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CHALLENGES AND SUGGESTIONS: ENABLING SPACE LAW TO PREPARE FOR HUMAN  
SETTLEMENT IN OUTER SPACE

**Abstract**

Last year, global society celebrated the 50th anniversary of the first Moon landing. And now, looking ahead, humanity aims to settle the Moon and Mars and create new habitats on both for human exploration and settlement, with some spacefaring states already developing technology for such missions. In contrast to this development, space law remains the same, and it is unprepared to address multiple aspects of such operations.

In this paper, we discuss the legal challenges which might occur as a result of Moon and Mars missions and point to two issues of fundamental importance: The first concerns the usage (and possibly over the long term the allocation) of terrain on the Moon and Mars for future missions' settlements and operations. The second concerns the question of jurisdiction as it pertains to the areas used for settlements and the facilities constructed on them. To address the above, we refer to the main principles of space law as well as international law rules on the jurisdiction of States, and we test their application to these issues. In this exercise, we will show how the application of these principles and rules provides tools to begin resolving the foreseen challenges, but nevertheless does not comprehensively resolve the problems related to the usage/allocation of lunar and Martian terrain or the question of jurisdiction.

We therefore examine existing regimes in place in other fields of activity, which might complement the above approach. Firstly, we consider the creation of an allocation regime for lunar and Martian terrain may be crucial to strengthen international cooperation, to ensure the peaceful use of outer space, and eliminate possible tension between States. The global frequency management regime can be a functional example on which to model this. In addition, the COSPAR Planetary Protection Guidelines can be regarded equally for the protection of the lunar and Martian environments. Secondly, we evaluate and propose the legal regime of artificial islands on the high seas as a model for jurisdiction on the allocated lunar and Martian terrain and constructed facilities.

In conclusion, the Moon and Mars missions are expected to raise new legal challenges, while space law and international law do not provide comprehensive solutions. We therefore suggest the establishment of new regimes governing the use and allocation of lunar and Martian terrain and jurisdiction, having regard to the existing legal instruments pertaining to different subjects.