

Space Policy, Sustainability and Legal Aspects (11)  
Space Policy, Sustainability and Legal Aspects - Session 2 (2)

Author: Mr. Sajal Sharma  
University of Petroleum and Energy Studies, India

THE CHALLENGES OF DEVELOPING A LEGAL FRAMEWORK FOR THE IN-SITU UTILISATION  
OF LUNAR RESOURCES: A COMPARATIVE STUDY OF THE ARTEMIS ACCORDS AND THE ILRS

**Abstract**

Space mining is not the stuff of science fiction anymore. The success of Osiris rex mission of NASA in bringing samples from near earth asteroid Bennu in September 2023 is a technological eye opener in this direction. The lunar market with its vast mineral and other resources is estimated to be worth over 100 billion dollars and this is what major space faring nations are closely eyeing. Various lunar missions have unearthed the hidden potential of commercialising those resources. The U.S. Commercial Space Launch Competitiveness Act, 2015 became the first national law to allow corporations and citizens to engage in the commercial exploration and utilization of space resources. Interestingly the bible of space law which is the Outer Space Treaty of 1967 in its Article II only talks about the principle of non-appropriation without any further elaboration on the possible exploitation of celestial resources. This presents a complex situation and a lack of clarity on the law governing extraction and utilisation celestial resources.

Moving further in this direction USA with partner States (currently 47) has outlined its Artemis accords and Russia and China with their ILRS and other partner countries are firmly moving in the direction of in situ utilisation of lunar resources and much more in their space ambitions. The Artemis Accords in Section 10(2) proclaims that “The Signatories emphasize that the extraction and utilization of space resources, including any recovery from the surface or subsurface of the Moon, Mars, comets, or asteroids, should be executed in a manner that complies with the Outer Space Treaty and in support of safe and sustainable space activities.” China plans to work with global partners to construct a basic version of the ILRS before 2028, an improved version before 2040, and a more complete one by around 2050. The parallel developments currently underway present a unique challenge to the sustainable use of celestial resources primarily that of Moon and Mars in the absence of a clear legal framework and cooperation between the two proposed systems. This paper makes a comparative analysis of the relevant principles of the Artemis accords and the ILRS including ongoing discussions within the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) related to the in situ utilisation of celestial resources. The paper concludes by recommending that a universally acceptable agreement would serve the interests of promoting conflict free sustainable in situ utilisation of celestial resources.