



Secure World Foundation

**Remarks delivered by Dr Peter Martinez at the informal consultative meeting of the
GGE on PAROS**

UN, New York, 1 Feb 2019

Mr Chairman and distinguished delegates,

Good afternoon. Thank you for giving me the opportunity to address a few remarks to this informal consultative meeting of the GGE on PAROS.

I found the discussions at this meeting very informative and consider it an important outreach of this GGE to a wider UN audience, and I commend the Chairman, Ambassador Patriota, for his efforts in this regard.

I have the task this afternoon of sharing some views on the substantive matters from an observer perspective, and addressing the topic of the role of civil society organizations in supporting multilateral efforts in the domain of space security.

Before doing so, I would like to take a moment to introduce our organization, the Secure World Foundation to you.

Secure World Foundation is a private operating foundation dedicated to the secure and sustainable use of outer space for the benefit of all peoples of the Earth. We work with governments, international intergovernmental organizations, international bodies, industry and other civil society organizations and entities to develop and promote ideas and actions for international cooperation to achieve the secure, sustainable and peaceful uses of outer space. Secure World Foundation has ECOSOC status and is a permanent observer to the UN Committee on the Peaceful Uses of Outer Space. The work of this GGE is therefore of direct interest to us, and we are pleased to have been invited to share some ideas with you today.

I would like to begin with a few general observations on the substantive matters before us, before proceeding to discuss the role of civil society organizations.

There are two types of developments that are giving rise to pressing challenges to space security. The first is the growing militarization of outer space. This has gone hand-in-hand with growing level of counterspace research and development activities.

The second development is the phenomenal growth in the number and diversity of space actors, fueled by advances in space technology.

I will discuss these two developments in turn, and add some ideas which I did not hear reflected in the debates yesterday.

With regard to the first development, namely the increasing militarization of space, we have seen that space security threats are not confined to space-space threats, but also encompass Earth-space and space-Earth threats. Of this triad of potential threats, the threats emanating from Earth to space are currently, in our view, the most immediate cause for concern. These threats encompass not only the development of debris-generating direct ascent weapons, but also non-kinetic threats, such as interference, jamming, blinding with lasers, and cyber threats. It is important to emphasize that in some cases interference or laser illumination may be unintentional, but of course it can be extremely difficult to identify a source and intention behind such events. This is why it is important to have norms of behavior that minimize or exclude the possibility of causing unintentional harm to the space objects of other states.

There is another class of threats to space assets that is completely terrestrial and has no component in space, but its effects on space systems can be profound. This has to do with threats to the ground infrastructure of space systems. One area we did not hear much discussion about yesterday was preserving the security and resilience of ground-based infrastructure that supports the operation of space systems. In our view, in a hierarchy of current space security risks, the security and resilience of ground infrastructure probably ranks higher than other ground-space or space-space risks. Disruption of ground infrastructure that could lead to loss of control of a satellite places not only that satellite at risk, but also others.

There was much discussion of TCBMs yesterday. One TCBM in this regard could be for States to adopt measures to protect their own ground infrastructure and to commit to refrain from interfering or disrupting the ground infrastructure of other States.

I'd now like to turn to the second development that is giving rise to space security challenges, namely the phenomenal growth in both the number and diversity of space actors.

Because this GGE and the CD are approaching space security from a disarmament perspective, there is, I suppose, the view that States are the main actors in orbit, at least insofar as pertains to questions of space security. This may have been true in the early days of the space age, when States were the dominant actors in space. The actual situation on orbit is now completely different.

We have been talking about an arms race in outer space, where States are the main rivals in such a kind of space race. The reality, however, is that the new 'space race' is not among States, but among private sector actors. There are some who believe the current \$400Bn space economy has the potential to exceed \$1Tn. Whether or not one believes such projections, the fact of the matter is that there are now many more satellites being launched into space per year than was the case previously, and a very large fraction of those satellites are wholly owned and operated by non-governmental actors. There are also more satellites being launched per launch. The current record is 104 satellites launched on an Indian PSLV launcher in February 2017. And there are projections for so-called mega constellations of thousands of satellites on the drawing boards for launch during the next decade. This growth in the number of satellites is partly driven by the much lower barriers to entry for new space actors, and also more (and more affordable) options for access to space.

While these developments hold out the hope of many more space applications for the benefit of all mankind, they also have potentially disruptive effects with regard to space safety, space sustainability and space security.

We now have many non-state actors, who are new entrants in the space arena and are sometimes largely unaware of the regulatory and normative frameworks for space activities – yet, in terms of Article VI of the OST, the States bear international responsibility for these actors.

This also raises the question, how does this all affect the safety, security and strategic stability of the space environment?

This is why it is so important to inform and educate the new entrants into the space arena about the existing regulatory and normative frameworks for responsible behavior in outer space. Secure World Foundation has produced a Handbook for New Actors in Space that covers these topics, and which we make freely available. It is one of our most popular resources. If any delegations here would like to have a copy, please see me after this panel.

I mention all this because the discussion here yesterday seemed to focus on space security threats emanating from States. Perhaps we should be thinking of space security threats emanating from the much larger number of non-State actors. And these would not be threats rising from some sort of geopolitical rivalry, but rather from an increasingly congested and commercially contested space environment.

This indicates the urgent need for new rules of the road, and the importance of the work being done in COPUOS to produce guidelines for the long-term sustainability of outer space activities, which I had the privilege to chair from 2010–2018. During its term, the Working Group mandated to do this work reached consensus on 21 guidelines. As in this GGE, we were discussing very complex matters and it was not possible to reach consensus on all elements by the time the Working Group's mandate expired. The group did not reach consensus on seven draft guidelines. The working group also agreed that work on LTS should continue, but it did not reach consensus at the June 2018 session on the modality of continuing the LTS discussions. Two weeks from now, the Scientific and Technical Subcommittee of COPUOS will reconvene in Vienna, and it will no doubt revisit these topics.

Some states are already starting to implement the 21 agreed guidelines. Secure World Foundation is organizing a panel event that will take place in Vienna on the margins of the STSC on the 12th of February in which States will be invited to share their views on the implementation experiences and challenges for the already agreed guidelines.

With regard to the topic of verification, there was a lot of discussion about verification yesterday, but Space Situational Awareness (SSA) wasn't mentioned much. We would like to note that SSA is foundational for space security and stability and is going to be a key part of any verification regime. So, we would suggest that a possible TCBM could be to actively share data and enhance global capacity to collect data and share it.

Turning now to the role of civil society organizations in supporting multilateral processes such as this GGE, there are several ways that civil society organizations can help.

Firstly, non-governmental organizations can help to foster Track 2 dialogues among experts from different governments to discuss complex technical issues. We have often brought together experts to discuss complex technical issues in a non-political setting, and under Chatham House rules, where delegates may speak freely to one another. These exchanges have helped to build mutual understanding and rapport among individuals who may later participate in formal negotiations. We will arrange a panel event on the margins of the upcoming session of COPUOS to discuss the long-term sustainability guidelines.

Secondly, we can support multilateral bodies, such as entities of the UN system to identify experts to address meetings, or we can provide support to UN entities to allow them to invite participants from developing countries to attend and participate in discussions that they might otherwise not be able to attend. We do this to support inclusiveness and a diversity of voices in the important debates in multilateral fora.

Secure World has worked with the UNIDIR and with the UN Office for Outer Space Affairs to support participation in events organized by both of those UN entities. We are also open to supporting regional meetings where countries debate issues and develop common regional positions in such multilateral processes, and have done so in the past.

Speaking of Track 2 dialogues, I would like to take this opportunity to draw your attention to the UNIDIR Space Security conference, which will take place in Geneva at the end of May this year. Mr Daniel Porras will be able to provide more information on that event to anyone who is interested.

Thirdly, civil society organizations can be source of objective, accurate and balanced information and analysis on an issue. This is particularly valuable for those States that may not have the capacity or the expertise to collect, assess and analyze publicly available information on a given issue area. In this regard, in the area of space security, we can point to the Space Security Index produced annually by Ploughshares, and the Global Counter Space Capabilities Assessment produced last year by Secure World. These studies are based on open-source information gleaned from many public sources.

Fourthly, civil-society organizations can support transparency and confidence building measures by providing information. Yesterday, we heard several times of the importance of independent, multilateral verification of compliance with TCBMs or binding obligations. Civil society actors can collate observations obtained from several sources to analyze trends and developments in Earth orbit. In this regard, academic institutions have a significant role to play in researching questions related to space security and space safety.

Lastly, being situated in civil society, NGOs are well placed to explain difficult issues such as those discussed by groups, such as the GGE, to more general audiences in academia, industry and the public. We are also able to gauge issues and concerns of civil society and to feed these concerns back to governments.

With this, Mr. Chairman and distinguished delegates, I will conclude my remarks. Thank you for your kind attention.