

Keynote Remarks Delivered by Dr Peter Martinez at the Joint Side Event Organized by UN OOSA, Portugal, Greece and the United Arab Emirates on Sustainability of Outer Space and the Pact for the Future

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Excellencies, distinguished colleagues and friends,

Thank you for the kind invitation to speak at this very timely discussion on space sustainability and the Pact for the Future. I also thank UN OOSA and the governments of Portugal, Greece and the United Arab Emirates for organizing this timely event on the margins of Summit of the Future.

Space sustainability is a topic that has rapidly grown in salience in the last few years, as shown by the amount of attention given to this topic in space conferences. There are some interesting parallels between the concept of sustainable development on Earth and space sustainability. The genesis and evolution of the concept of space sustainability parallels the development of the concept of sustainable development on Earth.

The concept of sustainable development, as we now understand it, had its genesis in the environmental movement of the 1960s and 1970s, which arose out of concerns over environmental degradation due to pollution and overpopulation, and gradually gave rise to the much broader concept of sustainable development that is now encapsulated in the 17 Sustainable Development Goals adopted by the United Nations in 2015.

In a similar manner, what is now broadly understood to encompass space sustainability, began with a concern about the degradation of the Earth's orbital environment through the proliferation of space debris. Deeper reflection has revealed that space debris is symptomatic of a broader set of challenges arising from how we behave in outer space, which we collectively refer to as space sustainability.

The topic of space sustainability has been addressed by the United Nations in a holistic manner since 2010. In 2019, after an 8-year process, the United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS), adopted a set of 21 consensus guidelines for ensuring the long-term sustainability of outer space activities, the so-called LTS guidelines. In the preamble to those guidelines, the following definition of space sustainability is given:

The long-term sustainability of outer space activities is defined as the ability to maintain the conduct of space activities indefinitely into the future in a manner that realizes the objectives of equitable access to the benefits of the exploration and use of outer space for peaceful purposes, in order to meet the needs of the present generations while preserving the outer space environment for future generations.



The seminal 1987 report of the World Commission on Environment and Development, titled *Our Common Future*, which played a pivotal role in shaping the multilateral narrative for sustainable development, defined sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

You will notice a parallel between this definition of sustainable development on Earth and the UN COPUOS definition of space sustainability I just mentioned. This was a deliberate choice, meant to highlight the connection between space sustainability and sustainable development on Earth.

Just as the 17 SDGs reveal the rich, multifaceted nature of sustainable development on Earth, the LTS guidelines give us a glimpse of the multifaceted nature of the concept of space sustainability. The definition of space sustainability in the LTS guidelines essentially constitutes an expansion of the paradigm of sustainable development to encompass also our actions and behaviours in outer space.

This may sound counterintuitive at first, but the rapid expansion of space activities in recent years has underscored the importance of thinking about the Earth's orbital environment and the radiofrequency spectrum as limited natural resources that must be used rationally and equitably.

The 1967 Outer Space Treaty identifies the exploration and use of outer space as the province of all humankind. Space sustainability is therefore not just a concern for the most advanced space nations with the most assets in orbit today – it is also fundamental for ensuring equitable *future* access to outer space for all nations, regardless of their current degree of development.

Space safety, space sustainability and space security are intimately intertwined. One cannot have one without the other two. The problem is that we often discuss these three Ss in isolation, under either first Committee or Fourth Committee processes, each of which sees a given issue through its own lens. This is especially evident when it comes to the dual-use aspects of a number of emerging space technologies.

In the past, this siloed approach has sometimes been an impediment to discussion of certain cross-cutting issues in COPUOS, such as active debris removal, largely over dual-use concerns. However, the commercial sector is not waiting for the UN system to address dual-use issues and is very actively developing a wide range of on-orbit capabilities that will underpin the future orbital economy. The problem is that these capabilities are often developed with little transparency, which fuels suspicions and mistrust. If we are to avoid misperceptions and mistrust over these dual-use capabilities, we must encourage as much transparency as possible.

The Pact for the Future recognizes the influence of emerging technologies on international security and disarmament efforts. Speaking as a former national space regulator, I can attest to the difficulty of trying to regulate technologies or capabilities in a rapidly evolving domain, such



as space, at national level -- let alone trying to achieve consensus on such measures at the multilateral level. This is why I see the recent shift in focus from discussing capabilities to discussing behaviours as a generally positive development because while it may be very difficult to assess motives behind the development of certain capabilities, behaviours can be easily observed and are, in a sense, transparent manifestations of intent. Transparent State behaviour in the use of space technologies can reduce risks to international peace, security and stability, and play an important role in increasing predictability and reducing risks of misperceptions, thus contributing to the prevention of conflict, on Earth and in space.

As with the adoption of the LTS guidelines for space sustainability in 2019, progress has also been made on the issue of transparency and confidence-building measures (TCBMs) for space activities. In 2013 I had the honour to serve as one of the 15 governmental experts in the group on TCBMs in outer space activities. The report of that GGE, which was adopted by consensus, contained within it a number of top-down TCBM recommendations that are just as pertinent today as when they were formulated in 2013. Indeed, a number of the LTS guidelines may be seen as technically-based, bottom-up implementation of some of the recommendations of the report of the 2013 GGE on space TCBMs.

Speaking of technically-based measures, I believe that the proliferation of commercially available space situational awareness capabilities and data will contribute to greater transparency of actions and behaviours in the space domain. This will not only enhance space safety and support future space traffic coordination efforts, but will also help to create fertile soil for potential political commitments and legally-binding instruments supported by appropriate and effective verification mechanisms, as envisaged in the draft Pact for the Future.

I started this keynote by pointing to the parallels between the evolution of our understanding of sustainable development on Earth and the evolution of our understanding of space sustainability. But there is one key difference. It took the multilateral system more than forty years to get to where we are today in terms of global action on sustainable development and climate change. In the space sector, we do not have the luxury of a few decades. The time for action is now!

Speaking of actions, Action 56 in the draft Pact for the Future encourages COPUOS to further consult on the proposal to hold a fourth United Nations Conference on the Peaceful Exploration of Outer Space (UNISPACE IV) in 2027. The three previous global UNISPACE conferences, held in 1968, 1982, and 1999, achieved clear multilateral diplomatic progress and shaped discussions in COPUOS in the decades following each of those summits. UNISPACE III raised the salience of space environment issues and paved the way for space sustainability discussions in COPUOS.

Given the enormous growth of the space arena over the past two decades, I strongly support the call for a UNISPACE IV. But the governance challenges we are facing today cut across the mandates of COPUOS, OOSA, the ITU, and the First and Fourth Committee bodies that deal with space issues, and can only be successfully addressed through engagement with commercial operators as well.



A UNISPACE IV, organized with broad multi-stakeholder participation, is a timely initiative to strengthen international cooperation in addressing governance challenges for space activities. It will take a great deal of planning and coordination to realize the promise of a UNISPACE IV, but we don't have many years to do this.

So, my call to action for you today, as COPUOS delegates, and as representatives of industry, academia and civil society representatives, is to engage in the consultations called for in the Pact for the Future on a UNISPACE IV as an important step towards forging a new global consensus on space governance that builds on the solid foundations already in place.

Thank you for your attention, and I look forward to the exchange of views in the panel discussion to follow.