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THE ENVIRONMENTAL ASPECTS OF SPACE MINING FROM A LEGAL PERSPECTIVE

**Abstract**

The legal nature and the regulation of space mining activities have been widely discussed over the past years. The advancement of technology suggests that the exploitation of resources of celestial bodies is a near-future perspective which not only poses questions for the safe and secure use of space but will also challenge the existing legal framework. As it can be expected that, as with space debris, the environmental risks associated to the extraction of valuable resources from celestial bodies (probably mainly near-Earth asteroids) and their implications for the use and exploration of space will be ignored unless the practicability of space activities is hampered, such considerations are relevant especially with a view to the future use of the most used and most densely populated orbits around the Earth and to sustainability in space in general. Therefore, a cross-section of the legal considerations and their technological background must be made in order to identify the problems posed by resources exploitation activities for both the space and the earth environment. This paper will present the main environmental aspects of space mining, as it will become feasible, and discuss a possible legal approach to address the harmful consequences for the space environment. For this purpose, an overlook on the currently applicable provisions in general international law, in space law and in environmental law will be given. As the existing space law framework has little to say on the exploitation of space resources on celestial bodies, but both scholars and the economic reality let us consider a future exploitation regime to be established as an open possibility, comparable legal fields such as Law of the Sea and Law of the Antarctic will be examined in an attempt to analyze the avenues for the creation of a liability regime for environmental damages associated to the risks posed by space mining.