

Submission by European Space Policy Institute (ESPI) to the Open-ended Working Group on Reducing Space Threats

April 2022

Background: Pursuant to the UNGA Resolution 76/231 convening this Group, and the understandings reached at the organizational session of the Group, which allow international organizations, commercial actors and civil society to provide written contributions on matters under consideration by the Group, the European Space Policy Institute (ESPI) is submitting this written contribution to support the Group in its deliberations in 2022 and 2023.

About ESPI: The following submission is provided by the European Space Policy Institute (ESPI), a not-for-profit organization based in Vienna, Austria, acting as an independent European think-tank specialised in various aspects of space policy, security, economy and diplomacy. The Institute fulfils its objectives through multi-disciplinary research activities leading to the publication of reports, books, articles, executive briefs, and position papers.

About this submission: The European Space Policy Institute welcomes the creation of the Working Group and its particular focus on exploring a behaviour-based approach for future norm-setting. It addresses relevant challenges at an appropriate time in a format which is not yet proven in the space security context, but worth exploring. This document intends to provide the members of the Group with high-level reflections and recommendations to inform its work. In particular, this submission seeks to provide inputs to one of the key mandates of the Group - *to make recommendations on possible norms, rules and principles of responsible behaviours relating to threats by States to space systems*. In this regard, this submission discusses in detail the following key elements:

- Expected contributions from the work of the Group.
- Key considerations to guide the work of the Group on new norms.
- Recommendation to further explore and foster regional approaches in a synergetic manner to deliberations at the global level.

The Working Group is well suited to stimulate convergence on behavioural expectations to reduce the probability of misunderstanding and miscalculations, even without providing a common definition of what actions constitute a responsible behaviour

Threats, risks, and hazards to safety of space systems, security of space activities and long-term sustainability of the space operational environment evolves at a fast pace. States largely agree this situation necessitates an effective and harmonised reply at international level, aiming for the preservation of a safe, secure, and sustainable space environment and the peaceful use of outer space on an equal and mutually acceptable basis for all.

The creation of the Working Group provides for a new platform in the broader landscape of international *fora* dealing with safety, sustainability, and security challenges to space activities, which continue their efforts in parallel with the anticipated work of the Group. In this context, the Group is advised to give an appropriate consideration to other ongoing multilateral engagements and leverage available synergies.

At the same time, it needs to be noted that the **lengthy discussions among UN member states** within the diplomatic process at the UN level in 2020 and 2021 **identified reasonable concerns**, in particular with regard to the dimension of subjectivity that is inherent to defining responsible behaviour.

Indeed, the primary focus on “responsible behaviour” creates non-negligible challenges for the Group’s deliberations, however the aspect of definition is not to be considered a crucial factor or a blocking point preventing further agreement on measures addressing the topic of the Group. Acknowledging the concerns of some stakeholders, the primary value of the Working Group does not necessarily lie in the need for defining responsible behaviour, but rather in an **opportunity for identifying and converging on activities that are not conducive for space security**. A relevant example in this regard is offered by the UNGA-endorsed Guidelines on the Long-term Sustainability of Outer Space Activities, which included rather concise and non-constraining definition of long-term sustainability and

such an approach facilitated their approval.

In this context, **the Group is well placed to lead to a greater convergence of expectations for the behaviour of state actors**, by identifying the key boundaries framing common stability and security for operations in the outer space environment. Indeed, these boundaries can be reasonably elaborated even without an explicit and detailed taxonomy on definitions.

These behavioural boundaries should also be outlined in a format that reduces the likelihood of misperceptions, misunderstandings and miscalculations by other state actors. The recently witnessed unfortunate deterioration of the international political landscape, coupled with increasing operational dynamics in near-Earth space, notably increase the risk of misunderstanding and miscalculations and possible unproportionate countermeasures. If the Group and subsequently the UN member states manage to reach a solid compromise on such boundaries, it will contribute to long-term stability and security of operation in the outer space environment.

Previous experience with development of space norms, rules and principles has entailed a few common hurdles and roadblocks, which should be considered by the Group with due attention

The past two decades have brought about the crafting of several new norms for the conduct of human activities in space, especially in the soft-law format and addressing the issues of space safety and sustainability. Notable examples include the principles and norms enshrined in the IADC and UN Space Debris Mitigation Guidelines, the LTS Guidelines, ISO standard 24113 (Space debris mitigation requirements) as well as in industry-driven initiatives such as the Best Practices for the Sustainability of Space Operations by the Space Safety Coalition. At the same time, the international community has not significantly progressed on new or updated legally binding international arrangements, and there has been only limited advancement on new norms, rules and principles on space security issues.

These different processes and their follow-up developments, where applicable, highlighted that crafting of space norms, rules and principles entails numerous problematic elements related to their development as well as their implementation. The challenge of widespread adherence underlined that norms, rules and principles on their own have shown to not be the sole adequate instrument in fostering space security, and require translation into operational practises of the affected actors.

A few selected hurdles, blocking points and weaknesses observed in these processes are summarized in the paragraphs below. **This submission recommends the Group integrates these aspects in its deliberations**, acknowledging them as lessons learned in order to increase the perspectives of a more effective and impactful results.

Firstly, the Group is advised to consider the frequently observed reasons of concerns by some Member States which halted convergence in previous, less successful initiatives. Most notably, due to an inherent link between space security and national security objectives, one of the underlying concerns in defining new norms for space security will be possible interference with national priorities given to freedom of military operations or classification of sensitive information.

Furthermore, concerns can also be anticipated should Group recommends very rigid and prescriptive proposals for possible norms, rules and principles, as it could increase the difficulty to reach widespread convergence and give rise to the argument that such proposals impede access to space and deprive the “newcomers” of freedoms, which other actors enjoyed in the past. The Group is advised to proceed in its deliberations in a manner that would provide a conducive environment to mitigating these risks.

Secondly, the experience with crafting of previous space norms, rules and principles repeatedly revealed several issues related to implementation, most notably concerning the aspect of driving widespread compliance. A relevant example illustrating the issue of compliance with norms can be observed in the domain of space safety and sustainability. The annually released Space Environment Report by the European Space Agency assesses that the rate of compliance with some crucial norms related to end-of-life operations of spacecraft remains undesirably low.

In fostering the perspectives of widespread compliance with possible future norms, rules and principles, the Group is advised to consider appropriate measures on two particular elements:

- **Offsetting the costs induced on actors by compliance with new norms, rules and principles**

The implementation of new possible space norms might entail adoption of new technologies, processes and coordination schemes, potentially resulting in substantial costs for the affected actors. These costs do not necessarily need to be of financial nature. They can mean political repercussions, security concerns or also human capital-related requirements. If the induced costs exceed the perceived benefits and there are only poor enforcement perspectives, it is probable that actor’s behaviour would follow primarily its self-interest.

The Group is hence advised to consider this “trade-off” dimension of norms creation in its upcoming deliberations. Efforts of the Group should look into minimising or offsetting potentially induced costs. One approach in line with this reasoning could be through fostering incentivisation instruments that would provide additional encouragement to affected actors to adhere by the new norms.

- **Developing or enabling effective options for monitoring and verification purposes**

Compliance with international norms and rules governing security issues is notoriously problematic, for it is not only necessary to have a set of principles, norms and rules that all actors agree upon, but also mechanisms to verify and enforce these rules. It is anticipated that the traditional approach based on voluntary actions and self-regulation so far favoured by the international space community will not, on its own, suffice to ensure effective adherence to the agreed-upon norms and rules. Only an institutionalised regime of cooperation, with clearly defined rules that all actors agree and proper enforcement mechanisms that define, monitor and make defection unaffordable, can properly manage expectations of behaviour in the area of space security.

Developing options for monitoring and verification of space norms is a task that goes beyond the scope of the Group as it also entails utilisation of appropriate capabilities. Nevertheless, the Group could consider recommending such provisions that would contribute to a conducive international environment facilitating access to and exchange of data, greater compatibility and interoperability of different technical systems, and improved clarity and predictability in actions and intentions of the affected actors.

Thirdly, the Group is advised to further explore and consider measures that lead towards norms, rules and principles, whose implementation would be based on measurable and quantifiable indicators. This can contribute to balance the subjectivity inherent in the definition of responsible behaviour. Being able to count and measure things facilitates an unbiased benchmarking against given criteria, provided that norm makers are able to find mutually acceptable compromise on such criteria. Recent experience with codification of principles in the domains of space safety and sustainability has shown that new concepts based on measurable criteria, such as the space environment capacity, are increasingly investigated.

Acknowledging some promising preliminary outcomes, e.g. with the Space Sustainability Rating initiative, the Group could consider exploring synergies between its subject matter and these new concepts currently in development. Eventually, the Group could also explore applicability and viability of such approach based on measurable indicators in reducing space threats and fostering space security at large.

While the work on new space norms, rules and principles will ultimately need to seek a broad international convergence, it should also facilitate the option of a bottom-up regional engagement, if relevant and constructive

Space security is an international challenge, and it can hardly move forward in an effective manner without a widespread international consensus. For this reason, the United Nations framework is a legitimate and suitable platform for the adoption of new norms of behaviour.

At the same time, the development of new norms of behaviour, including for matters related to space security, should also be developed and promoted through regional efforts and initiatives. Once sufficiently mature, these regional approaches could be brought up for consideration, and ultimately consolidation, with other similar initiatives at the global level.

This approach, if further explored, could offer some advantages, especially in the short-term:

- A regional engagement could provide better perspectives in addressing immediate threats and challenges, as building up the needed convergence would require a smaller number of participating states, which are, in theory, familiar with unique regional characteristics (technologies, operations, national interests...).
- Also, a greater role given to regional consolidation could provide smaller states with more favourable opportunities to address the topic and have their voice heard.

Exploring perspectives for regional approaches does not contradict the relevance of UN-anchored processes. On the contrary, it can have a conducive effect on discussions within the UN framework, which will be inevitable in the long term. In fact, a regional consolidation of diplomatic positions by UN member states during deliberations within the UN platforms is a legitimate and regularly used method of work.

However, for such an effort to succeed in the longer-term, a mechanism should be implemented to allow frequent exchange and interaction between the different regions, to make sure that their efforts do not end up in opposite directions and to facilitate future mutual acknowledgement between the different frameworks.

Finally, the call for exploring regional approaches to space norms could build on two building blocks:

- **There are already existing platforms, which can be utilised for this purpose** (e.g. space-themed frameworks such APSCO/APRSAF in Asia or ALCE in Latin America, but also more general frameworks, e.g. African Union).
- **There are successful examples of space regionalisation.** Europe could serve as a model example in this regard. Beyond the areas of norms for space safety and security, the European approach to space exploration and utilisation at large, has been built around a shared vision translated into a common strategic culture, which entails collaborative approach to norms, rules and principles.



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