

IISL COLLOQUIUM ON THE LAW OF OUTER SPACE (E7)
International cooperation on the way to the Moon and Mars (2)

Author: Dr. Yuri Takaya-Umehara
The University of TOKYO, Graduate school, Japan, yuritakaya@gmail.com

LEGAL STUDIES ON THE SAFETY FRAMEWORK FOR NUCLEAR POWER SOURCE
APPLICATION IN OUTER SPACE

Abstract

To protect people and the environment in Earth's biosphere from potential nuclear hazards associated with the use of Nuclear Power Source (NPS), the Safety Framework for NPS Application in Outer Space was jointly drafted and adopted in 2009 by the Scientific and Technical Subcommittee (STSC) of the UN Committee on the Peaceful Uses of Outer Space (UNCOPUOS) and the International Atomic Energy Agency (IAEA). Compared with the 1986 NPS Principles which was the outcome of the Legal Subcommittee (LSC) of the UNCOPUOS, the 2009 Safety Framework highlights a pressing need to control the use of NPS in space exploration where not only spacefaring states but also New Space actors are entering into a new race seeking for, in particular, space resources on the Moon.

The use of NPS in space exploration is traceable to the 1960s when space actors were only two, the United States and the former Soviet Union, which pursued a series of exploration on the Moon, and, in the present, the NPS-equipped rovers have still remained on the Moon and the Mars. The use of NPS in outer space neither constitutes the breach of Article IV of the Outer Space Treaty of 1967 nor the Nuclear Non-Proliferation Treaty of 1968 as it is not nuclear weapon; however, as long as it is nuclear-related materials, its development, use and transfer fit into the scope of the IAEA and nuclear-related export control. Thus, the involvement of IAEA in implementing the 2009 Safety Framework is indispensable not only from the perspective of the denuclearization of outer space but also of the environmental protection of outer space including the Moon and other celestial bodies.

Considering the technical nature of the NPS Framework which needs advanced legal studies, this article aims to clarify legal its challenges by studying: the existing international instruments related to the use and transfer of NPS [1]; the monitoring mechanisms for the use of NPS on the Moon considering the role of IAEA in its implementation [2]; and possible measures to pursue Transparency and Confidence-Building Measures (TCBMs) concerning the use of NPS [3].