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English only

**Committee on the Peaceful
Uses of Outer Space
Legal Subcommittee
Fifty-seventh session
Vienna, 9–20 April 2018
Item 6 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-sixth session, in 2017, the Working Group of the Legal Subcommittee on the Status and Application of the Five United Nations Treaties of Outer Space recommended ([A/AC.105/1122](#), Annex I, para. 15) that States members and permanent observers of the Committee provide the Subcommittee, at its fifty-seventh session, comments and responses to the “Questionnaire on the application of international law to small satellite activities” ([A/AC.105/1122](#), Annex I, Appendix II).

The present conference room paper contains the reply received from Brazil.

* [A/AC.105/C.2/L.303](#).



Brazil

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1. Overview of small-satellite activities

Brazil currently supports several CubeSat initiatives and at least one small satellite mission. The development of the second generation NanoSatBR series, the first Brazilian CubeSat, is currently in progress and it is known as NanoSatC-BR 2.

ITASAT, Brazil's first 6U satellite, is currently awaiting launch aboard the PSLV of India. In the private sector, VISIONA (a Brazilian space contractor) is working on their VCUB1, which will demonstrate some technologies.

In the small satellite area, the Brazilian Institute of Space Research (INPE) is currently conducting a preliminary review of the EQUARS mission, a scientific satellite for Heliophysics research. EQUARS will focus on the research of South American Magnetic Anomaly and gravitational waves.

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 can undoubtedly serve a myriad of applications. Brazil is threading its first steps in developing a consistent small satellite environment. The major application for nanosatellites in Brazil has been the training of much needed human resources for the space program, as they provide a low-cost alternative to engage students in an actual space project. The SERPENS (Portuguese acronym for "Space System for Nanosatellite Research and Experimentation") program is AEB's main initiative in the field of nanosatellites and education.

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 involved on the developing of small and Nanosatellites. Brazil has developed and operated several small satellites: SCD-1, SCD-2, SCD-2A*, SACI*, AESP-14, NanoSatC-BR1, SERPENS-1.

*Failed at launch

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

Several public Universities and INPE.

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

There is no dedicated focal point, but activities are coordinated by the of the Directory of Satellites and Applications of the Brazilian Space Agency (AEB), which can be contacted at dsad@aeb.gov.br.

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?

Not currently.

2. Licensing and authorization

2.1 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?

The only existing regulatory instance is the mandatory registration of space objects which is applicable to all national satellites in the terms of international space law (e.g. the Registration Convention).

3. Responsibility and liability

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

These questions are still under review.

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?

These questions are still under review.

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?

The "launch" phase could be seen as ending at the point in which the satellite is independently operated, for example when separated from the launch vehicle or, in the case of cubesats, 30 minutes after deployment (such intervals are a mandatory requirement by the launcher and consequently part of the CubeSat's launch).

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?

Yes, the existing regime is enough to address small satellite operations.

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?

We adhere to the procedures of the registration convention and we therefore register small satellites. Civilian satellites are registered as well.

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?

There is currently no mandatory debris mitigation regulation in Brazil. AEB is currently working on it.