

EU joint contribution to the Open Ended Working Group on reducing space threats

Third part: current and future threats by States to space systems, and actions, activities and omissions that could be considered irresponsible -

As the space environment is becoming increasingly congested, contested and competitive, the number of risks and threats to space objects and systems is rising significantly and merits our full attention. The destruction of space objects, systems and infrastructure or interruption of their services significantly impact and disrupt connected societies which are increasingly dependent on space-based services.

The rapid technical, economic and political development of space reveals new and emerging threats while the inherent dual-use nature of many space objects and systems poses challenges when it comes to protecting space assets, identifying threats, and interpreting an actor's intentions.

I. Irresponsible and threatening behaviours

Threats in outer space cannot be identified from space objects, technologies or space capabilities observed in isolation, but only from a comprehensive analysis of a combination of capabilities and behaviours linked to actions, operations and activities in space, on the ground and in the cyber domain.

As a consequence, and considering the dual-use nature of most of space assets and technologies, additional measures which take account of behaviours should supplement the relevant traditional disarmament and arms control tools to further strengthening the existing normative framework. Indeed, irresponsible behaviours can be threatening and may lead to escalation including due to misunderstanding, misinterpretation or miscalculation.

The current and future threats posed to space systems and services, and the behaviours that could be considered irresponsible can be categorised by their effect as non-kinetic or kinetic, reversible or irreversible, employed in orbit, on the link segment or on the ground. Moreover, in view of the above, the characterisation of what constitutes an irresponsible behaviour should consider the consequences on safety, sustainability and security in outer space as well as international peace, security and stability.

Threats and irresponsible behaviours can, potentially, have a significant impact on civilians, leading to partial or complete service outage; result in reversible or irreversible damages to space systems, and in some cases result in debris. These could have grave consequences for the security and safety of people and goods and impact present and future generations, including by jeopardising the complete and long-lasting availability of orbits of vital interest.

Behaviours with long-lasting consequences on the space environment

Destructive direct-ascent anti-satellite (DA-ASAT) tests lead to the destruction of the targeted satellite and generate space debris. The persistent development and testing of a DA-ASAT capability demonstrates a State's intent to acquire capabilities of targeting and destroying satellites of a potential adversary. The conduct of such tests, per se, may lead States to perceive their space assets, including satellites of crucial importance, such as command and control, navigation or communication satellites, to be at risk. As such, the EU and its Member States consider these tests as irresponsible. Such activities are dangerous and highly destabilising; they may lead to deteriorating confidence between space actors, increase the perception of threats, and could trigger an escalation of violence and potentially could have catastrophic consequences.

DA-ASAT tests leading to the generation of space debris increase the hazards of in-orbit collisions and accidents, the potential for misunderstanding, misinterpretation or miscalculations leading to escalation, and jeopardise access to space. Space debris, notwithstanding its origin, already constitutes a major challenge to the sustainable use of space. In this regard, the EU and its Member States welcome the progress achieved in COPUOS with the adoption of the Long Term Sustainability Guidelines (duly considering i.a. the Space Debris Mitigation Guidelines) and future related work, but remind that more should be done to prohibit such intentional behaviours resulting in the creation of debris. The EU and its Member States thus urge all States to refrain from the irresponsible behaviour of intentionally creating space debris, including through ASAT tests. This behaviour has indeed long-lasting consequences on the space environment, including by threatening other space systems. In this context, the EU and its Member States welcome the commitment made by the United States, and joined by Canada and New Zealand, not to conduct destructive, direct-ascent anti-satellite missile testing.

Ambiguous behaviours with a risk of misunderstanding, misinterpretation or miscalculation leading to escalation

Most of the space assets can be considered dual-use. Technologies, originally made for active debris removal or on-orbit servicing, and therefore allowing in-orbit rendez-vous operations, could be misused for irresponsible or threatening activities such as de-orbiting satellites without consent or destroying them. Also, proximity operations could involve an innocuous manoeuvre, but could also be intentional irresponsible behaviour to disrupt a space system. Bearing in mind this dual-use issue, rendez-vous operations and proximity operations may thus be perceived as a threat or hostile action if conducted in a non-transparent manner.

Therefore, the EU and its Member States consider that conducting or knowingly supporting rendez-vous operations that affect another State's space system without the prior consent of that State constitute an irresponsible behaviour. The omission to inform, notify or communicate about a proximity operation that affects another State's space system is considered an irresponsible behaviour.

Non-kinetic threats and their consequences on international peace, security and stability

Non-kinetic threats such as cyberattacks, jamming and other intentional electromagnetic interferences or direct energy weapons can affect the use of space assets as well and impair services of the targeted satellite or payload to the detriment for its users; they can also be targeted at ground and user segments, and communication links. Some of these activities can be carried out from the ground, whereas others can be carried out from space. These behaviours remain complicated to detect, characterise or attribute, but they can have, in certain circumstances, dramatic consequences on international peace, security and stability. The EU and its Member States believe that these activities may constitute irresponsible behaviours when they jeopardise the security of people and goods, whether on Earth or in space.

II. Perspectives

Given the dual-use nature of many space systems, without excluding the possibility of a legally binding instrument in the future the EU and its Member States believe that an approach based on behaviours, supported by relevant monitoring capabilities, is the most pragmatic and immediate way forward to improve space security today, as it will help to reduce the risks of misunderstanding, misinterpretation and miscalculation, and therefore decrease the risks of conflicts and escalation in outer space.

The upcoming second session of the OEWG, dedicated to threats and threatening behaviours in outer space is thus a unique opportunity for all States to share their concerns and priorities and to present to other States their view of what they consider irresponsible or threatening. It is an opportunity to engage in a dialogue and to collectively reflect on each other's security concerns. This dialogue and exchange should act as a confidence building measure as it will help build a common understanding of what can be considered responsible and irresponsible behaviours in a comprehensive approach which is of vital importance.

The EU and its Member States therefore continue to be fully committed to engage actively and constructively in this process in order to establish what should be considered as responsible or irresponsible behaviours, through norms, rules and principles. We look forward to the views of other States and to engage with them actively in the discussions in order to concretely advance space security.
