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Open-ended working group on reducing space threats through norms, rules and principles of responsible behaviours
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Current context and benefits of establishing norms of responsible behaviour

Submitted by France

I. The importance of space capabilities for our lives and our societies

1. **Our modern lifestyles, economies and societies are today heavily dependent on the space sector and its capabilities.** These include positioning and navigation satellite systems (like GPS and Galileo) which synchronize banking and stock exchange systems and energy distribution, support travel around the world, and help emergency services to operate. Earth observation capabilities support weather forecasting, monitoring of climate and environmental change and prevention of natural hazards: phenomena which are expected to increase in future due to climate change. Lastly, space telecommunications capacities also contribute to access to television, telephone and the Internet in blackspots, helping break down the digital divide. Use of satellite data is increasing, as is the dependency of our societies on them: many new technologies rely on these data, including connectivity, telemedicine and autonomous vehicles.

2. **Our space capabilities are also essential for military activities and operations.** In particular, Earth observation, telecommunications satellites and satellite navigation and synchronization are essential for national autonomy in terms of situational awareness, decision-making and action. Mastery of space technologies is also essential to protect national defence interests, including through early warning that contributes to monitoring of proliferation and ballistic activities. This is a key aspect of our security in the context of renewed strategic competition from certain major powers and serious proliferation crises (North Korea, Iran). Lastly, space capabilities are highly important for maritime surveillance, alongside other capabilities, thanks to automatic detection.

II. A degraded strategic context, increasing destabilizing behaviour and a heightened risk of miscalculations and escalation

3. Today's strategic context appears degraded, with increased military competition between major powers in all field, including space, which is particularly suited to the deployment of hybrid strategies below the threshold of conflictuality thanks to its dual-

use nature. The return to the logic and strategies of power and hybrid capabilities, challenges to the security and arms control architecture and persistent proliferation crises further degrade the strategic environment, including in space. Anti-satellite strikes, the latest of which by Russia in November 2021, hostile approaches, jamming and various dominance strategies all demonstrate increased strategic competition and can increase the risk of misunderstandings, lead to destabilization and provoke heightened tensions in space.

4. This degradation of the strategic context is particularly problematic because States are increasingly dependent on space both for their economies and societies and for their defence interests. They are therefore seeking to create new instruments and capabilities to address these dependencies and vulnerabilities. Conversely, certain States rely little on the space environment, and this asymmetry could encourage them to develop sabotage strategies in space, deploying offensives without concern for the viability of space activities and long-term use of orbits.

5. At the same time, the space environment is seeing a considerable rise in the quantity of objects in orbit: there are around 5,000 active satellites today, and several thousand space objects in orbit. In addition to the increased risk of collisions, the growing population density of space objects in certain orbits increases the likelihood of interferences between satellites and the risk of misunderstandings or miscalculations between intentional and non-intentional interference. In addition to active satellites, there are currently some 900,000 pieces of debris greater than 1 cm in space, which can neutralize or even totally destroy a satellite in the event of collision – and generate further thousands of pieces of debris in the process. While the issue of managing debris and collision risk is addressed within the Committee on the Peaceful Uses of Outer Space (COPUOS) and the Inter-Agency Space Debris Coordination Committee (IADC), there is not yet any international framework to prevent intentional creation of debris, such as through anti-satellite strikes that are hostile, destabilizing actions and have significantly increased the number of pieces of debris in orbit.

6. Lastly, the development of New Space and new activities in orbit, such as Active Debris Removal (ADR) and In-Orbit Servicing (IOS) may lead to an increased risk of misunderstandings, insofar as they may be confused with hostile activities (approaches or rendezvous for the purposes of intelligence collection, sabotage or destruction of a satellite), in the context of increasing numbers of space objects.

7. Space is a field in which systems are largely dual-use and situational awareness is inherently difficult. The difficulty of distinguishing between civilian and military space objects contributes to greater uncertainty and instability. Similarly, the difficulty of monitoring and attributing certain activities makes the risk of miscalculations and misunderstandings significant, as is also the case in other fields such as cyber space. In practice, it is now extremely difficult, even for the great space powers, to detect all space events, anticipate the risks and threats they may face and identify the aggressive or inoffensive nature of a given action. For example, it is complicated to distinguish between the innocent manoeuvre of a satellite for the purposes of its mission that might lead to accidental collision or jamming from a manoeuvre aimed at causing intentional harm. This difficulty, compounded by the highly dual-use nature of space, leads to a significant risk of escalation or triggering of tensions, or even a conflict in space.

III. In this context, it is necessary and urgent to establish norms of behaviour

8. In this particularly concerning context, it is important today to establish instruments to maintain peaceful use and free access to space for all while limiting the risks of destabilization and conflict in space. Despite the previous efforts of the Conference on Disarmament and GGE on prevention of an arms race in space, the proposals were not sufficient to achieve a consensus and could not come to fruition, bringing work to a standstill. It was therefore essential to launch a new, inclusive process to tangibly, pragmatically and immediately improve space safety and security and reduce the threats and risks of misunderstandings in space.

9. As we have all seen, the dual-use nature of space and the objects deployed there mean a capability-oriented approach aimed at prohibiting certain systems in space would be irrelevant and ineffective. Current space capabilities are to a large extent dual-use, making it difficult to distinguish between military and civilian, threatening or inoffensive capabilities and, ultimately, to choose to prohibit certain capabilities rather than others. More generally, France recalls the difficulty of determining what constitutes a weapon in space, as any space object can be used as one (such as a kamikaze satellite). Certain capabilities required to maintain free and viable access to space, such as IOS and ADR, could also be used aggressively. Lastly, France recalls that a legally binding instrument must be verifiable.

10. A behaviour-based approach currently appears most suited to pragmatically and immediately improve safety and security in space, insofar as it would reduce the risk of miscalculations and misunderstandings in space. By governing the conduct of certain activities in order to avoid them being perceived as aggressive, this approach seeks to reduce their destabilizing potential and the risk of conflicts and escalation in space. Moreover, a behaviour-based approach, focusing on the *effects* of activities on space systems, the environment and populations, appears more viable as it would not be rendered obsolete by future technological developments.

11. France and its partners therefore propose to establish pragmatic, immediately applicable and non-binding norms that would constitute a "good use guide". The nature, spirit and status of these norms of behaviour could be the same as those defined by the Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security: *"Voluntary, non-binding norms of responsible State behaviour can reduce risks to international peace, security and stability. Accordingly, norms do not seek to limit or prohibit action that is otherwise consistent with international law. Norms reflect the expectations of the international community, set standards for responsible State behaviour and allow the international community to assess the activities and intentions of States."*

12. Moreover, in the light of the threat of destructive anti-satellite strikes to safety and security in space, France advocated in July 2019 space strategy for a norm prohibiting actions creating multiple long-lived pieces of debris.

13. These norms would therefore not seek to amend the applicable international law, including the Charter of the United Nations and the right to self-defence. However, they could later serve as a basis in discussions to establish a legally binding treaty, if a consensus were achieved and verification mechanisms could be established.