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English only

**Committee on the Peaceful
Uses of Outer Space
Legal Subcommittee
Fifty-eighth session
Vienna, 1–12 April 2019
Item 5 of the provisional agenda*
Status and application of the five United Nations
treaties on outer space**

**Questionnaire on the application of international law to
small satellite activities**

Note by the Secretariat

At its fifty-seventh session, in 2018, the Working Group of the Legal Subcommittee on the Status and Application of the Five United Nations Treaties of Outer Space agreed ([A/AC.105/1177](#), Annex I, para.8) that States members and permanent observers of the Committee should continue to be invited to provide comments and responses to the “Questionnaire on the application of international law to small satellite activities” ([A/AC.105/1177](#), Annex I, Appendix II).

The present conference room paper contains replies received from Brazil and Czechia to the questionnaire.

* [A/AC.105/C.2/L.308](#).



Brazil

[Original: English]
[Received on 6 February 2019]

Questionnaire on the application of international law to small-satellite activities

1. Overview of small-satellite 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?

Yes. Small-satellites are mainly used in our society for technological development and human resources training.

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?

Yes, Brazil is currently involved in 8 small-satellite projects.

- NanosatC-Br 1 and 2;
- AESP-14;
- SERPENS 1 and 2;
- ITASAT;
- Floripasat;
- SPORT.

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

The Brazilian Space Agency(AEB), the National Institute for Space Research (INPE), and universities such as ITA,UFSM, UFABC, UFMG, and UFMA.

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

Yes, the focal point is the Satellite, Applications and Development Directorate (DSAD) at the Brazilian Space Agency. Dr. Rodrigo Leonardi is the person in charge.

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?

We are currently working in a project called SPORT (Scintillation Prediction Observation Research Task) in cooperation with NASA. The workshare is as follows: United States of America: Payload, Launching and Data Analysis; Brazil: Bus, Operation and Data Analysis.

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?

Not yet. The Brazilian Space Agency is currently working on it.

3. Responsibility and liability

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

The Brazilian Space Agency understand that space debris and other satellites operations and interference are the new challenges regarding 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 air craft in flight or to another space object in orbit?

Since all small satellites under Brazil's responsibilities are governmental, the government takes care of the damages. Brazilian Space Agency is currently working on legislation for private users.

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?

Yes, since even attempt of launch is considered a launch by the international regulatory framework, we understand the small satellite would be a payload as any other in the fairing of the launch vehicle.

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?

It is sufficient, but it can be optimized for small satellites.

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?

Yes, Brazil has the practice of registering small satellites, although the status updates are not up to date. We don't have a legislation for it yet. Brazilian Space Agency is currently working on it.

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

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

Brazilian projects follow ISO Standards. We are currently working on a national regulatory framework to deal with space debris mitigation.

Czechia

[Original: English]
[Received on 4 February 2019]

1. Overview of small-satellite 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?

Small satellites activities serve technological, educational and scientific purposes in Czechia. Seven Czech and Czechoslovak satellites have been launched to date (between 1978 and 2017); all of these were under 100 kg in mass, well within the category of small satellites. The MAGION 1–5 and MIMOSA satellites were scientific missions and VZLUSAT-1 is primarily a technology demonstrator, while also collecting scientific data using several instruments. VZLUSAT-1 has been very successful and further technological satellites are planned.

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?

Several projects are ongoing in Czechia regarding small satellites. A successor to the VZLUSAT-1 satellite is being prepared. The Western Bohemian University is designing and manufacturing a small satellite (Pilsen CUBE II) which is supposed to be launched this year. Students can participate in this project and gain practical experience and acquire skills ranging from designing to construction of such small satellites, including communication.

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

In Czechia, the small satellite activities are carried out mainly by universities, research institutions and the space industry.

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

Currently, there is no focal point responsible for coordination of small-satellite activities, however, the Ministry of Transport is informed about these activities (a clear roles and responsibility setting should be part of the new national legislation on 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?

The MAGION satellites have been launched in the framework of the Interkosmos (MAGION 1 – 3) and Interball (MAGION 4–5) programs. The VZLUSAT-1 was launched within the international QB-50 project.

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?

Czechia is drafting its national legislation on space activities which is supposed to cover also activities of small satellites including registration. This matter is currently regulated by an Act of the Government. It is envisaged that the same regime that is applicable to space objects in general would apply to small satellite activities.

3. Responsibility and liability

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

There might be concerns regarding the responsibility and liability if a State is not aware that small satellite activities are taking place and cannot thus control if the requirements for insurance and other general criteria are complied with. However, even without knowledge that such activities are carried out, the State still could be liable internationally for a damage caused by them.

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?

Czechia is currently drafting its national legislation on space activities and it is envisaged that the same regime that is applicable to space objects in general would apply to small satellite activities.

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?

In case that a two steps deployment of a small satellite would be needed, the first step which means launching from Earth to outer space would be considered as the "launch" within the meaning of the United Nations treaties.

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?

In our view, the existing international legal regime can address also activities of small satellites and therefore we do not see a need for establishing new regulatory framework. However, international guidelines and standards specific to small satellites could be useful for dealing with emerging technological challenges, in particular with regards to large constellations.

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?

Czechia is currently drafting its national legislation on space activities and it is envisaged that the same regime that is applicable to space objects in general would apply to small satellite activities, including registration.

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

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

Czechia is currently drafting its national legislation on space activities and it is envisaged that the same regime that is applicable to space objects in general would apply to small satellite activities, including requirements on space debris mitigation.