**UN Open-ended working group on the prevention of an arms race in outer space in all its aspects**

**The threat or use of force in outer space**

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## Introduction

1. This expert briefing introduces the international legal framework governing the resort to force between States (*jus ad bellum*), its two key rules - the prohibition of the threat or use of force and the exception of self-defence - and explains how these rules can be applied to outer space.

### *Jus ad bellum*

2. *Jus ad bellum* is a distinct field of international law to *jus in bello*. *Jus in bello*, also known as international humanitarian law or the law of armed conflict, is a body of international law that applies during armed conflict to regulate the conduct of hostilities and protect civilians. *Jus ad bellum* on the other hand governs the resort to force between States in their international relations. Its main provisions are articles 2(4) and 51 of the UN Charter.

### Article 2(4) of the UN Charter and the prohibition of the threat or use of force

3. The key rule in *jus ad bellum* is the prohibition of the threat or use of force between States. This rule is enshrined in article 2(4) of the UN Charter, which provides:

> All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations.

The International Court of Justice (ICJ) has held that the prohibition of force is a 'cornerstone' of the UN Charter. The prohibition of the threat or use of force is also a norm under customary international law binding all States.

4. The prohibition of the threat or use of force is a peremptory norm of international law (*jus cogens*). Peremptory norms have a hierarchical superiority over other norms. This means that no State can derogate from the norm, the norm overrides any inconsistent obligations, and that it can only be modified by a subsequent norm that has the same character. States cannot enter into a treaty that conflicts with the prohibition of the threat or use of force.

5. Article III of the Outer Space Treaty (OST) makes clear that international law, including the UN Charter, applies in outer space.

6. In sum, the prohibition of the threat or use of force binds all States under the UN Charter and customary international law, is a peremptory norm and explicitly applies in outer space.

**Article 51 of the UN Charter and the right of self-defence**

7. The only recognised exceptions to the prohibition of the threat or use of force are self-defence in response to an armed attack and a use of force authorised by the UN Security Council acting under Chapter VII of the Charter.

8. The right to self-defence is set out in article 51 of the UN Charter, which provides:

> Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security. …

The right to self-defence is an inherent right under customary international law.

9. Article 2(4) refers to 'use of force' and article 51 refers to 'armed attack'. These are distinct concepts. The ICJ has held that armed attacks are 'the most grave forms of the use of force'. Self-defence is only permitted against an 'armed attack'.

10. The right to self-defence is subject to the customary international law requirements of necessity and proportionality. This means that a use of force in self-defence must be both necessary and proportionate to the legitimate aim of self-defence, namely, halting and repelling the armed attack. There is no requirement that a use of force in self-defence take the same form or be carried out in the same domain as the armed attack it is responding to. The proportionality requirement under *jus in bello* must also be taken into consideration when using force in self-defence.

**Interpreting and applying article 2(4) of the UN Charter**

11. When applying the prohibition of the use of force in article 2(4), two types of factors are relevant: contextual requirements, and elements that characterise the act as a 'use of force'. Due to the unique environment of space, some of these elements raise specific legal and factual issues that I will address later.

12. The contextual requirements for prohibited force are set out in article 2(4), and must be met for a 'use of force' to fall within the scope of the prohibition. These require that the 'use of force' be:
    a. by a State;
    b. in international relations; and
    c. 'against the territorial integrity or political independence of any state or in any other manner inconsistent with the Purposes of the United Nations'.

13. The elements of a 'use of force' refer to:
    a. Its *means*.
    b. Its direct, physical *effects*.
    c. The *severity* (or gravity) of those effects.
    d. A hostile or coercive *intent*.

These elements are weighed and balanced to form an overall assessment of whether the threshold for a 'use of force' is reached.

**Applying the prohibition of the use of force to outer space**

14. The unique physical environment of outer space and special rules that apply in this domain raise specific issues in applying article 2(4) of the UN Charter.

15. Regarding the contextual elements:

    a. By a State:

        i. Due to article VI of the OST, the 'appropriate State' is internationally responsible for national activities in space, including by non-governmental entities. This means that commercial space actors can implicate a State in a violation of *jus ad bellum*. (Note: any targeting of commercial space actors must comply with international law including *jus ad bellum* and *jus in bello*.)

        ii. Attribution of acts in outer space can be challenging depending on the type of capability used. This underscores the importance of space situational awareness (SSA) for characterising acts and determining the lawful response.

    b. 'against the territorial integrity or political independence of any state or in any other manner inconsistent with the Purposes of the United Nations': due to lack of territoriality in space and the characteristics of satellites, which may be jointly owned or operated, host multiple payloads and provide services to a wide range of end-users, special considerations apply to identifying the victim State or States of a use of force in space.

16. Regarding 'use of force':

    a. *Means*: The ICJ has stated that article 2(4) 'does not refer to specific weapons'. There is a wide range of counterspace capabilities, from kinetic physical such as direct ascent or co-orbital ASAT, to non-kinetic physical (laser dazzling), electromagnetic (jamming, spoofing) and cyber operations. Kinetic physical means are more likely to meet the threshold for a 'use of force' because they are often easier to attribute and are more likely to have destructive effects and evince a hostile intent. Non-kinetic means can also constitute a 'use of force' depending on their effects, severity and intent.

    b. *Effects*: Counterspace capabilities can have a range of effects, which may be permanent (e.g. physical damage or destruction) or temporary and reversible (e.g. jamming of satellite signals). Permanent destructive effects are more likely to be

considered severe. Temporary and reversible effects on space systems and services can also be severe depending on the circumstances, for example, jamming of GPS signals leading to a civil aviation accident.

c. *Severity* of the effects encompasses the severity of the immediate physical effects and the cascading effects of a forcible act, including damage from space debris created by kinetic ASAT capabilities.

d. *Intent* can be challenging to establish in space. Space situational awareness can contribute to determining whether an act was mistaken or accidental or if it was done with a hostile or coercive intent. The more the means used are perceived to be a 'weapon', the more likely its use is to be characterised as evidence of a hostile or coercive intent, although this assessment must still be made in light of the surrounding facts and circumstances.

**Conclusion**

17. The prohibition of the threat or use of force under article 2(4) of the UN Charter and customary international law applies in outer space and binds all States. It is therefore a matter of increasing the clarity of the norm regarding its interpretation and application to this domain.

18. Both legally binding instruments and non-legally binding measures can contribute to increasing the clarity of the prohibition of the threat or use of force in its application to outer space. This can take the form of subsequent agreement and subsequent practice of States in their application of the UN Charter. These approaches can be complementary.

19. The framework for applying article 2(4) of the UN Charter in space can accommodate an assessment of both capabilities and behaviours, as both may be relevant to whether the threshold for a prohibited threat or use of force is met. The prohibition of the threat or use of force can form the foundation for building common understandings to achieve the goal of preventing an arms race in outer space in all its aspects.

**Further resources**

20. This expert briefing has provided an overview of the prohibition of the threat or use of force in its application to outer space. The following Open Access resources set out the topic in more detail:

a. 'Outer Space and Use of Force' (UNIDIR, 2024): a legal primer for a diplomatic and policy audience on how to apply the prohibition of the use of force in outer space;

b. Cosmic Force: A Framework for Applying the Prohibition of the Use of Force in Outer Space (*International Law Studies*, 2025): an in-depth legal analysis and illustrative application of the prohibition of the use of force to case studies including

DA-ASAT, rendezvous and proximity operations, laser dazzling, jamming and spoofing; and

c. *Prohibited Force: The Meaning of 'Use of Force' in International Law* (Cambridge University Press, 2024): a monograph setting out the framework for interpreting and applying article 2(4) of the UN Charter.

21. Thank you for your attention and I look forward to the discussion.