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FREEDOM AND RESTRICTIONS ON SCIENTIFIC INVESTIGATION OF SPACE RESOURCES  
UNDER THE PRINCIPLES OF INTERNATIONAL LAW

**Abstract**

Progress in the space industry has led to ever-deeper collaboration between government agencies and private entities, and now the time has arrived when private operators will also become main players for lunar activities. As an example, in February 2024, Intuitive Machines of the United States became the first private company in the world to successfully soft land on the Moon. In Japan, ispace.inc is also aiming to land on the Moon as a private company and is planning to use lunar resources for commercial purposes. Rules for lunar activities are increasingly required, and they are being discussed in the Space Resources WG of the COPUOS Legal Subcommittee. On the other hand, there is a consensus that scientific investigation is a freedom of all actors, which is recognized under Article 1 of the Outer Space Treaty. This trend is also true for the other area of International Law like known as “freedom of scientific research” under UNCLOS. Whether an activity is scientific research or not, however, has often been determined in courtroom. For proper international governance of space exploration, it is worthwhile to consider what types of space resource activities are free and what are restricted, even though international law does not clearly define the meaning of scientific investigation. This paper —while recognizing that simple analogies are not always valid —focuses on the state of scientific investigation in historical international precedents such as the Chagos Marine Protected Area Arbitration (Mauritius v. U.K.), with the aim of discovering some essence that may be common to contemporary space resource activities. Naturally, reference will also be made to due regard principle in examining the freedom of scientific investigation. As a result, the objective determination of scientific investigation is based on a cumulative consideration of factors including the purpose and objective manners of the activity. The difficulty of objective monitoring, however, requires a well-organized information sharing method, which is still establishing. Consequently, to assess the factors that determine the characteristic of an activity, this paper proposes that introducing principles and mechanisms of international environmental law can be one of the effective means for increasing the transparency and foreseeability of activities, and such activities are with due regard to the interests of other states and therefore has the right to enjoy the freedom of scientific investigation.