



# The environmental dimension of space arms control<sup>☆</sup>

Jinyuan Su

School of Law, Xi'an Jiaotong University, Xi'an, Shaanxi 710049, China

## ARTICLE INFO

### Article history:

Received 12 March 2012

Received in revised form

7 July 2012

Accepted 9 July 2012

Available online 27 December 2012

## ABSTRACT

Current debates on the prevention of an arms race in outer space are dominated by the traditional perspective of international strategic balance. This article addresses the issue through the often-neglected lens of environmental protection, reviewing a number of environmental instruments as they relate to outer space. It argues that environmental protection, as a non-traditional element, is an instrumental impetus for arms control. The current regime leaves the door open for states to develop conventional orbital weapons and ground-based anti-satellite weapons (ASATs), which would have a significant adverse impact on the space environment. Thus the law of environmental protection is deficient in effectively protecting the space environment from pollution resulting from military activities. It is further argued that the space arms control regime should be strengthened for humanity's common interest in a sustainable space environment. Preferably an international treaty should be concluded to prohibit testing, deployment and use of space-based weapons and ASATs. These substantive obligations also conform to the requirements of safeguarding international peace and security, and the security interests of spacefaring countries.

© 2012 Elsevier Ltd. All rights reserved.

## 1. Introduction

The conduct of military activities, in times of peace or war, is inherently detrimental to the physical environment, hindering other activities therein. Environmental protection has thus become an increasingly relevant consideration for negotiating arms control-related treaties, such as the Antarctic Treaty and the Partial Test Ban Treaty. The law of arms control, in turn, protects the environment indirectly. With regard to arms control in outer space, the mainstream debates thus far have taken place from the traditional perspective of international strategic balance [1]. In contrast, the environmental dimension has attracted only limited attention. This article recommends a greater focus on the latter approach and explores the environmental dimension of space arms control, considering both *lex lata* and *lex ferenda*.

The next section discusses the role of environmental protection in arms control in the general sense, as well as in the context of

outer space. It attempts to identify the loopholes in the current legal regime of space arms control, and its impact on protection of the space environment. Whereas arms control comprises two facets, namely legal constraints on military activities in time of peace and limitations on military actions in time of conflict, this article focuses on the former. Section 3 discusses the limitations of environmental law where military activities are concerned, and applies international environmental law to peace-time military activities in outer space, drawing on both treaty and customary law. Section 4 discusses the feasibility of amending the current legal regime of space arms control to prohibit both conventional orbital weapons and anti-satellite weapons (ASATs), for the sake of humanity's common interest in a safe space environment.

## 2. The role of environmental protection in space arms control

### 2.1. Environmental protection as an instrumental impetus for arms control

For an insight into the role of environmental protection in arms control, it is helpful to refer to the philosophy of value, in which the value of things is divided into intrinsic value and instrumental value. Intrinsic value is characterized in terms of the value that something has "in itself", or "for its own sake", whereas instrumental value is the value that something has by virtue of being a means to an end [2]. There is no universal hierarchy between the

<sup>☆</sup> This is a significantly revised version of a paper presented at the 54th IISL Colloquium on the Law of Outer Space, Cape Town, South Africa, 3–7 October 2011. The research is supported by "the Fundamental Research Funds for the Central University" (Project No. skzd11009), P.R. China. The author gratefully acknowledges valuable comments and suggestions received from Dr. Steve Doyle on a previous version of this article, and those received from anonymous journal reviewers. All views are personal and all errors the author's.

E-mail address: [nnpercent@gmail.com](mailto:nnpercent@gmail.com).

two categories, as people may sacrifice intrinsic value for instrumental value, or vice versa.

Outer space, as an infinite sphere, has multiple values. It is instrumentally valuable for benefits derived from commercial, scientific and military utilizations; its intrinsic value rests with the uniqueness of its environment *per se*. Environmental ethicists hold that space environments have inherent value [3]. The various values of outer space sometimes conflict and it is in the damage to the extraterrestrial environment that conflicts occur. For instance, the conduct of military activities could damage the space environment. This is not only an impediment to its intrinsic value of unique beauty, but also to its instrumental value, by making the environment inhospitable for satellites serving commercial and research purposes.

The instrumental value of outer space is immense. What states seek from its exploration and use is the optimal fulfillment of their needs, by striking a balance between conflicting values. Although, along with exploration and use, there may be environmental cautions, the space environment is protected more for the realization of its instrumental value. Protection of its intrinsic value, namely its uniqueness, has yet to become a priority for states. It is only when man-made deterioration of the physical environment hinders other utilizations that an impetus for environmental protection arises. The military significance of outer space was recognized at the dawn of the Space Age. Today, a large proportion of space utilities are dedicated to the military sector. Protecting the environment at the cost of surrendering military freedom would be extremely difficult for states to accept, as one of their primary vocations is the quest for security. This is evidenced by the commonly seen fact that states, as the rule makers of international law, are often reluctant to subject their military to the level of environmental accountability required of civil actors. Therefore, human activities conducted in outer space, as in other common areas beyond national jurisdiction, are anthropocentric, and environmental protection is an instrumental impetus for arms control at best.

In reality, it is the traditional elements of security, including the national security of individual states and the security of the whole human race that carry more weight in states' contemplation of arms control. States are unlikely to choose to assume any arms control obligation that curtails their national security. But it should be noted that military build-up does not always enhance security. Sometimes it is even counterproductive. The use of weapons such as nuclear warheads, and subsequent retaliation, would result in indiscriminate devastation. The stockpile of such weapons is a time bomb threatening the survival of the human race, although its existence is more for deterrence than actual use. Thus, in order to safeguard the security of all peoples, states may agree to mutually limit or even prohibit such weapons. An example is the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), whose objective is, among others, to prevent wider dissemination of nuclear weapons and to further the goal of achieving nuclear disarmament. Central to the treaty is the obligation of non-proliferation on the parts of both nuclear-weapon and non-nuclear weapon states parties. The former undertake not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly or indirectly, and not in any way to assist, encourage, or induce any non-nuclear-weapon state to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices [4]. Non-nuclear-weapon states parties undertake not to receive nuclear arms or control over them from any transfer whatsoever, directly, or indirectly; not to manufacture or otherwise acquire nuclear weapons or explosive devices; and not to seek or receive any assistance in the

manufacture of nuclear weapons or explosive devices [5]. Furthermore, all five nuclear-weapon states have made undertakings not to use nuclear weapons against non-nuclear-weapon states parties to the NPT, except in response to a nuclear attack, or a conventional attack in alliance with a nuclear weapons state.

Morality is another impetus for arms control. There are some weapons whose use is excessively injurious and which are deemed unnecessary for the purpose of gaining a military advantage. Because of their serious humanitarian repercussions, it is easier for states to agree to limit them. Examples are the 1899 Hague Declaration concerning Expanding Bullets and the 1925 Geneva Protocol for the Prohibition of the Use of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare.

In the context of outer space, predominant in the traditional negotiation of arms control is the security perspective. Environmental protection, in particular that from space debris, has not been an important consideration, primarily because it has not been a significant concern until recently. As space debris continues to proliferate, more attention should be paid to the non-traditional element of environmental protection in discussions on space arms control.

## 2.2. The element of arms control in the outer space treaty

Arms control comprises two facets: legal constraints on military activities in peacetime and limitations on military actions in time of armed conflict. The former typically limits development, testing and building of certain military technologies in peacetime, while the latter limits the use of certain weapons in armed conflicts. As mentioned, this article focuses on the legal constraints on military activities in time of peace. Apart from the fundamental threshold of non-use of force in order to qualify "time of peace", states' right to conduct military activities in outer space in time of peace is constrained by arms control obligations that they assume voluntarily. The 1967 Outer Space Treaty (OST), which is the backbone of the current *corpus iuris spatialis*, has an arms control element. Article IV prohibits the placement of weapons of mass destruction (WMDs) in orbit around the Earth, on celestial bodies, or in outer space in any other manner. The Article also bans the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military maneuvers on celestial bodies.

In fact, the prohibition of nuclear weapons and other WMDs was agreed between the two cold-war superpowers well before the negotiations on the OST. Addressing the General Assembly on 22 September 1969 President Eisenhower proposed, *inter alia*, that no nation should put WMDs into orbit or station them in outer space [6]. Subsequent to the signing of the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water of 1963 (the Partial Test Ban Treaty), the USSR and the USA reaffirmed that they did not intend to station any objects carrying WMDs in outer space. These expressions were welcomed by the UN General Assembly in its resolution 1884 of 17 October 1963. This was largely because of the concern over the massive destructiveness of nuclear weapons. In other words, it was the threat to the whole human race that prompted the prohibition.

The OST deals with arms control only fragmentarily. Article IV fails to prohibit either conventional weapons in outer void space, i.e. between celestial bodies, or ASATs, be they airborne or land based. These loopholes leave the door open for possible development of space weapons. It seems likely that one state's development of such weapons would force others to follow suit, igniting a conventional space weapons race. Whereas only a few states have the capability and funds to develop complex and costly space-based

Download English Version:

<https://daneshyari.com/en/article/10522308>

Download Persian Version:

<https://daneshyari.com/article/10522308>

[Daneshyari.com](https://daneshyari.com)