

## IAF SPACE SECURITY COMMITTEE

### 1. Introduction/Summary

Space security has become one of the key topics in any discussion concerning space. The need to strengthen long-term sustainability, safety and security in space is shared by all nations. It is in the collective interest of all peaceful space-faring or space-using nations to encourage the responsible use of space and minimize orbital debris, in order to protect any in-orbit maneuvering spacecraft from a risk of collision and to preserve the space environment.

At the same time, the peaceful use of Outer space, which prevailed in the past, is not to be taken for granted; we are facing a change of paradigm with a contested and conflicting space domain. Today, close approach and proximity operations by foreign objects of satellite-inspection class are already a reality.

We acknowledge the apparition of newcomers and the diversification of space actors, the arrival of large constellations and the multiplication of small satellites, leading to a growing complexity of space operations. There are also moves towards active debris removal (ADR), on-orbit servicing (OOS), rendezvous and proximity operations (RPO), which can be perceived as dual use technologies. This combination of factors and trends brings many opportunities but it also means increasing risks of collisions and interferences, as space will become more and more dense and congested.

In this fast-changing environment, with an increase in both the risks and threats in space, the question of Space Situational Awareness and Space Traffic Management is of the utmost importance. Today, and in the future, we will need to be able to detect, identify, characterize, understand, analyze, attribute and verify what is happening in outer space. An awareness of the highly dynamic and increasingly complex near-Earth space environment appears to be essential to safeguarding space-based assets, ensuring access to space and

contributing to the safety, security and sustainability of space in the long run.

The Space Security Committee focuses on a wide spectrum of topics concerned with security, safety and sustainability. More than a technical committee, the Space Security Committee is a high-level policy and strategy Committee welcoming highly distinguished speakers, and fascinating experts as well as researchers from around the globe. From national to international bodies and through multi-actors, the Space Security Committee offers a 360 degrees range of topics and discussions enlightening the space security community as well as the public to a topic that concerns us all.

### 2. Summary

Thanks to its high-level members and distinguished speakers, the Space Security Committee was able to encompass both Vienna, through the Long-Term Sustainability Working Group, and Geneva through the Open-Ended Working Group on reducing space threats, rules and principles of responsible behaviours.

Themes that were approached and discussed by the Committee in 2022 included Space Traffic Management in Europe, Space Situational Awareness, rules and principles of responsible behaviours, global space competition, as well as raising awareness and building capacity.

Indeed, during our Spring Meeting, **Rodolphe Munoz** from the European Commission introduced the topic of Space Traffic Management in Europe, followed by **Carine Claeys**, a special envoy from the European External Action Service who extended the conversation on the EU's international cooperation on STM.

We had the pleasure to listen to **Dick Bueneke** from the US Department of State in order to discuss the newly published United States Space Priorities

Framework. **Guoyu Wang** from the Beijing Institute of Technology complemented the Committee Meeting and shared with us the Chinese perspective on space traffic management.

During the IAC meeting, this past September, we had the chance to welcome **Richard DalBello**, director of the US Office of Space Commerce, who highlighted the priority of developing Space Situational Awareness capabilities both nationally and internationally. **Umamaheswaran Raman**, director of the human Space Flight Center at ISRO, shared his experience as the Chair of the Working Group on the Long-term Sustainability of Outer Space Activities, concluding his remarks by pressing that the issue of space sustainability is becoming more and more important and a pressing issue, reminding us that space is for the benefit of humankind and should be taken care of.

His presentation was followed by the one of **Ambassador Hellmut Lagos Koller**, Chair of the Open-Ended Working Group on Reducing Space Threats and shared with us the results of the 2<sup>nd</sup> Session that took place just 3 days before the Space Security Committee Meeting. The new approach of the Open-Ended Working Group focused on behaviour rather than capabilities and promoted that norms of responsible behaviours can be a platform to put forward, and it is not solely focused on an antisatellite weapon ban discussion.

**Jerome Barbier** from the Paris Peace Forum presented the Net Zero Space Initiative, highlighting once more the role of multi actors in space security and sustainability, aiming to raise high-level political awareness beyond the space community at a global scale. Jana Robinson from the Prague Security Studies Institutes reported to the Committee the findings of the Space Security Conference on the Global Space Competition: Security, Markets and Sanctions, finding an ever-greater dependency on space-based technologies and services as well as an increasingly diverse environment in which new private actors are entering.

### 3. Highlights

The Space Security Committee discussions along the year 2022 can be summarized in three keywords, Space Security, Space Safety and Space Sustainability.

In fact, space has become a congested, coveted and competitive space where private actors have an ever-increasing role. Indeed, to use Clay Mowry's words, once the purview of superpowers, space is now a domain where multiple actors seek to field new technologies that will investigate, navigate, communicate and innovate. Affordable access is opening new frontiers to researchers, both from government and industry, to explore the very real possibilities of work abroad a future defined by multiple orbital destinations. Sustainability, Investment and Security (SIS) is becoming the new highlight for any space topic where 'security refers to the freedom to operate safely in the space domain', and will live at the core of the security Committee Agenda for the years to come..

### 4. Future Outlook

The main focus of the Space Security Committee in the following years will be **Space Economy, Space Security and Space Sustainability**. The Space Security Committee will also give significant importance to the role of the private sector in relation with the sustainability and security of outer space. For instance, space debris removal or in-orbit servicing. The goal is to identify the commercial capacities in addition to the patrimonial capacities, and to broaden our scope to the importance of investment in relation to space security and sustainability. As Clay Mowry expresses, "We will build a brighter future and ensure humanities' upward march to the stars."

### 5. Committee activities

In accordance with our future outlook and the future of our field, we will closely follow the path set out by Clay Mowry, the IAF President, believing that activities and exchanges centered on sustainability, investment and security are key to promoting cooperation, sharing scientific knowledge, and meet urgent concerns facing spacefaring nations. The Space Security Committee will continue to invite and share its knowledge with high-level experts and researchers in the field of Space Security, encompassing both, national and international bodies as well as multi actors. Continuing the study of the risk level update of space threat, and organizing sessions promoting the submission of our topics.