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THE ENVIRONMENTAL DIMENSION OF SPACE ARMS CONTROL

Abstract

The injurious effects of various weapons on the natural environment may diminish or even bring to an end the prospect of other utilizations. Environmental concerns have thus played an important role in some arms control negotiations, such as the Antarctic Treaty and the Partial Test Ban Treaty. With regard to arms control in outer space, many more debates have taken place over inter-State strategic trade-offs than over the cooperative interest of avoiding a disaster arising from orbital debris, which moves at an extremely high speed and poses significant threats to orbiting satellites. The proposed article would explore the environmental dimension of space arms control, to the extent of both *lex lata* and *lex ferenda*.

First, it discusses the element of environmental protection in the framework of existing outer space treaties and the application of general international environmental law and international law of armed conflicts to military uses of outer space. Particular emphasis would be placed upon Article IX of the Outer Space Treaty, the 1972 Liability Convention, Additional Protocol I of 1977 to the Geneva Conventions of 1949, the *Sic utere* principle, the principle of *usus publicus*, the principle of inter-generational equity, the precautionary principle, and the polluter pays principle. It aims to examine their sufficiency in addressing environmental concerns arising from space military activities.

Second, it argues for the adoption of a treaty prohibiting testing, deployment and use of space-based conventional weapons and ground-based Anti-Satellite Weapons to fill the lacuna of existing outer space law, for the sake of ensuring long-term sustainability of space activities. The testing, deployment and use of space weapons would generate great quantities of space debris or even veil the Earth orbits with debris clouds in the worst-case scenario, making them no-go areas and jeopardizing the possibility of space exploitation. Therefore, there is a growing taboo against testing, deploying and using space weapons, which resembles that of nuclear weapons. The effect of space weapons would be deterrence at best, but the threshold of using them is much lower because of their conventional nature. A possible desperate use could annihilate Earth orbits. The optimal policy would be at least to preserve the *status quo*, one without space-based weapons and ground-based Anti-Satellite Weapons. The international community should be encouraged to cooperate in mitigating threats posed by orbital debris for the common good, rather than derogating outer space into a battlefield to every nation's detriment.