

## In space, either we all win, or we all lose

The European Union and wider international community must act urgently to avoid the further militarisation of outer space, writes Professor Nayef Al-Rodhan.



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Last week, the European Commission published its 2021 work programme, containing new legislative initiatives across six political priorities presented during Commission chief Ursula Von der Leyen's first State of the Union address. Space security was not among them. After NATO officially designated space a new 'operational domain' in June of last year, the omission of space security from the EU's agenda represents a significant oversight, and a missed geopolitical opportunity. The European Union should be playing a leading role in pushing for new international treaties to militate against the weaponisation of space.

Evidence of the militarisation of space is growing by the day. In July of this year, the US Space Command announced it had evidence that Russia had tested a space-based anti-satellite weapon. The satellite system used to conduct the test was the same the US Space Force had labelled "unusual and disturbing" just a few months earlier, in February, after two Russian satellites in the system followed

a US spy satellite. Earlier this month, news emerged that Elon Musk's SpaceX had secured three military contracts to help the US Department of Defense (DoD) transport supplies faster across the globe. This deal comes as the US military is "retooling" because of growing global political tensions.

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The militarisation of space is not a new geopolitical phenomenon. A technological race has been going on for decades now. Historically, the United States has always been the pre-eminent power. The US has long relied on superior space technologies to support its military presence around the globe, in the shape of GPS technology, MUOS communications satellites, and other spatial engines used as observatory tools by the US Air Force, the National Geospatial-Intelligence Agency and other agencies.

In reaction to this domination, and in a bid to flex its muscles, China fired its first anti-satellite missile in 2007. Its most recent test, conducted in 2018, was yet further evidence of the country's growing prowess and ambition in space. China now has almost 300 satellites in orbit. Whether they are primarily used for purposes of observation, communication or navigation might be a matter for debate - but a significant part of their infrastructure is likely to have militaristic capability, if not intent.

Russia is of course the other lead protagonist in this arms race. While the former Soviet Union failed to carry low-orbit anti-satellite shots during the Cold War, Russia finally succeeded in doing so in 2015. Since then, it has been consistently enhancing its capabilities.

In March 2019, India became the fourth country to demonstrate its ability to destroy a low-orbit satellite by firing a missile into it. Such a feat requires a significant level of autonomous capacity at state level, from the fact of access to space to the mastering of state-of-the-art technologies. But here lies the problem: not much room is left for cooperation.

States consider their space technologies to be among their most precious assets, which translates into a reluctance to share information, limit transparency, and fail to enact international binding mechanisms. In 2021, the EU executive is set to propose a 'Joint Communication on strengthening the EU's contribution to a rules-based multilateralism' – space security must be put at the top of the list.

These successful tests conducted by the world's major powers - the US, Russia, India and China - are symptomatic of a global drive towards the militarisation of space, in which the development of anti-satellite weapons fired from the earth, the stratosphere or from space itself is a key characteristic. But this modern arms race is beginning to bring about considerable geopolitical tensions which will only escalate if the international community does not act now.

To date, the Outer Space Treaty constitutes the basis of international space law and prohibits the placing of weapons of mass destruction (i.e. nuclear weapons) in space. Dating back to 1967, it has been signed by over 130 countries.

While it has laid a theoretical groundwork to criminalise the weaponisation of space, this treaty and others have nevertheless failed to prevent states from placing other types of weapons or potential weapons in space. Moreover, they do not ban the use of anti-satellite missiles shot from the earth. This lack of legal clarity has created a vacuum that countries like Iran and North Korea have harnessed.

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This is creating a zero-sum environment. The international community should instead be adopting an approach I have termed "symbiotic realism", whereby space is treated as a multi-sum domain in which powers can broke mutually beneficial agreements - ensuring non-conflictual competition and absolute gains for all. Alternatively, if space becomes unsafe, it will not be selectively unsafe, but rather unsafe for all.

States that have acquired anti-satellite capabilities must sit at the negotiation table and discuss ways of making space a safer place. After the last space security talks that took place in Geneva between Russia and the US, both parties recognised they had had a productive exchange. Such talks must be pursued and extended to India and China. A quintet format could even be envisaged, if the EU is willing to step forward.

By [Professor Nayef Al-Rodhan](#)



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