Thank you, Mr. Chair.

It is my great pleasure to have this opportunity to share with you the ICRC’s views on the constraints under international law on military operations in or in relation to outer space during armed conflicts.

As was noted by previous speakers, the use of space and space objects has been an integral part of contemporary warfare for several decades. As the role of space systems in military operations during armed conflicts increases, the likelihood of these systems being targeted also increases, with potentially significant impacts for civilians on earth. Possible threats to space systems include electronic warfare, cyber operations, directed energy attacks and orbital-based and ground-based anti-satellite weapons.

In light of the above, the ICRC is primarily concerned with the potential human cost for civilians on earth of the use of weapons and other military operations in, or in relation to, outer space during armed conflicts, and the protection afforded by international law, including international humanitarian law (IHL), against their effects.

In the interest of time, my presentation will focus on the following five points:

I. The potential human cost of military operations in or in relation to outer space

Military operations in, or in relation to, outer space during armed conflicts could have significant impacts on civilians on earth because technology enabled by space systems permeates most aspects of civilian life, making the potential consequences of attacks on space systems a matter of humanitarian concern.

For example, civilian infrastructure needed for health care, transportation, communications, energy and trade is increasingly dependent on space systems. Space objects – particularly weather, communication, navigation, and earth observation/imaging satellites – also contribute to every phase of humanitarian work, from needs assessment to emergency relief delivery, from early recovery to disaster and conflict risk reduction. However, many of these civilian satellites, or some of their payloads, may also serve armed forces, and are therefore of a dual-use nature, which may make them military objectives. Another issue of growing concern is space debris, which I will elaborate on later.

II. Existing limits under international law on military operations in or in relation to outer space

It is important to underline that military operations in or in relation to outer space do not occur in a legal vacuum but are constrained by existing international law. If military operations in relation to outer space would nevertheless be carried out as part of an armed conflict, relevant international law includes among others:
The United Nations (UN) Charter, which governs the lawfulness of the resort to force between States. It contains a general prohibition on the threat or use of force, and mandates Member States to settle their international disputes by peaceful means.

The Outer Space Treaty, which recognizes the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes.

The law of neutrality, which regulates relations between belligerent States and neutral States in times of armed conflict and serves to mitigate and contain the conflict adverse effects.

IHL, also known as the law of armed conflict or jus in bello, which establishes limits on the right of belligerents to choose means and methods of warfare and rules on the conduct of hostilities to protect civilian populations, civilians and civilian objects from the danger arising from military operations.

IHL applies to, and therefore limits, any military operations conducted in the context of an armed conflict, including those that occur in outer space or the effects of which extend to outer space, just as it regulates the use of any other weapon, means and method of warfare in any armed conflict, whether new or old.

III. Essential rules of international law, in particular IHL, protecting civilians against military operations in, or in relation to, outer space

The following three categories of rules in international law are particularly relevant to the use of weapons and other military operations in, or in relation to, outer space during armed conflicts, including those designed or expected to disrupt, damage, destroy or disable space systems, whether it be a space component, a ground component or any link between them:

The first category of rules prohibits or restricts the choice of weapons, means and methods of warfare that could be placed and/or used in outer space in the event of armed conflict:

- The placement in orbit of objects carrying nuclear weapons or other weapons of mass destruction, the installation of such weapons on celestial bodies and the stationing of such weapons in outer space in any other manner is prohibited.
- The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies are forbidden. The moon and other celestial bodies must be used exclusively for peaceful purposes.
- Weapons that are by nature indiscriminate, or of a nature to cause superfluous injury or unnecessary suffering, as well as a number of other specific types of weapon, are prohibited. These prohibitions are not limited to the terrestrial domains.
- Military or any other hostile use of environmental modification techniques – namely any technique for changing, through the deliberate manipulation of natural processes, the dynamics, composition or structure of the earth or of outer space – having widespread, long-lasting or severe effects as the means of destruction, damage or injury is prohibited.
- States party to the 1977 First Additional Protocol to the Geneva Conventions are required to review the legality of any new weapon, means or methods of warfare in or in relation to space that they would decide to develop or acquire - be it kinetic or not, space-based or ground-based - to ensure that its employment would comply with IHL and other relevant rules of international law. All States have an interest in doing so to ensure that their armed forces are capable of conducting hostilities in accordance with their international obligations.

The second category of IHL rules regulates the conduct of hostilities, notably with a view to protecting civilians. These include notably the principle of distinction, the prohibition against indiscriminate and
disproportionate attacks, and the obligation to take all feasible precautions in attack and against the effects of attack. These rules were already presented at length by the previous speaker.

The third category of rules offers additional specific protection to certain objects and persons in armed conflict. For instance, attacking, destroying, removing or rendering useless objects indispensable to the survival of the civilian population is prohibited. Specially protected persons and objects, such as medical services, must be protected and respected at all times, including when carrying out military operations in relation to outer space.

In addition, all feasible precautions must be taken to protect civilians and civilian objects against the effects of military operations in, or in relation to, outer space, which is an obligation that States must already implement in peacetime. Measures that could be considered include segregating the military use of space objects from the civilian use of space objects; and working towards identifying space systems serving specially protected objects like hospitals and objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural land, drinking water installations and supplies, and irrigation networks. If a space object is exclusively dedicated to civilian use, the State of registry should register it as such, clearly indicating its protected status under IHL.

IV. Challenges for the application of IHL to military operations in or in relation to outer space

The specificities of the space environment pose challenges to the application of IHL principles and rules. The ICRC thus encourages States to work towards a common understanding of how IHL applies in outer space, bearing in mind strengthening protection of civilian population during armed conflicts.

Among the various issues, I would like to discuss the following three issues:

A. The notion of “attack” under IHL and military operations against space systems

Most IHL rules stemming from the principles of distinction, proportionality and precautions – which provide general protection for civilians and civilian objects – apply only to military operations that qualify as “attacks” as defined in IHL, i.e. “acts of violence against the adversary, whether in offence or in defence” under Article 49(3) of the First Additional Protocol. The question of how widely or narrowly the notion of “attack” is interpreted with regard to military operations in relation to outer space is therefore essential for the applicability of these rules and the protection they afford to civilian satellites and ultimately to civilians on earth.

It is widely accepted that a kinetic operation against a space system during an armed conflict constitutes an attack under IHL. This is also the case for non-kinetic operations, for example by directed energy/laser weapons or a cyber operation, that may be expected to cause death, injury or physical damage, including in the ICRC’s view when such harm is caused through the indirect (reverberating or cascading) effects of such attacks.

However, a space system could also be disabled (rendered dysfunctional) without being physically damaged, and divergent views exist on whether disabling an object without causing – even indirectly – physical damage qualifies as an attack under IHL.

In the ICRC’s view a non-kinetic operation that may be expected to disable an object without causing – even indirectly – physical damage qualifies as an attack as defined in IHL and is therefore also limited by the above-mentioned rules governing attacks, among others. Otherwise a non-kinetic operation designed or expected to render dysfunctional a space system on which critical civilian infrastructure rely might not be covered by essential IHL rules protecting the civilian population and civilian objects. Such an overly restrictive understanding of the notion of attack would be difficult to reconcile with the object and purpose of the IHL rules on the conduct of hostilities. It is essential in this regard that States find a common understanding to adequately protect the civilian population on earth against the effects of operations affecting space systems.
B. The military use of a space object and the impact on its civilian character

IHL forbids targeting civilian objects in outer space. However, civilian satellites, or some of their payloads (for example, a specific transponder on a satellite bus), may also service armed forces, and hence be of a “dual-use” nature. Dual-use satellites may become military objectives, provided that their use for military purpose is such that they fulfil the definition under Article 52(2) of the First Additional Protocol.

As noted above, disabling the civilian functions of dual-use space objects could disrupt large segments of modern-day societies, especially if they also support safety-critical civilian activities and essential civilian services on earth. Even if a dual-use space object was no longer protected as civilian object, any attack would remain governed by the IHL prohibitions of indiscriminate attacks and the rules of proportionality and precautions in attack. These rules and principles are relevant not only with regard to the foreseeable incidental civilian harm to other civilian objects, but also in terms of the consequences for civilians of impairing the civilian use of that dual-use space object. Whenever feasible, means and methods of warfare that affect solely the payload used for military purposes and not the rest of the civilian satellite must be chosen to avoid or at least minimize incidental civilian harm.

C. Space debris

Another issue of concerns is the risk posed by space debris. Debris can be created by a host of space activities. This includes in particular kinetic attacks against space objects, which risk causing far more debris than many other space activities. Debris may continue to travel in the orbits in which it is produced for decades or more. Given the speed at which it travels, debris risks damaging or destroying in an unpredictable manner other space objects.

As noted above, when planning or deciding upon an attack against a military objective in space during an armed conflict, all feasible precautions must be taken to avoid or at least minimize incidental civilian harm and damage to civilian objects, and such incidental harm must not be excessive. A party to armed conflict that would plan to attack a military objective in outer space must therefore choose a non-debris producing alternative, for example an electromagnetic or cyber operation or the use of direct energy weapons, whenever this is feasible and enables to avoid or minimize incidental civilian harm including the dangers that the creation of debris would pose to civilian satellites.

V. Conclusions and recommendations

As civilian life today increasingly relies on space objects, military operations affecting these objects entails a risk of significant human cost on earth. Despite the examples given earlier, the exact scope of the potential consequences of these activities is uncertain and would merit further analysis. It is therefore essential for the OEWG to acknowledge and examine the humanitarian consequences on civilians of “current and future threats to space systems”. It is notably critical to consider in this respect the harmful impacts of directly or incidentally disrupting, damaging, destroying or disabling satellites that support safety-critical civilian activities and essential civilian services on earth.

For the protection of the civilian population and civilian infrastructure, in the view of the ICRC, any future discussion and recommendations on “possible rules, principles and norms of responsible behaviours” should be based on the stock-taking of the “existing international legal and other normative frameworks” mandated to the OEWG. Notably, military operations in or in relation to outer space do not occur in a legal vacuum, but are constrained by existing law, notably the UN Charter, the Outer Space Treaty, IHL and the law of neutrality.

The ICRC urges States to consider the risks of humanitarian consequences when taking any decision with regard to military operations in or in relation to outer space, at national or multilateral level. In particular, in light of the risks of significant civilian harm, States may decide to set general prohibitions
or specific limits with regard to weapons, hostilities or other military operations in or in relation to outer space for a range of reasons, including humanitarian ones, as they did in the Outer Space Treaty.

If new norms, rules and principles in this regard are to be developed, they must be consistent with and should build on and strengthen the existing legal framework, including IHL.

Thank you.