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English only

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Matters relating to the definition and delimitation of outer space: replies of the United Arab Emirates

National legislation and practice relating to the definition and delimitation of outer space

1. The UAE Draft Law on the Regulation of the Space Sector was approved by the Council of Ministers and was approved subsequently by the Federal National Council. The next step is approval by the Supreme Council of the Union, and issuance by the UAE President which is targeted by Q2 of 2019.

The UAE Space Agency (UAESA) conducted a full internal study on this definition and delimitation of outer space air space. The result of the study was well reflected in our national law and regulations.

The draft law does not provide a direct definition which indicate delimitation of outer space, but provides the following relevant definitions:

- Outer Space: The area outside the Earth's atmosphere;
- Identified Area: An area located at least 80 km above mean sea level;
- Space Activities: All activities which aim for, or result in particular effects in, or use or exploration of the Identified Area.

2. Regulation on Human Space Flights Activities, which was issued in Q4 2018 by the UAESA Board of Directors, provides the regulatory provisions and process for authorizations required to conduct space activities that involve human transport to space, including suborbital flights.

Concrete and detailed proposals regarding the need to define and delimit outer space, or justifying the absence of such a need

Since there are many space activities that can take place in the outer space or in the Earth or in between, it is important to have a clear definition for outer space. Furthermore, the Outer Space Treaty, international principles, standards, agreements, and national regulations refer to the terminology of "outer space," which increase the need of a standard international definition. Moreover, the definition will also help in determining applicable laws.



Questions relating to the definition and delimitation of outer space

- (i) *Is there a relationship between plans to establish a system of space traffic management and the definition and delimitation of outer space?*

The UAE Space Agency (UAESA), alongside with the international community, recognizes the importance of Space Traffic Management (STM). This recognition was a driver to conduct a study with the purpose to define the main elements of the STM, when developing the national relevant regulations and processes.

Moreover, the UAESA contributed to the development of 2017 IAA Cosmic Study on STM.

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- (ii) *Is there a relationship between suborbital flights for scientific missions and/or for human transportation and the definition and delimitation of outer space?*

The draft federal law includes the following definitions (this is best efforts translation from the original language of the draft law):

- Suborbital flights: Any space flight which intends to enter the Identified Area but does not intend to complete an orbit around the Earth;
- Human Space Flight: Any space flight using a space object with any member of the space flight crew or any of the participants in the human space flight or both;
- Authorization: The document issued by the Agency for the conduct of Space Activities or Space-supporting Activities or High-altitude Activities, which includes the License, Approval, Permit, Experiment Permit, or any authorization issued under these Regulations.

Scientific missions and experiments are subject to an Experimental Permits which is defined in the draft regulations on Authorization of Space Activities, follows:

- Experimental Permits: Authorization granted to the Owner, Operator or to an educational institution for the conduct of Space Activities of an exceptional or training nature.

Of course, having a definition is quite helpful, as it will help applying the same international law (Space and Aviation) across countries, and potentially harmonizing applicable national regulations.

Astronaut's safety is highly required whither they are on Earth, on orbit or on outer space. Several international agreements and treaties stressed on the importance of helping astronauts. For example, the Outer Space Treaty and the Rescue Agreement.

- (iii) *Will the legal definition of suborbital flights for scientific missions and/or for human transportation be practically useful for States and other actors with regard to space activities?*

Since there is no international standard definition for the suborbital flights, having a legal definition of suborbital flights for scientific missions and human transportations would be very useful. The non-existence of the definition allows every

State to define it differently, which may cause problems in applying rules on case of occurred issue. Furthermore, the clear definition will help to distinguish between the application of the space law and the civil aviation law. This will be an enabler to the era of Human Transportation via suborbital flights.

- (iv) *How could suborbital flights for scientific missions and/or for human transportation be defined?*

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Those definition were based on study and detailed comparative analysis by the UAE Space Agency of different international and national legislations.

- (v) *Which legislation applies or could be applied to suborbital flights for scientific missions and/or for human transportation?*

For the case of the UAE, it is space law and not the civil aviation law. However, the UAE Space Agency will be collaborating with relevant government entities such as the General Civil Aviation Authority in order to ensure the proper implementation of the laws and regulations and operations as per the regulatory procedures.

- (vi) *How will the legal definition of suborbital flights for scientific missions and/or for human transportation impact the progressive development of space law?*

Defining the suborbital flights will help first in determining the applicable law. Second, the liability and the responsibility of the States. Third, it also will help to set the insurance limit as well as the safety requirements. Finally, this may potentially lead to development of necessary standards that will enable interoperability of international suborbital flights for human transportation.

- (vii) *Please propose other questions to be considered in the framework of the legal definition of suborbital flights for scientific missions and/or for human transportation.*

How do you foresee the potential collaboration between the various UN bodies (e.g. UNOOSA, ICAO, and ITU) to develop the necessary international framework for suborbital flights?