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Committee on the Peaceful Uses of Outer Space

Questions on the definition and delimitation of outer space: replies from Member States

Note by the Secretariat

Addendum

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I. Introduction

1. At the forty-fifth session of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space, in 2006, the Working Group on Matters Relating to the Definition and Delimitation of Outer Space agreed to address to Member States the following questions:

(a) Does your Government consider it necessary to define outer space and/or to delimit airspace and outer space, given the current level of space and aviation activities and technological development in space and aviation technologies? Please provide a justification for the answer; or

(b) Does your Government consider another approach to solving this issue? Please provide a justification for the answer (A/AC.105/871, annex II, para. 7 (f)).

2. At the forty-ninth session of the Subcommittee, in 2010, the Working Group agreed to address to the Governments of Member States the following additional question:

(c) Does your Government give consideration to the possibility of defining a lower limit of outer space and/or an upper limit of airspace, recognizing at the same time the possibility of enacting special international or national legislation relating to a mission carried out by an object in both airspace and outer space? (A/AC.105/942, annex II, para. 11 (c)).

3. Also at the forty-ninth session, the Working Group invited Member States to submit their replies to the above questions (A/AC.105/942, annex II, para. 11 (b) and (c)).

4. The present document contains replies to those questions received by the Secretariat, as well as general replies concerning matters relating to the definition and delimitation of outer space.

II. Replies received from Member States

Algeria

[Original: French]

[13 January 2012]

The Government of Algeria considers it essential to define and delimit outer space and thus airspace as well. Such delimitation is of particular importance in relation to the issue of the liability of States that are conducting space activities on a growing scale. Moreover, failure to delimit outer space could give rise to legal ambiguity, which in turn could increase the risk of disputes among States. In that regard, Algeria considers that outer space should be defined and delimited within the framework of the Committee on the Peaceful Uses of Outer Space and on the basis of consensus and that, at the same time, terminology applicable to outer space (terms such as “outer space”, “space activity”, “space object” and “liability of a State”) should be agreed upon with a view to the uniform interpretation of relevant treaties and conventions.

In response to the question “Does your Government give consideration to the possibility of defining a lower limit of outer space and/or an upper limit of airspace?”, given that the boundary between outer space and airspace has not yet been established on the basis of consensus, as mentioned in question (b), the Government of Algeria continues to support the conventional view that space activity consists in the launch of space objects intended to remain in orbit for a specific period.

Australia

[Original: English]
[31 January 2012]

Question (a). The Australian Government recognizes that it is advantageous to domestic entities conducting space activities to have certainty as to the legal framework which applies to their activities. In this respect, the delimitation of activities that must comply with the requirements of the Space Activities Act and activities that need not comply is necessary for the efficient regulation of domestic Australian space activities. In achieving this goal, the existence of an accepted point of delimitation is more important than the physical location of that point.

Question (b). The Australian Government considers its current domestic regime adequate for dealing with the practical requirements of regulating domestic space activities and therefore has not considered alternative approaches to the issue.

Question (c). The Australian Government has not considered such an approach. The Australian Government recognizes that international agreement on a spatial region in which international space law applies may be useful. Such agreement should be pursued even if initial agreements do not fully resolve the delimitation of airspace and outer space. The approach of defining a lower limit of outer space may be one way in which to achieve such initial agreement.

France

[Original: French]
[19 April 2011]

France does not consider it appropriate, as the situation with regard to space activities currently stands, to define and delimit outer space. It maintains a functionalist approach to space activities: any object whose purpose is to reach outer space, whether or not that purpose is achieved, is a space object. Thus, the international liability regime established by treaties under the aegis of the United Nations may be applied even when a launched object fails to reach outer space but nevertheless causes damage.

With regard to activities on the borderline between aeronautical and space activities, such as suborbital tourism projects, France considers that it would be useful, in due course, to study the scope of such activities on a case-by-case basis. Such an analysis would make it possible to establish a common international approach with a view to determining whether each type of activity should by its very nature be considered to be a space activity (in which case United Nations

instruments relating to space would apply), without the need to have established a strict delimitation of outer space.

Norway

[Original: English]
[2 November 2011]

Question (a). Norway does not at the present moment consider it necessary to define or delimit airspace and outer space. The absence of such definitions/delimitations has so far not been an impediment to Norwegian space activities.

Question (b). Norway does not consider any other approaches to solving this issue.

Question (c). Norway does not presently consider this possibility.

Thailand

[Original: English]
[21 February 2012]

Question (a). Owing to the rapid development of space and aviation technology, which gives aircraft the capacity to reach certain parts of outer space, the definition of outer space and airspace by international customary law will provide a guideline for State practices in this area and reduce conflicts in the interpretation of the law.

Question (b). One option is the establishment of an international outer space and airspace agency with the authority to settle disputes among States relating to outer space and airspace.

Question (c). Since the question of defining a lower limit of outer space and an upper limit of airspace may have implications with respect to the sovereignty of States and may be a subject of international debate, careful consideration by all parties is required.

Turkey

[Original: English]
[19 January 2012]

Question (a). Given the current level of space and aviation activities and technological development in Turkey, we consider that it is not necessary to define outer space and/or to delimit airspace and outer space at present.

Question (b). We would not foresee other approaches for solving said issue, since it necessitates a holistic and multilaterally approved solution.

Question (c). We would not consider the possibility of defining a lower limit of outer space and/or an upper limit of airspace. We support the view that outer space should be explored and utilized freely by all States on equal terms.

III. General replies

Russian Federation

[Original: Russian]
[24 January 2012]

The delimitation of outer space and airspace is the establishment, by means of a treaty, of the boundary between outer space and airspace. It has not yet been possible in current international space law to establish such a boundary or a universally agreed legal definition of outer space. Consequently, the scope of application of the provisions and principles of international space law has not yet been defined.

The issue of the definition and/or delimitation of outer space was raised as a legal matter by the Committee on the Peaceful Uses of Outer Space in 1959. Interest in the issue grew during discussions by the Committee's Legal Subcommittee of the draft Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. In accordance with General Assembly resolution 2222 (XXI) of 19 December 1966, the issue was officially included in the agenda of the sixth session of the Legal Subcommittee. Until now, it has been addressed together with that of the legal regime governing the geostationary orbit. During discussions on the issue, States adopted divergent positions regarding the appropriateness and feasibility of drawing up a universally acceptable definition of outer space and establishing its boundary with airspace. In 1979, 1983 and 1987, the Union of Soviet Socialist Republics proposed the establishment, by means of a legally binding agreement, of a boundary between outer space and airspace that met certain conditions. It proposed that the boundary should be established at an altitude not exceeding 100-110 kilometres above sea level, and that a space object of any State should retain the right to pass over the territory of other States at lower altitudes for the purpose of reaching orbit or returning to Earth.

Under international space law, there are three approaches to the issue of delimitation: the "spatial" approach, the "functional" approach and a combined approach.

Proponents of the "functional" approach view outer space and airspace from a legal point of view as a single above-ground space that does not require delimitation. They therefore propose the regulation of outer space and airspace activities, i.e. to approach the issue of above-ground activities not on the basis of where those activities take place but on the basis of their nature.

Proponents of the "spatial" approach draw attention to the main differences between the legal regimes applicable to outer space and airspace and the resulting need, first and foremost, to define the spatial limitations that determine the extent of

application of the principle of freedom to explore space, on the one hand, and that of State sovereignty over national airspace, on the other.

Over the years, neither approach has won universal support. The majority of legal experts share the view that international space law establishes the lower boundary of outer space as the altitude of the lowest perigee attainable by an artificial Earth satellite.

The passage of space objects through foreign airspace is one of the issues requiring additional international legal regulation. Each State has complete and exclusive sovereignty over the airspace above its territory. Foreign aircraft may therefore pass through that space only with the consent of the State concerned. A number of space-related agreements currently in force provide that manned space vehicles have the right to unauthorized passage through foreign airspace in the event of an accident, distress or emergency or an unintended landing. The passage (descent) of a space object or its component parts (debris) through foreign airspace as a result of an accident or orbital decay caused by gravitational force following completion of a flight mission is also not considered a violation of law. Developments in space science and technology and the increasing number of States launching space objects into outer space have necessitated the examination, from an international legal perspective, of issues relating to the use of existing and future systems — reusable spacecraft and aerospace systems — capable of flight both in airspace and in outer space. The issue of international legal regulation of the flight of space objects through foreign airspace is linked to that of the delimitation of outer space and airspace. The proposals submitted by the Russian Federation to the United Nations regarding delimitation provide for the right of peaceful (innocent) passage of space objects through the airspace of foreign States for the purpose of reaching orbit or returning to Earth.

The Russian Federation considers that, taking into account long-term forecasts for the development of Russian and foreign space technologies, the approach to the future resolution of legal issues relating to aerospace objects will depend upon the scale and pace of development of such objects, their possible applications and the scale of activities involving them, and should be implemented in stages.

During the first stage, until such time as aerospace objects are used on an extensive scale, any legal situations that arise may be resolved through direct application of the provisions of international space and airspace law or, if necessary, through the establishment of comprehensive international space and airspace regulations.

It is therefore advisable not to go beyond the existing definition of aerospace objects as airspace and outer space objects with a design similar to that of an aeroplane and capable of performing a wide range of manoeuvres during passage through airspace and outer space, which, given the purpose and functional capabilities of aircraft, makes it possible to classify existing aerospace objects either as space objects, the activities of which are governed by space law, or as aircraft, which are subject to international airspace law.

At the same time, work could be carried out within the framework of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space to classify aerospace objects, research and develop possible future applications of such objects and examine and address any legal or regulatory issues

that may arise. On that basis, work could begin, within the framework of the Legal Subcommittee, to establish a comprehensive framework for the legal regulation of activities relating to the future construction and use of aerospace objects and the design of comprehensive solutions to current legal issues relating to aerospace objects through coordination of the legal mechanisms of international airspace and international space law. At the same time, work should continue on the development and incorporation into national legislation of agreed regulations relating to airspace and outer space legal regimes, the delimitation of airspace and outer space, the classification of various types of aircraft and procedures for their operation.

During the same period, it would be advisable to adopt legislation regulating specific legal issues relating to airspace and outer space activities.

During the second stage, when the use of aerospace objects for peaceful space exploration intensifies, proposals for the updating of international space and airspace law may be drawn up on the basis of the scientific, technical and legal solutions identified and experience accumulated with regard to aerospace objects.

Current attempts to resolve the issue of the definition and delimitation of outer space within the framework of the Committee on the Peaceful Uses of Outer Space, including by defining the lower boundary of outer space and the corresponding upper limit of airspace, may complicate space activities currently being carried out by the international community and disturb the existing international legal balance.

It would therefore be premature to address the question of adopting a legislative instrument regulating the flight of aerospace objects.

In the longer term, progress in defining and delimiting outer space should be achieved through cooperation between the International Civil Aviation Organization and the Committee on the Peaceful Uses of Outer Space.
