

# The Political Economy of Space Law: The Legal and Political Perspectives of Space Mining

Reşat Volkan GÜNEL<sup>1</sup> 

<sup>1</sup>Associate Professor, Cyprus Science University, Faculty of Law, Department of Public International Law, Cyprus

ORCID: R.V.G. 0000-0003-0141-3336

## ABSTRACT

Space Law and policy was previously under the strict government control. It is now open to the private sector and commercial enterprises worldwide in recent years. This trend is especially seen in the manufacturing and operation of communication satellites and in the field of launching services and it is also developing today in areas such as commercial space travel and private space bases. The issue of space mining is yet to be a realized and proven space activity. It is obvious that there are certain signs in this activity which will take place in the near future.

**Keywords:** Space Mining, Space Policy, Technology and Law

Submitted: 29.05.2021 Accepted: 30.12.2021

Corresponding author: Reşat Volkan GÜNEL / resatgunel@csu.edu.tr

Citation: Gunel, R. V. (2022). The Political Economy of Space Law: The Legal and Political Perspectives of Space Mining. In B. E. Balin, V. N. Akun & S. Alis (Eds.), *Proceedings for the First Symposium on Space Economy, Space Law and Space Sciences* (pp. 135-140). <https://doi.org/10.26650/PB/SS46PS01.2022.001.009>

Initially, it should be noted that international space law is generally part of international law. All activities in space must be carried out in full compliance with the basic principles of international law, especially the provisions of the United Nations Charter. Currently, the legal basis for space activities is provided by five international treaties and a set of policy resolutions adopted by the United Nations General Assembly. These rules are complemented by national space laws, which have been enacted at the national level and are increasing in number recent years. Other provisions forming space law can be found in the statutes of international organizations working on space activities.

For many years, governments have been unable to agree on new binding international norms on space issues. In recent years, the emergence of fundamental problems in the dominant players of space activities has forced the international community to take regulatory actions to address these issues. In this context, the acceptance of legally non-binding instruments has emerged as a functional way of achieving this goal. Today, I will try to evaluate the issue of space mining briefly.

In the early years of the space age, space activities were exclusively under the control of the state. The current legal framework for regulating activities in space was drafted during the so-called Cold War, when space was perceived differently and used for different purposes than today. In recent years, more and more private companies have actively entered the sector, which includes space activities, with the appropriate legal environment and the appeal of potential profits. The influence of private sector operators in the space market is increasing gradually. This development has put national laws into operation in addition to the international legal resources mentioned above. In particular, fundamental changes to the U.S. Space Act encourage other states to regulate or create new national space regulations.

### **To sum up in the issue of space mining**

To begin with, all states have the right to free access to space, to explore and use space freely. States are not obliged to have permission from the international authorities to engage in space activities. Additionally, states should not be discriminated against according to their level of economic development. This principle is stipulated in Article 1 of the Outer Space Treaty of 1967. (Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies). However, within the same article, it is foreseen that the interests and benefits of all states will be driven in these activities. In this context, will any natural or legal person need to share the raw materials and acquisitions from their own space mining activities, or will the activity itself provide a general benefit for the earth with limited mineral resources? The answer to this question lies in the economic policy to be followed by the dominant powers of the international politics.

According to another basic principle of space law, any part of space, including celestial bodies and the Moon, cannot be subject to territorial acquisition by governments. This is the basic provision that clearly distinguishes the legal situation on Earth from that of outer space. States exercise their sovereignty over the territory within their borders. Occupation with the claim of sovereignty is one of the conventional methods used by states to claim *terra nullius*. International space law prohibits such sovereignty practices and recognizes space and celestial bodies as areas where no state can dominate and where everyone has common ownership.

The Moon Agreement, in which the main space actors are not involved and only 16 states are parties, includes provisions that do not allow ownership on the surface of the moon or under the ground and is not only related to the moon, which further reinforces the principle of the common heritage of mankind. (Agreement Governing the Activities of States on the Moon and Other Celestial Bodies).

The increasing demand for space technologies to find more and more applications and the use of space services in civilian spaces are the guiding forces of the commercialization of space. The sectors that were previously under the strict government control are now more open to the private sector and commercial enterprises worldwide. This trend is especially seen in the manufacturing and operation of communication satellites and in the field of launching services and it is also developing today in areas such as commercial space travel and private space bases. The issue of space mining is yet to be a realized and proven space activity. However, there are certain signs that this activity will take place in the near future. Hence, what will be the place of such activity in the current space law?

There are three common opinions in terms of doctrine and practice. The first view is that the provisions of existing space law do not allow space mining. Accordingly, states cannot have sovereignty over a celestial body; thus, states cannot have rights alone on the mine within the relevant celestial body. The second opinion is that there is no provision under the existing rules of space law prohibiting space mining. However, the issue of space mining must be regulated by an international convention or national laws. The third opinion is that the “right of all states to freely access, explore and use space” in the practice of space law includes space mining and therefore no new regulation is required. In addition, some believe that asteroids cannot be considered celestial bodies anyway, and there is no obstacle to asteroid mining.

Freedom is essential in social life. The rule is the exception. In this context, the rule of freedom is only possible with the arrangements of the legal authorities when it is necessary to limit this freedom. From a legal point of view, the state can only act with duty and authorization. Individuals are originally free, and while these freedoms can only be limited by law, the state can only be authorized by law. The applied international law is also formed and executed by the will of the states or international organizations authorized by the states. In this context, in order to talk about a situation such as a prohibition on space mining activities in space law, which develops under international law, such activity must be legally mandated. Moreover, the exploration and use of space are free for all states on the basis of equality. In addition, there is no international agreement on whether the right to “free use” includes the right to buy and consume non-renewable natural resources, including minerals and water in celestial bodies.

In the context of space law, the allocation of sovereignty in space or in celestial bodies in space is prohibited, both in accordance with the Space Treaty, which regulates general space activities and has a constitutional nature, and in terms of customary law. In the face of this current provision, it would be contrary to the law of space that states or private or legal persons acting on behalf of the state shall subject the mines that constitute a celestial body or part of it to their own property and subject them to the sovereignty of a state.

On the other hand, if a private person or company wants to carry out mining activities in space regardless of the states and their countries where their powers apply, I believe that they should

be free to carry out activities since such prohibition is not a mandatory norm of international law. When examined specifically under the U.S. Space Act with the amendments in 2015, it is seen that the United States has specifically granted mining in space to its own citizens, which is contrary to the prohibition of sovereignty under the law of sovereignty (U.S. Commercial Space Launch Competitiveness Act, Public Law 114–90—Nov. 25, 2015).

Here, in principle, we come across the principle of “*Nemo plus iuris transfer (ad alium) potest quam ipse habet*”, so no one gives what they do not have. Although the right granted by the United States to its own citizens does not give individuals the right to dominate space or establish ownership over celestial bodies, the mining license granted is a mining acquittal similar to that of the colonial period which grants partial ownership on the territories of natives. The legal nature of such a license is generally not acceptable for an area you do not have and cannot have according to the law. However, under the law, the United States does not have a new legal opportunity for its own citizens, but it can be mentioned that it affirms its existing rights since as mentioned above, the United States provides this license on behalf of private operators and real persons who do not act on its behalf.

As stated, it is possible for individuals, regardless of the states, to benefit from a place that does not belong to anyone else or belongs to everyone – unless expressly prohibited by national and/or international law. However, the main problem here is the effects of such exploitation on those who are unable to take advantage of such an opportunity. Actually, this is the subject of political economy. It can be argued that the mines in space will meet the demands of people living on the world the resources of which are scarce or depleted. However, being able to carry out this activity in space will require a certain technological power. What the existing situation now is that the activity will be carried out by companies that are stronger than many states in terms of capital. As long as there is no sharing economic system in terms of fair distribution of resources, the income gap will increase more, and inequality will grow.

The negative impact of the results of the colonial period still exists all over the world. For such reasons, space mining must be maintained in a way that is necessarily in the best interest of all people. A comprehensive international convention might be prepared to achieve this. The contract must address not only mining activity, but also ways to resolve potential disputes and the institution of responsibility in detail.

On the other hand, the long-term sustainability of all space activities is threatened by various factors such as environmental problems, congestion in orbit, and military activities and actions in orbit. The sustainability can be improved by regulating good practices, standards, and rules for space operators. The international community should strive to develop such rules both in the form of non-binding norms and, preferably, in the form of binding obligations.

The international community should also continue to work to ensure tighter harmonization of national space regulations.

It is a well-known fact that the Earth, whose energy resources are limited or diminishing, needs a new outlet as of the stage it has reached. Eventually, we face the question of how space mining will contribute to meet the needs of humankind once enough raw materials can be supplied from extra-terrestrial sources in the future. With a futuristic approach, considering

the development of 3D production (3D Printing), it is obvious that when an unlimited raw material is available, the mode of production and its new type of future relations will change in this context, and even classical theories of economics can end. From this point of view, space mining can be seen as an attempt to change all the traditional dynamics in human history, not only as a technical issue.

### **References**

Agreement Governing The Activities of States on The Moon and Other Celestial Bodies.

Treaty On Principles Governing The Activities Of States In The Exploration And Use Of Outer Space, Including The Moon And Other Celestial Bodies.

U.S. Commercial Space Launch Competitiveness Act, Public Law 114–90—Nov. 25, 2015.

