

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

Author: Mr. Sandeep Garg
Indian Space Research Organization (ISRO), India

Dr. Rajeev Jaiswal
Indian Space Research Organization (ISRO), India

Mr. Imtiaz Ali Khan
Indian Space Research Organization (ISRO), India

POLICY PERSPECTIVES ON OUTER SPACE RESOURCES ACTIVITIES

Abstract

Harvesting of space resources has been a popular topic for science fiction novels and articles. In the recent years, technological developments have led to the conviction that this science fiction stuff might turn into reality. Some countries have enacted domestic laws to regulate or facilitate space resources exploitation. The growing interest in exploiting resources contained in the celestial bodies including the Moon and near-earth asteroids has opened up a global debate on the framework under which such operations are to be carried out. At present, the United Nations Treaties Conventions form the international law concerning space activities. However, these Treaties and Conventions do not deal with the particular subject in detail. Also, the scope of such activities has not been clearly defined. Some recent efforts such as the building blocks by 'The Hague International Space Resources Governance Working Group', 'Artemis Accord', 'Moon Village Principles' and 'Working group on Legal Aspects of Space Resource Activities' seek to address the uncertainty surrounding space resources utilization at the international level. The Indian Space Research Organisation (ISRO) has a decent track record in the field of space exploration with successful missions such as Chandrayaan-1, Mars Orbiter Mission, Chandrayaan-2 and Chandrayaan-3. These scientific missions aimed at studying the planetary atmosphere and development of technologies required for space exploration. Government of India has announced the future directions for its space exploration program, which includes a lunar sample return mission and eventual human landing on the Moon by 2040. The Indian legal framework concerning space activities is still evolving. Rather than clubbing all space resources in one basket, it would be prudent to adopt a step-by-step approach. The resources with utilization value for humanity, viz., energy resources and water could be prioritized over resources with pure commercial value. Similarly, in situ resource utilization could be prioritized over transportation of resources from one planetary body to another. The steps involved will include prospecting, site selection, ground based trials and exploitation of resources and utilization. It is also amply clear that no single nation/enterprise would be able to take up an end-to-end space resources exploration mission on its own. It would require international collaboration among nations with complementary capabilities to take up such a venture. These aspects along with discussions on existing mechanisms and models are included in the paper.