

Forum: UN International Space Council

Issue 2: The question of addressing the growing threat of space debris following anti-satellite weapon tests by MEDCs and other spacefaring nations

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The growing threat of space debris following anti-satellite weapon tests by MEDCs and other spacefaring nations

Videos

- [ESA: Space debris – is it a Crisis? \(documentary, 2025\)](#)
- [ESA: Distribution of space debris in orbit around Earth \(animation\)](#)
- [ESA: Facing the space debris challenge](#)
- [ESA: Earth's first Space Debris Removal Mission \(ClearSpace-1\)](#)

Articles

- [UNOOSA: The Outer Space Treaty \(1967\)](#)
- [ESA: Space debris by the numbers](#)
- [Secure World Foundation: Statement on the Russian ASAT test](#)
- [Arms Control Association: Russian ASAT test Creates Massive Debris](#)
- [The Diplomat: Why an ASAT Test Ban Is Important](#)

Key Terms

Space debris: junk that floats in space. For example dead satellites, old rocket parts, and chunks of space equipment that broke apart. ESA estimates that there are now more than 34,000 pieces larger than 10cm floating in space and about 130 million pieces smaller than that.

Anti-satellite weapon (ASAT): a weapon designed to destroy a satellite. Direct-ascent ASAT is fired from the Earth and hits a satellite, shattering it into thousands of pieces.

Low Earth orbit (LEO): the part of space closest to the Earth. It is roughly within 2,000 kilometers of the Earth. Many satellites, including the International Space Station, and most debris is located in LEO.

Kessler syndrome: a theory developed by NASA engineer Donald Kessler in 1978. If enough debris is present in an orbital path, then if two pieces collide they will create additional debris. These collisions could continue indefinitely until the orbital paths are unsafe for

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further use.

Outer Space Treaty (1967): the primary international treaty governing space. The Outer Space Treaty prohibits placing nuclear weapons in orbit but does not address either anti-satellite tests or space debris.

ASAT test moratorium: a pledge by a nation not to conduct anti-satellite tests that result in destroying operational satellites. The United States issued the first moratorium in April 2022.

Overview

Since 1957 many countries have launched satellites into space. However, a significant amount of this hardware remains in space today. Once satellites fail to function they rarely return to Earth. Instead, they usually remain in orbit as junk, along with remnants of old rockets and pieces of spacecraft that have disintegrated. According to ESA, approximately 34,000 items greater than 10 centimeters in diameter and over 130 million items under ten centimeters in diameter currently exist in orbit around Earth. This presents a major concern due to the high speeds involved (up to 56,000 km per hour). Thus, even small pieces of debris could potentially disable functioning satellites.

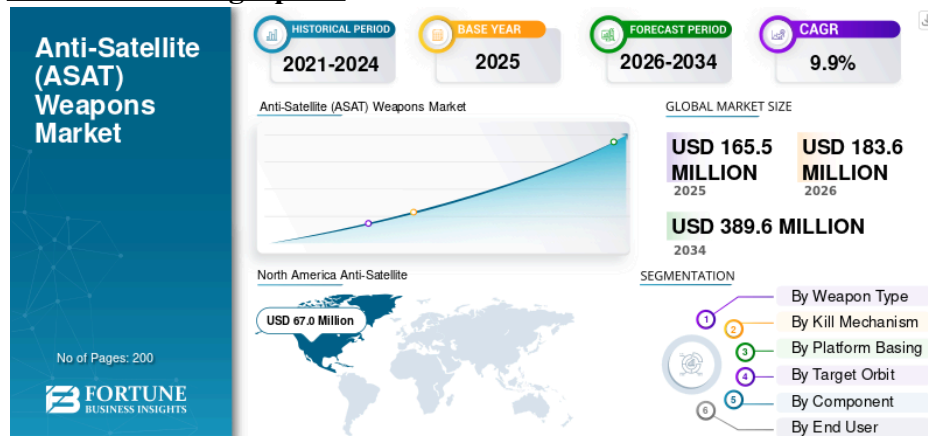
Anti-satellite tests are one of the fastest ways to create large amounts of new debris. One country fires a missile at one of its satellites to demonstrate capability and the satellite explodes into thousands of pieces. These pieces will remain in orbit for years. Four countries have tested anti-satellite missiles against operational satellites: the United States, Russia, China and India.

The first serious effort to govern space activity was the Outer Space Treaty adopted in 1967. The treaty prohibits nuclear weapons from being placed in outer space and encourages peace in space. However, it does not contain provisions prohibiting anti-satellite tests or controlling debris. Some people believe the Outer Space Treaty is outdated due to the immense growth of space activities since 1967. Each year numerous satellites are launched into space. As the number of satellites increases so does the probability of collisions occurring among satellites.

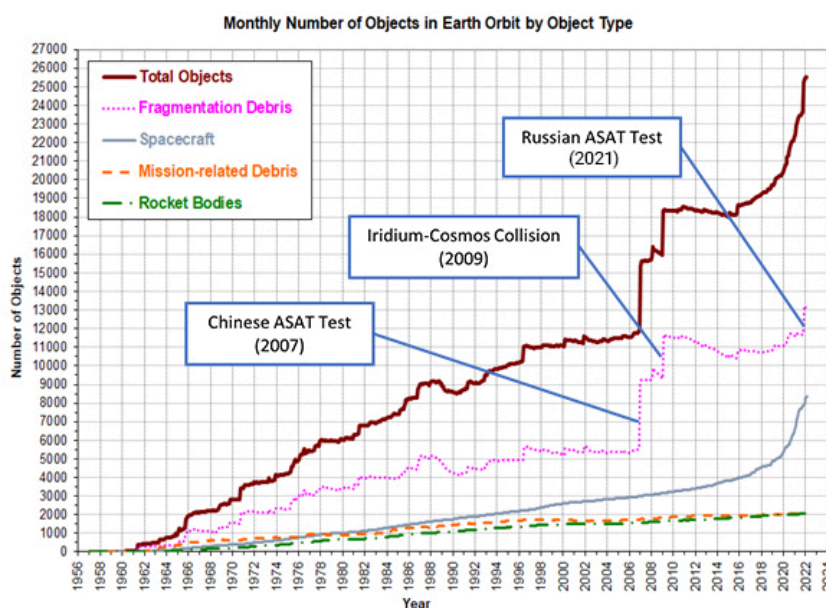
Several tests stand out. China exploded one of its weather satellites in January 2007 resulting in approximately 2,763 identifiable fragments remaining in orbit. The United States destroyed a malfunctioning U.S. spy satellite with a missile in February 2008, although the majority of that debris has reentered Earth's atmosphere since. India conducted an anti-satellite test in March 2019 but limited the impact by conducting it at a relatively low altitude and thus limiting the amount of debris generated. On November 15, 2021 Russia conducted an anti-satellite test that resulted in over 1,500 identifiable pieces being put into orbit. At that time seven astronauts were aboard the International Space Station (ISS) and were forced to take refuge inside their docking vehicle to prevent potential damage from debris.

Actions have begun. In April 2022 the United States announced it would cease conducting destructive anti-satellite tests. It also called upon other countries to follow suit. By the end of 2022 seven other countries (Canada, Japan, Germany, Great Britain, South Korea, Australia and France) followed the lead of the United States. In December 2022 the United Nations General Assembly approved a resolution supporting the concept of a ban on destructive anti-satellite tests. Of those voting, 155 supported the ban while nine opposed it and nine abstained. Although this represents progress toward reaching agreement regarding the dangers posed by such tests, a very significant limitation exists - the three countries most likely to conduct these tests (China, Russia and India) either voted against the resolution or abstained. Therefore, there is still no legal prohibition on such destructive tests - this is what this committee needs to focus on.

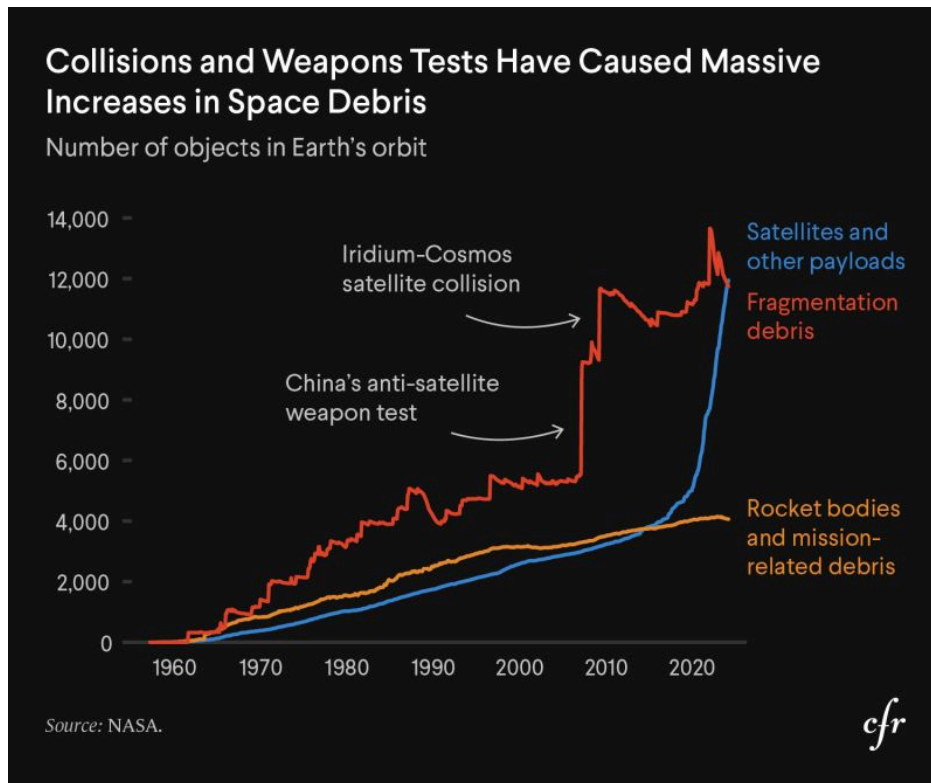
Statistics & Infographics



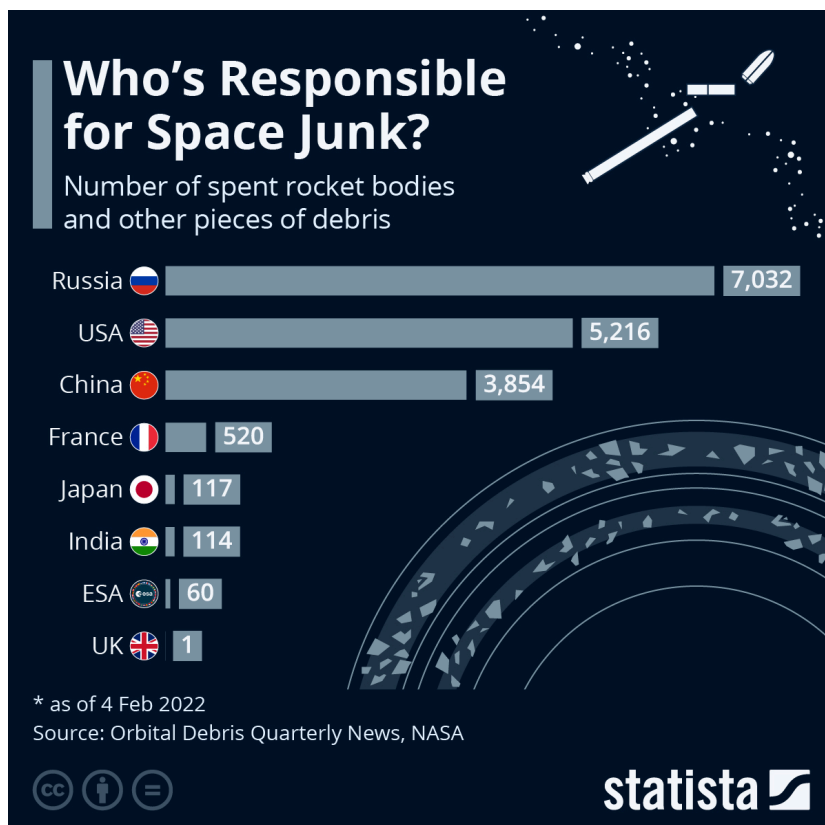
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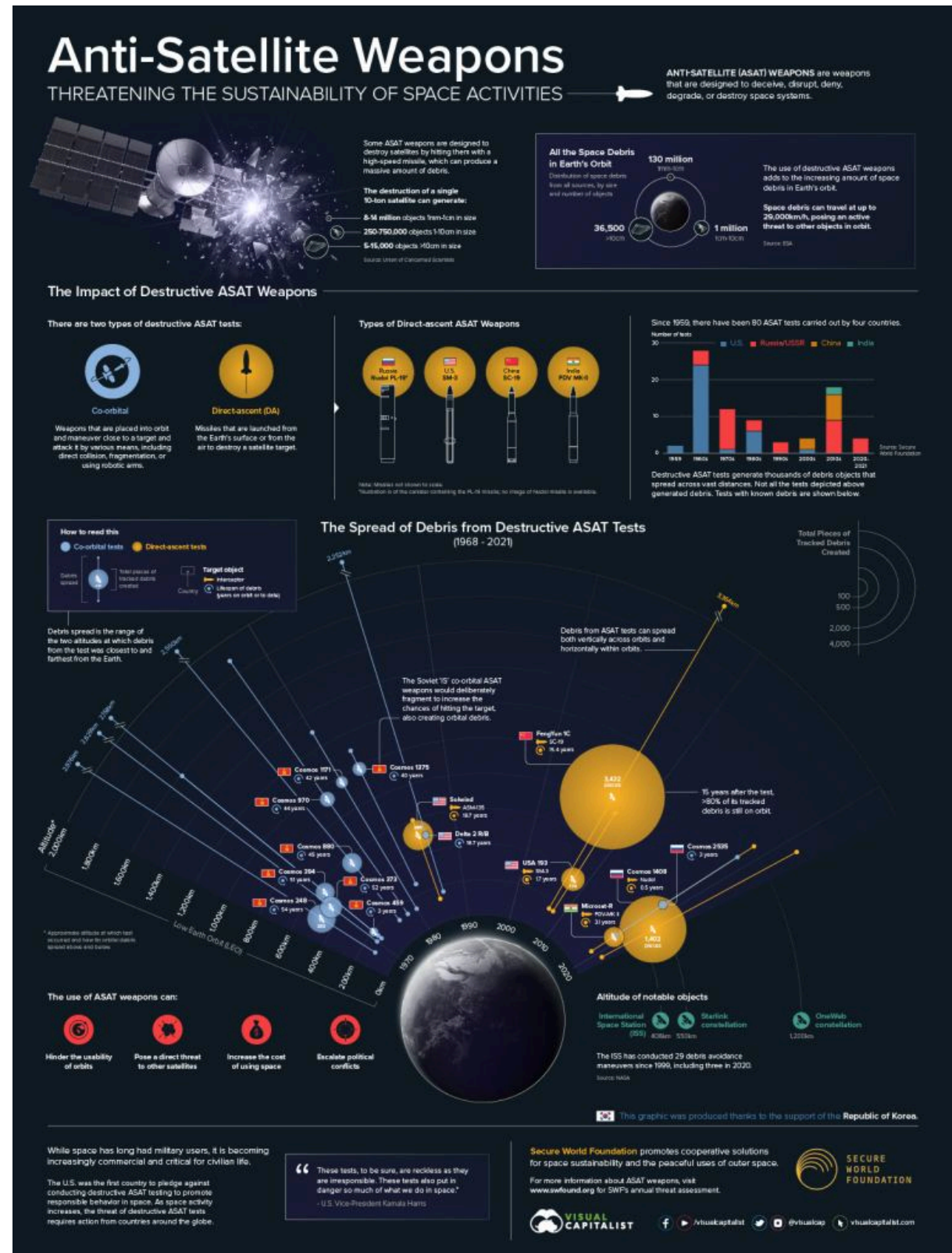
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Timeline

1957	Soviet Union launches Sputnik I -- first satellite launched into space
1967	Outer Space Treaty signed
1978	Donald Kessler describes Kessler syndrome
2007	Chinese government conducts ASAT test
2008	United States destroys malfunctioning spy satellite
2019	Indian government conducts low altitude ASAT test
2021	Russian government destroys Cosmos 1408 satellite
2022	United States announces anti-satellite test ban
2022	United Nations supports ASAT test ban resolution with majority vote

Major Parties

United States of America - has launched more satellites than any other country and conducted an anti-satellite test in 2008. Also led efforts for an anti-satellite test ban announced in April 2022. Also encouraged participation from other nations.

Russia - Russia's November 15, 2021 ASAT test created massive amounts of debris threatening to harm crew members on board the International Space Station. Russia also voted against the UN-supported resolution banning such tests and has not participated in the ban.

China - Chinese government has conducted one test resulting in approximately 2,763 identified fragments remaining in orbit. China also voted against the UN-supported resolution banning such tests indicating they would need incentives or pressure to participate.

India - India conducted an anti-satellite test in March 2019 but did so at a lower altitude and therefore produced fewer pieces of debris. India chose to abstain from voting on the UN-sponsored resolution.

European Union and allied space nations - members include France, Germany, Great Britain, Japan, Canada, Australia and South Korea who have generally supported the ban on destructive ASAT tests and advocate cleaning up existing space debris.

New emerging nations - countries such as the UAE, Saudi Arabia and Brazil are becoming increasingly active in pursuing opportunities for space development. They are interested in establishing regulations that apply equally to all space-faring nations.

Possible Solutions

Delegates to the International Space Council at RCMUN 2026 should seek ways to develop policies protecting orbit from destruction while recognizing motivations for developing anti-satellite capabilities. Potential policy options may include:

- Converting the UN-sponsored resolution banning destructive ASAT tests into enforceable legislation requiring participating nations to comply.
- Amending the Outer Space Treaty to explicitly prohibit anti-satellite testing and/or regulate debris.
- Requiring nations to de-orbit satellites and rocket components once they are no longer needed.
- Exchanging tracking information enabling satellite operators to avoid colliding with known space debris.
- Providing funding for clean-up missions similar to ESA's ClearSpace-1 mission to eliminate existing debris from orbit.
- Identifying incentives encouraging China, Russia and India to support enforcement mechanisms for banning destructive ASAT tests.

Committee Objective

The objective of the International Space Council at RCMUN 2026 is to facilitate meaningful discussions concerning issues associated with space debris resulting from anti-satellite testing. Delegates should know their country's position, understand the technical and political sides of the issue, and work towards agreements that keep space usable in the future.

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