

The 'Gateway': Need for Respecting International Space Treaties' Obligations

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ABSTRACT

The international space treaties of the twentieth century were developed on the strong foundations of common benefits and rights of humankind in the exploration and use of outer space. Twenty-first century space developments, especially commercial, are posing serious challenge in the practical implementation of treaty obligations. The Gateway is one such project that has taken shape in the recent past, which raises multiple questions under the provisions of the United Nations space treaties. This paper attempts to unearth some of the most significant issues that arise out of the interplay between the project Gateway and obligations of States under the international space treaties. The focal point of argument here is to protect the sanctity of the foundational principles of international space law to ensure orderly developments in the space sector.

Keywords: Artemis program, Common Rights' regime, jurisdiction, mining, registration, space tourism

La 'puerta de entrada': necesidad de respetar las obligaciones de los tratados espaciales internacionales

RESUMEN

Los tratados espaciales internacionales del siglo XX se desarrollaron sobre la sólida base de los beneficios y derechos comunes de la humanidad en la exploración y utilización del espacio ultraterrestre. Los avances espaciales del siglo XXI, especialmente los comerciales, están planteando serios desafíos en la implementación práctica de las obligaciones derivadas de los tratados. El Gateway es uno de esos proyectos que ha tomado forma en el pasado reciente, lo que plantea múltiples preguntas en virtud de las disposiciones de los tratados espaciales de las Naciones Unidas. Este artículo intenta descubrir algunas de las cuestiones más im-

portantes que surgen de la interacción entre el proyecto Gateway y las obligaciones de los Estados en virtud de los tratados espaciales internacionales. El punto central del argumento aquí es proteger la santidad de los principios fundamentales del derecho espacial internacional para garantizar un desarrollo ordenado en el sector espacial.

Palabras clave: Programa Artemisa, régimen de derechos comunes, jurisdicción, minería, registro, turismo espacial

“门户”：尊重国际空间条约义务的必要性

摘要

二十世纪的国际空间条约是在人类探索和利用外层空间的共同利益和权利的坚实基础上制定的。二十一世纪的空间发展，特别是商业空间发展，对条约义务的实际履行提出了严峻挑战。“门户”就是最近形成的此类项目之一，根据联合国空间条约的规定，该项目遭遇了许多质疑。本文试图揭示门户项目与国际空间条约规定的各国义务之间相互作用所产生的一些最重要的问题。本文的论点聚焦于保护国际空间法基本原则的神圣性，以确保空间领域的有序发展。

关键词：阿耳忒弥斯计划，共同权利制度，管辖权，采矿，登记，太空旅游

Introduction

New generation space activities have gone beyond the traditional understanding of using the outer space primarily for scientific research. A long list of commercial uses of outer space has come to the forefront in the last seven decades of space activities. Building the Gateway Space Station by NASA in collaboration with other Governmental space agencies like ESA, CSA and JAXA as well as private space company like SpaceX is a step

forward from the scientific and technological perspective (NASA, 2023). As the Gateway is intended to provide a platform with necessary support for human missions to moon and other celestial bodies, we can expect human presence on celestial bodies for longer durations in future. Such human presence on celestial bodies will have several commercial implications ranging from resource mining to human settlements, which are already evident from the Artemis programme (NASA, 2020). While the UN space treaties are

not against commercialization of outer space or celestial bodies, they advocate for our common future in space based on the principles of justice and equity. Keeping this as the central theme, evaluating the United States' Gateway initiative and suggesting for necessary steps to be taken to keep it in conformity with the international obligations envisaged under UN space treaties attain tremendous significance.

The Common Rights' Regime

The entry into the outer space and the subsequent space race between the Soviet Union and the United States necessitated an international response to regulate space activities. The United Nations took the lead in developing international space law, first in the form of General Assembly Resolutions (soft laws) and subsequently in the form of space treaties (hard laws) (Bhat, 2009). The first and the foundational aspect to attain consensus among States in the space law-making has been the recognition of "Common Rights" of the international community. This has resulted in the adoption of principles like province of all mankind, benefit and interest of all countries, freedom of exploration, use and scientific investigation, national non-appropriation, cooperation between States etc., which are all part and parcel of the common rights' regime. Considering the astronauts as envoys of mankind and all States undertaking obligation to rescue and return them safely in case of any emergency are also the reflection of the understanding that the space activi-

ties must be carried on for the common benefit. It must always be kept in mind that this common rights' regime is so fundamental that any development in the field of space activities must respect it in the true spirit.

Mining Gateway?

The commercial space activities are increasing rapidly, and we are witnessing a gradual move from indirect commercial uses of outer space to direct commercial uses like resource exploitation. The United States Commercial Space Launch Competitiveness Act 2015 (Pub. L. No. 114-90) allows the mining of asteroid and space resources by the individuals. This law also confers property rights to the United States' citizens over the resources mined by them. This has been replicated by Luxembourg, the United Arab Emirates and Japan by enacting similar laws in 2017, 2019 and 2021, respectively. Ironically, the Indian Space Policy 2023 (ISRO, 2023) duplicates the United States' approach to space resource mining even in the absence of the much-required legislative backing. Meanwhile, the United States has also floated the idea of cooperation between the States to mine celestial resources through the Artemis Accords. As of 4 December 2023, representatives from 33 States have signed the Artemis Accords (Lea, 2023). Based on the Artemis Accords, the United States is attempting to implement its Artemis Program- a stage-by-stage journey towards the celestial bodies.

The Gateway project has been unveiled as a part of the Artemis Pro-

gram. Hence, it carries the risk of being a mining gateway for the benefit of a select few. One of the elements of the common rights' regime, as reflected under Article II of the Outer Space Treaty 1967 (610 UNTS 205), is the prohibition on national appropriation of outer space and celestial bodies by "claim of sovereignty, by means of use or occupation, or by any other means." This provision is also supplemented by Article I of the Outer Space Treaty, which requires all space activities to be carried on "for the benefit and in the interests of all countries." Hence, it is undesirable to see the Gateway as a mining gateway to further the interests of only select few States.

Tourist Gateway?

Space tourism has become a fascination of the present generation. An activity, which was confined to one or two in a year after the beginning of the twenty first century, has grown leaps and bounds with the entry of private sector into the business of space tourism in 2021. A lot of people have already signed up for both orbital and sub-orbital tourism, and the demand is increasing day by day (Shah, 2023). The next step in this direction is the tourist visits to moon and other celestial bodies. In light of this, the Gateway might turn into a tourist gateway to reach celestial bodies.

Though such a development would undoubtedly be a technological achievement, the implications of it would be far-reaching. The two major issues having legal implications that

emerge out of such a development are relating to environmental protection and space traffic management. The space launch emissions and unscrupulous activities of space tourists damage both outer space and earth environment. The launch emissions are resulting in temperature increase and ozone depletion at a rapid speed (Moore, 2023). The radioactive forcing of launch emissions is estimated at 500 times more than all surface and aviation sources combined (Ryan, et al., 2023). Added to this, the debris that may be littered in outer space by the tourists would pose further environmental concerns. Unfortunately, the only provision under the Outer Space Treaty that relates to environment (Article IX) is very weak to prevent environmental degradation. It uses vague terms like prevention of "harmful contamination" of outer space and "adverse changes" in the earth environment without defining either of them.

Space tourism is a biggest hurdle in space traffic management. In the absence of proper traffic management, the outer space would become a realm of chaos with catastrophic disasters (Rothblatt, 1982). The International Telecommunication Union (ITU) performs the task of coordination and orbital allocation for various space activities with a view to ensure orderly developments in space (Thompson, 1996). Given its technical expertise, the ITU allocates the orbits by adhering to safety standards. With the increased space activities coupled with our failure to handle space debris, outer space is already experiencing heavy traffic.

The tourist launches to outer space and celestial bodies are going to add further burden on heavily congested outer space, risking the safety of space operations. Hence, critiques are rightly questioning the space/celestial tourism from the sustainability perspective (Paladini & Saha, 2023).

Concern in Registration

The Registration Convention 1972 (1023 UNTS 15) was adopted for the purpose of identifying the space objects, which helps in the proper implementation of laws governing outer space activities. Article II of the Registration Convention mandates the launching State to register the space object when it is “launched *into* Earth orbit or beyond” (emphasis added). The use of the preposition “into” indicates that the launch of the space object should take place from a point which does not fall within the purview of “Earth orbit or beyond.” Accordingly, the conclusion is that the launch should take place from the surface of the earth or from airspace for the application of Article II of the Registration Convention. Going by this interpretation, a launch from Gateway to moon or other celestial bodies will not be covered under the mandate of the Registration Convention.

Jurisdictional Conflict

Jurisdictional conflict is an issue that is closely connected with the registration. This is already evident in the International Space Station (ISS) proj-

ect. Since Gateway is a cooperative venture between the States, similar to ISS, different modules of it will be registered by the respective contributing State. Article VIII of the Outer Space Treaty stipulates that “A State Party to the Treaty on whose registry an object launched into outer space is carried *shall retain jurisdiction and control over such object, and over any personnel thereof*, while in outer space or on a celestial body” (emphasis added). While conferring the jurisdiction on the State of registry of the space objects, Article VIII has combined quasi-territorial jurisdiction (space object) and personal jurisdiction (personnel thereof) without creating any hierarchy between two. The use of the words “personnel thereof” clearly indicates that even if the personnel moves out of the space object to conduct space walk or to land on a celestial body, the jurisdiction of the State of registry continues to exist. It is also significant to note here that Article VIII jurisdiction is not just a right of the State of registry but also an obligation due to the use of words “shall retain jurisdiction.”

In the wake of uniqueness of Article VIII jurisdiction, conflicts are bound to occur in two ways. First, when personnel is launched from a space object registered in one State enters into a module of Gateway registered by another State, jurisdiction over such personnel and his/her activities is at limbo due to the intersection between the quasi-territorial and personal jurisdictions. It will end-up in a situation wherein either both States attempt to exercise jurisdiction or neither exer-

cises jurisdiction by pointing towards each other's obligation to exercise jurisdiction. Secondly, when any wrong is committed by using multiple modules of Gateway that are registered by different States, the jurisdiction to deal with it is also at limbo. Dividing the activities leading to the commission of a wrong into parts for conferring jurisdiction to different States, based on the registration of their modules, will not work. Such a piecemeal approach would result in the acquittal of the wrongdoers in all jurisdictions since their activities, taken in isolation, are not adequate enough to establish the commission of a wrong.

Concluding Remarks

The foundational principles of international space law are adopted on the basis of consen-

sus of space-faring nations during the twentieth century. Those principles are based on principles of justice, equity and maintenance of good order in outer space. Rooting in the common rights' regime, these principles have prevented the outer space from being the realm of conflict. In order to continue with the sustained exploration and use of the outer space and celestial bodies, catering to the interests and needs of all is indispensable. Hence, the United States and its associates need to ensure that the Gateway is a human gateway to celestial bodies on the basis of well-established principles of international space law rather than being a kingdom of a select few rich States.

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