

IISL COLLOQUIUM ON THE LAW OF OUTER SPACE (E7)
Moon and Mars Settlement: Open Legal Issues (2)

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DEVELOPING AND MANAGING MOON AND MARS SETTLEMENTS IN ACCORDANCE WITH
INTERNATIONAL SPACE LAW**Abstract**

Despite still being a few decades in the future, the idea of establishing an extra-terrestrial settlement on another celestial body, being it the Moon or Mars, has never been so strong. From ESA's Moon Village to NASA's Artemis program, and from ispace's project of a Moon Valley to SpaceX's ambition of "making humans a multi-planetary species", both public and private actors are starting to make initial but also concrete steps towards this goal.

Moving from the premise that future Moon and Mars settlements shall not take place in a lawless space, this paper will address the question of how to develop and manage them in accordance with international space law. To this end, it will conduct a systematic analysis of the Outer Space Treaty (OST), with the goal of reconciling the freedom to use celestial bodies under its Article I with the prohibition of appropriating them under its Article II, taking into account other relevant principles of international space law. Based on the above analysis, the paper will conclude with three findings.

First, it will argue that a systematic reading of the OST suggests the development of open international settlements made of shared modular facilities. Building on the successful experience of the International Space Station, such Moon and Mars settlements should welcome contributions from all actors providing complementary capabilities.

Second, the paper will argue that the managing of such settlements should be regulated by a combination of national and international sources. To ensure flexible cooperation, international guidelines should provide a general framework to be then implemented in *ad hoc* Memoranda of Understandings between the involved parties. In accordance with the principle of adaptive governance, such guidelines should ensure the right of an interested actor to join the settlement, while leaving the concrete terms of such endeavour to the agreement of the involved parties.

Third and finally, the paper will argue that all actors involved in the development and managing of Moon and Mars settlements should agree on a cross-waiver of liability and should adopt the "2011 Optional Rules for Arbitration of Disputes Relating to Outer Space Activities", developed by the Permanent Court of Arbitration, as primary mean for the peaceful resolution of potential disputes among them.