activities are included in such cooperation agreements?

2.Licensing and authorization

2 Do you have a legal or regulatory framework to supervise any aspect of small-satellite activities in your country? If so, are they general acts or specific rules?

Many states do not have regulation or rules in licensing satellites. Moreover, they may even not have national space legislation.
Therefore it is difficult to authorize and continuously supervise small satellites activities.

3.Responsibility and liability

3.1 Are there new challenges for responsibility and liability in view of small-satellite activities?

3.2 How are liability and insurance requirements enforced on an operator in your country, for a small satellite under your country's responsibility, in the event that "damage" occurs on the surface of Earth, to aircraft in flight or to another space object in orbit?

Since small satellites nowadays can be launched with low cost, many universities or NGOs are involved in small satellites activity.

However, if these satellites causes damage, regardless of their size, the launching State will be liable under the Liability Convention.

Therefore, it is important to know that all satellite operators recognize potential liability and assure measurements for compensation.

Liability Framework 1

A launching state shall be

liable to pay compensation for damage caused by

its space objects

(OST Art. VII & Liability Convention)

Launching State

1 State which launches a space object

2 State which procures the launching of a space object

3 State from whose territory a space object is launched

4 State from whose facility a space object is launched

Damage

Loss of life, personal injury or other impairment of health; or loss of damage to property of States or of persons, natural or juridical, or property of international intergovernmental organization

Space objects

Component parts of a space object as well as its launch vehicle and parts thereof

Liability Framework 2

Damage caused by a space object

Damage in surface of the Earth

absolute liability
（Liability Convention Art.II）

Space activities are beneficial, however...

- incorporates ultra-hazardous activities
- might cause great damage
- requires knowledge of the space technology and notoriously difficult to prove the fault

Damage in outer space

liability
（Liability Convention Art. III）

Both parties acknowledge the risk of space activities.

Due diligences is required.

If there is no fault there will be no illegality to the act.

4.Launching State and liability

4.1 Since small satellites are not always deployed into orbit with dedicated rockets as in the case of larger satellites, there is a need for clarification in the understanding of the definition of “launch”. When a launch of a small satellite requires two steps — first, launching from a site to an orbit and, second, deploying the small satellite to another orbit — in your view, would the first step be regarded as the “launch” within the meaning of the United Nations treaties on outer space?

4.2 Do you think that the current international regulatory regime is sufficient to regulate operators of small satellites or that there should be a new or different international regulatory approach to address operations of small satellites?

Small satellites are not always deployed into orbit with rockets as in the case of big satellites. Therefore there may arise problems in finding a country suitable for “procuring the launch”. In terms of liability, it may be difficult to find the country liable when an incident has occurred.

5.Registration

5 Does your country have a practice of registering small satellites? If so, does your country have a practice of updating the status of small satellites? Is there any legislation or regulation in your country that requires non-governmental entities to submit to the Government information for the purpose of registration, including updating of the status of small satellites they operate?

Under the Registration Convention, states must register space objects regardless of their size.
However, registration to the UN is done in a “timely manner”, hence the status of the small satellites are not changed or sometimes never registered due to their relatively short life time.

Information required for registration (Treaty)

Registration Convention (Article IV para. 1):

Each State of registry shall furnish to the Secretary-General of the UN, **as soon as practicable**, the following information concerning each space object on its registry:

- name of launching State or States;
- an appropriate designator of the space object or its registration number;
- date and territory or location of launch;
- basic orbital parameters, including:

  (i) nodal period (time for satellite to orbit the Earth)

  (ii) inclination (angle from the equator of the orbit of the satellite)

  (ii) apogee (the furthest distance the orbit is from the Earth);

  (iii) perigee (the closest distance the orbit is from the Earth);
- general function of the space object.

Additional Information required for registration

In reference to Article IV para 2

Recommendation on Registering Space Objects (res 62/101, 2007) (para. 4 (a)):

States could furnish additional information, such as;

(i) The date of change in supervision;

(ii) The identification of the new owner of operator;

(ii) Any change of orbital position;

(iii) Any change of function of the space object;

6.Space debris mitigation in the context of small-satellites activities

6 How has your country incorporated specific requirements or guidelines into its national regulatory framework to take into account space debris mitigation?

Piggy-back launch is the major method to deploy small satellites.
This means that even though small satellites have short lives they will be in the orbit for around 25 years.

Responds to the questions

- Questionnaire is available in A/AC.105/1122
- Provide the LSC with valuable information on the important issues covered by the questionnaire.
- Responds are open to …
  - member States
  - observers

    (International intergovernmental and non-organizations having permanent observer status)
- Made available in a conference room paper

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THANK YOU

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