

## Existing International Legal Instruments and Prevention of the Weaponization of Outer Space

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### I. Existing international legal instruments are inadequate to prevent outer space from being weaponized

Since the 1960s, the international community has instituted a series of legal instruments on outer space, including the 1963 Limited Test Ban Treaty (LTBT), the 1967 Outer Space Treaty (OST), the 1979 Moon Agreement as well as some bilateral agreements. These instruments have played a positive role in promoting peaceful use of outer space and regulating outer space activities. They have also had a bearing on prohibiting the deployment of weapons of mass destruction (WMD) and certain military activities in outer space, but are inadequate to prevent the weaponization of outer space.

#### 1. Limited Test Ban Treaty (LTBT)

Article I 1(a) of Limited Test Ban Treaty (Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, LTBT) prohibits “*any nuclear weapon test explosion, or any other nuclear explosion*” from being carried out “*in the atmosphere; beyond its limits, including outer space*”.

This provision can be interpreted as banning both tests and use of nuclear weapons in outer space. As the Comprehensive Test Ban Treaty has not yet entered into force, this provision is still of important realistic significance. However, LTBT addresses activities regarding only nuclear weapons in outer space and does not cover other weapons.

#### 2. The Outer Space Treaty (OST)

Paragraph 1, Article IV of the Outer Space Treaty (Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies) prescribes that States Parties to the Treaty “*undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner*”.

This provision bans the deployment of weapons of mass destruction in orbit around the Earth, on celestial bodies and in outer space, but does not deal with weapons other than WMD, such as conventional weapons and new types of weapons based on other physical principles.

Paragraph 2, Article IV prescribes that, *“the Moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies shall be forbidden.”*

While this provision prohibits relevant military activities on the Moon and other celestial bodies, it does not restrict such activities in outer space where the Moon and other celestial bodies are, such as the orbits to and around the Moon and other celestial bodies.

### 3. The Moon Agreement

As an addition to and development of the Outer Space Treaty, the Moon Agreement (Agreement Governing the Activities of States on the Moon and Other Celestial Bodies) is a relatively comprehensive legal instrument on restricting military activities on the Moon and its orbit. However, only 11 States had ratified, and an additional 5 had signed the Agreement by August 2004. Hence it lacks universality. And it also has some drawbacks.

Article 3(2) prescribes that, *“any threat or use of force or any other hostile act or threat of hostile act on the Moon is prohibited. It is likewise prohibited to use the Moon in order to commit any such act or to engage in any such threat in relation to the Earth, the Moon, spacecraft, the personnel of spacecraft or man-made space objects.”*

Article 3(4) prescribes that, *“the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on the Moon shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration and use of the Moon shall also not be prohibited.”*

The above provisions prohibit only tests and use of weapons of any kind on the Moon, and the use of such weapons from the Moon against the Earth, spacecraft and the personnel. However, activities of such kind in the Moon orbit and in outer space other than the Moon are not covered.

Article 3(3) prescribes that, *“States Parties shall not place in orbit around or other trajectory to or around the Moon objects carrying nuclear weapons or any other kinds of weapons of mass destruction or place or use such weapons on or in the Moon.”*

This provision bans only the deployment of weapons of mass destruction on the Moon and in its orbit, but does not deal with weapons of

other kinds.

#### 4. Convention on Environment

Article I (1) of the Convention on Environment (Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques) prescribes that it is not permitted, “*to engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party*”, and Article II prescribes that the term “environment” includes outer space.

This provision bans only the use of environmental modification techniques in outer space, but other means of strike, damage and injury to other States are not dealt with.

#### 5. Relevant Bilateral Agreements

Some bilateral arms control agreements between the United States and former Soviet Union restricted, to some extent, the use and deployment of weapons of special kinds in outer space.

Article IX (1) of the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms (SALT-II) of 1979 prescribed that the two parties undertake “*not to develop, test, or deploy...: (c) systems for placing into Earth orbit nuclear weapons or any other kind of weapons of mass destruction, including fractional orbital missiles*”.

The provision had a positive role in forbidding the deployment and use of nuclear, biological and chemical weapons in the Earth orbit. However, it did not prohibit the deployment and use of weapons of other kinds in the Earth orbit. The Agreement expired in 1985.

The Anti-Ballistic Missile Treaty of 1972 required not to develop, test or deploy space-based anti-missile systems. The Treaty became null and void when the US withdrawal decision entered into force on June 13, 2002.

## II. Conclusions

Although the current international legal instruments concerning outer space do prohibit and/or restrict, to some extent, the deployment of weapons, use of force as well as military activities in certain parts of outer space, the related provisions contained in them are limited in scope and thus inadequate for preventing the weaponization of outer space. This is reflected mainly in the following two aspects:

First, these instruments are unable to effectively prevent the testing,

deployment and use of weapons other than WMD in outer space, especially in the orbit around the Earth, on celestial bodies other the Moon.

Second, none of the above-mentioned legal documents covers the question of use of force, or threat of use of force against objects in outer space.

The progress of science and technology, especially the research and development of weapons to be used in space warfare, as well as the emerging of military doctrines which include the concept of weaponization of outer space, make it necessary for the international community to strengthen the existing international legal system on outer space by overcoming its shortcomings and rectifying their defects so as to effectively prevent the weaponization of and an arms race in outer space. The best way is to enact through negotiations an international legal instrument on the prevention of the weaponization of outer space.