

IISL Session E7.4: Space Law at Unispace +50: Consequences and Future Perspectives

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Session E7.4 consisted of various papers engaging with the development of space law at the 2018 Unispace +50 Conference on the occasion of the fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

Prof. Larry Martinez and Dr. Merve Ederm opened the session presenting their paper on “Unispace +60: Evolution of Long Term Sustainability Guidelines (LTS) into Customary Legal Norms”, which indicated UNCOPUOS LTS guidelines as “the rules of the road for sustainable use of outer space”. Moving from the case of the ITU graveyard orbit radio regulations, which enjoy a mere 30% compliance rate, the authors noted significant problems of compliance with current LTS guidelines. Given the low probability of a new treaty, Prof. Martinez and Dr. Ederm indicated as possible solution the evolution of the LTS guidelines into customary international law (CIL), which in Space 4.0 can be found as evidenced by national legislation and regulatory regimes. Then the authors categorized the guidelines according to the likelihood of attaining CIL status, pointing out that so far only the first set of them can be considered CIL, with explicit reference to guidelines 1, 2, 3, 4 and 28. While questioning UNCOPUOS suitability to elevate the remaining guidelines to CIL status, the authors concluded linking their work to that of Prof. Peter Martinez, Chair of the LTS Working Group, who already presented other “rules of the road” at the 2017 Space Security Symposium.

Following, Prof. Steven Freeland took the floor presenting his paper entitled “A Vital Artery or a Stent Needing Replacement? A Global Space Governance System Without the Outer Space Treaty”, that he co-authored with Prof. Ram Jakhu. The author started reminding that the Outer Space Treaty (OST) covered the need for international cooperation raised by the soviet launch of Sputnik 1 in 1957. The OST celebrated its 50th anniversary in 2017 and secured an outer space without war, thanks to its fundamental provisions laying down freedom of exploration, prohibition of appropriation and peaceful use. However, during those 50 years the world has changed, as the global rhetoric shifted from international “law” to international “rules”. Pragmatism took the lead of rule-making and interpretation, and States are increasingly withdrawing from internationally binding agreements they do not like anymore, as showed by the cases of the Human Right Council, the International Criminal Court, and the Paris Climate Change Agreement. As some argue that the OST is “outdated”, “inadequate” and even “inconvenient”, Prof. Freeland wondered whether the treaty is at risk of being abandoned. While theoretically it is possible to withdraw from the OST with one year notice, the author doubts whether such move would be actually useful, since its fundamental provisions are considered to be customary international law. Thus, Prof. Freeland concluded that adherence to the OST is the only rational choice, as it provides a fundamental and organized framework for space activities, and called for responsible behavior in the utmost preservation of the humanity of space.

Next was the turn of Prof. Yun Zhao, co-chair of the session, that together with Dr. Shengli Jiang presented their paper on “Armed Conflict in Outer Space: International Humanitarian Law as a solution?”. Dr. Jiang started reminding that unfortunately armed conflict in space is no longer an illusion, and thus there is the need to research which law could govern it. As international space law does not have any specific rules for armed conflict in outer space, according to Article III OST it is worth looking at international law. Moving from the notion of “use of force” in public international law (PIL), Dr. Zhao wondered whether the use of ground based and space based weapons in armed conflict in outer space constitutes use of force under PIL. Then, Prof. Zhao took the floor discussing the exercise of self-defense as an exception to the prohibition of use of force, reminding that no international rules have denied the exercise of self-defense in outer space. Having clarified the

applicability of PIL, the authors then considered the application of international humanitarian law to armed conflict in outer space. Again, in the absence of specific rules prohibiting such possibility, the authors concluded that it is safe to assume that general principles of international humanitarian law, such as those of limitation, proportionality and distinction between militaries and civilians, are applicable to armed conflict in outer space.

The 4th presentation was delivered by Dr. Martina Smuclerova, that discussed her paper on “Legal Perspectives for the Further Development of the Five UN Treaties on Outer Space in Light of Rising Multistakeholderism”. The author started reminding the new challenges coming from UNISPACE +50, with special focus on the effectiveness of the current space legal regime. Accordingly, Dr. Smuclerova presented some legal perspectives on adjustments, supersession or resistance of the UN treaties. First, in the impossibility to make formal amendments, adjustments can be ensured via further elaboration and complementation on subsidiary levels, as well as via other regulatory techniques such as specialized treaties, national law and soft law. While specialized treaties are less likely in the current context, a significant contribution can be given by soft law as catalyzer of international custom and harmonizer of national laws. At the same time, soft law can play a role until it doesn't contradict the existing legal rules, and it is functional as long as it is uniformly interpreted. Moving to interpretation, the author reminded first that modern interpretation should remain in line with the letter and original purpose, and second that a multilateral treaty is not an object for a single State's unilateral interpretation. Dr. Smuclerova then concluded that while adaptation of the UN treaties is inevitable, it also brings the risk of fragmentation, challenging the unity and coherence of international space law, that we should then aim to preserve in the process.

The 5th speaker was Mr. Dennis O' Brien, presenting his paper on “UNISPACE +50: Time of the Moon Treaty”. The author started underlining the most significant concerns usually raised against the Moon Agreement (MA) also seen in the light of the UNCLOS mining regime. Inter alia, Mr. O' Brien discussed intellectual property, the establishment of international fees, royalties or taxes, the weaknesses of a global decision making process and the challenges of nationalism. To such issues, the author replied that the international community should fight war, violence and neglect, as they destroy hope, create cynicism and crush the spirit. According to Mr. O' Brien, the mission is to restore the hope created in 1968, when our view of the world changed, because of the Apollo astronauts watching it from the Moon, and thus to spread again passion about space. To such end, the author concluded that current State Parties to the MA must begin the process of drafting an implementation agreement, create a framework of subsequent laws and invite non-members to join or be left behind.

The 6th presentation was delivered by Mr. Alexander Soucek and Ms. Jenni Tapio, who presented their paper on “Normative References to Non-Legally Binding Instruments in National Space Laws”. Moving from a hypothetical quote from the imaginary National Space Act of *Exemplia*, according to which “the operator shall adhere to internationally recognized guidelines and standards for space debris mitigation”, the authors recalled a conversation they had on the vagueness of what is “internationally recognized”. Accordingly, the presenters discussed unspecific normative references as a fundamental obstacle in measuring compliance with national and international law. In the given example, for instance, there are three different “internationally recognized guidelines on space debris mitigation”: the 2002 SDM guidelines developed by the Inter-Agency Space Debris Coordination Committee (IADC), the 2007 SDM guidelines approved by the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS), and finally the SDM standards approved in 2010 by the International Organization for Standardization (ISO). Furthermore, analyzing the rules related to “debris release” and “spacecraft break-up”, the two authors showed that the three documents are quite different from each other, thus further complicating the compliance question also in light of Article VI OST. On this note, the authors favored a role for the executive power, through the individual act of authorization/supervision, as the effective link between the State's behavioral guidance and the

operator's behavioral response. In conclusion, according to Mr. Soucek and Ms. Tapio, while unspecific normative referral in laws is probably inevitable in national space legislation, such laws should also make sure that any non-specificity will ultimately be resolved at the executive level, for the law to truly manage the expectations of those designing it – and those being submitted to it.

The 7th presenter was Ms. Irina Chernykh, who discussed her paper on “International Legal Aspects on Sustainable Development of Outer Space Activities: Combine Safety Effectiveness in the Long-Term”. The author started introducing the LTS guidelines for outer space activities as enshrined in multiple UN documents, and assessing their effectiveness. Then, Ms. Chernykh moved to the challenges related to space debris and space traffic management, illustrating the various soft law documents dedicated to them and figuring also a possible role for ICAO. Following, the author discussed the issues related to the differentiation between launching and registering states, as again dealt in many different UN documents. Pursuant to this situation, according to Ms. Chernykh, current international space law is becoming too fragmented and thus is at risk to lose its effectiveness. Consequently, the author concluded suggesting a new UN Convention on Space Law based on the UNCLOS model, with the purpose of updating the existing space treaties, consolidating the steps taken in soft law documents and unifying the existing legal rules of international space law.

At this stage, pursuant to the initiative of co-chair Prof. Bernard Schmidt-Tedd, the session was paused for discussing some questions. *Inter alia*, it was discussed how to ensure precise compliance, what happens if non-compliance is proven and how far an authority can go in interpreting the SDM, with interventions from many of the authors. Following, Prof. Schmidt-Tedd handed out the main direction of the session to Prof. Yun Zhao and the floor was given to the 8th presenter.

The 8th presentation was delivered by Dr. Annette Froehlich, who illustrated her paper on “A Fresh View on the Outer Space Treaty and on the Evaluation of the Post-Agenda 2030 goals”. Dr. Froehlich started reminding the thematic priorities for UNISPACE+50 (i.e. space governance, capacity building and space for sustainable development) and comparing them to the topic presented to the European Space Policy Institute (ESPI) by a group of young scholars specifically asked to indicate the most sensitive issues in space law. In particular, attention has been drawn to the following topics: environmental protection, how to prevent militarization, aspects around human settlements to avoid old colonial mistakes, use of robots and issues around creating new societies in space. Then, the author discussed each of those issues, underlining the impressions expressed by these young scholars, that the ESPI has then collected in a book. *Inter alia*, while environmental protection has been considered to have high priority, concerns were expressed about the adequacy of the OST to cover UN peacekeeping missions. Lastly, Dr. Froehlich concluded arguing the need to expand the OST with fundamental principles of governance for human settlements and the establishment of a specialized supranational judicial body open to both public and private actors.

The 9th presenter was Mr. Edward Burger, who discussed his paper about “The Promotion of (Space-Based) Telemedicine via UNISPACE +50”. First the author defined telemedicine, underlining its importance in contributing to sustainable human presence in outer space. Further to that, Mr. Burger illustrated how relevant is telemedicine becoming on a daily medical basis, with extensive on-Earth applications. Following, Mr. Burger went through the developments on space medicine and telemedicine in the UN legislation, first from 1980s to 2014 and then since 2014 onwards. From such analysis, Mr. Burger concluded that the UN has been giving increasing priority to research and application of telemedicine technologies, as they can play an essential part in the common development effort.

The 10th presentation was given by Prof. Xiaodan Wu on “Reflections on International Legal Framework Governing the Re-Entry of Space Objects”. The author started with a selected list of

reentries, some of them controlled and some of them uncontrolled, from the 2001 MIR of the Russian Federation to the 2018 Chinese Tiangong-1. Then, Prof. Wu pointed out that space law has established a unique state responsibility regime to provide effective rights to individual victims, in a victim oriented and environment-friendly framework. On this note, while the re-entry process should be transparent, the author noted that there is a loose notification duty: to whom the information should be disclosed, and to what degree? Nevertheless, from Cosmos 954 to BeppoSAX and Tiangong-1, practice is evolving towards more openness. Still, according to Prof. Wu the degree of this extension is quite problematic as sometimes it involves sensitive data. Further to that, Prof. Wu analyzed jurisdiction and control issues, alongside the removal of re-entering space objects in connection with return of personnel and post-entry clean-up operation. On liability and compensation, the author noted that there is a limited definition of damage in Article 1 of the Liability Convention, which also does not provide any definition of fault nor a fixed standard for determining it. Thus, also because technology is now mature enough for controlled re-entries, Prof. Wu concluded pointing out the need to improve the current legal framework as it is uncertain, fragmented and not specific. As state practice is uneven, non-binding standards and guidelines can be a good starting point.

The 11th presenter was Mr. Kazushi Kobata, who illustrated his paper on “Evolving Norms on Pre-Launch Notifications of Space Launch Vehicles: Historical Perspective in the Context of UNISPACE+50 Thematic Priority Three”. The author started introducing thematic priority three as dedicated to enhancing the exchange of information on space objects and events, as supported by the LTS guidelines, by the work of the Group of Governmental Expert (GGE) on Transparency and Confidence Building Mechanisms (TBCM) in outer space and finally by the Draft International Code of Conduct (ICOC) for activities in outer space. In such context, Mr. Kobata investigated how and why the LTS guidelines evolved through the fulfillment of thematic priority three. To such end, the author recalled other attempts to enhance the exchange of information on space objects and events than the LTS guidelines. *Inter alia*, Mr. Kobata recalled the attempt, proposed by Canada, to expand the Registration Convention so that it would require more detailed and timely information concerning the function of a satellite for arms control purposes. Further to that, the author also mentioned France’s attempt to introduce the obligation to transmit pre-launch notifications of launches to an international center set up under the auspices of the UN. Unfortunately, both attempts failed to convince the United States and thus consensus was not reached. On the contrary, the LTS guidelines managed to enhance the practice of registering space objects, evolving from merely assuring safety to providing more detailed and timely information for registration, as also supported by State practice. Ultimately, Mr. Kobata concluded praising the importance of LTS guidelines as they moved the focus of the discussion from arms control to space safety, thus increasing the possibility to reach consensus.

The 12th presentation was delivered by Ms. Kang Duan, on “‘Belt and Road’ Space Information Corridor: Opportunities and Challenges from Legal Perspectives”. The author started introducing the “Belt and Road” initiative, raised by Chinese President Xi Jinping in 2013 in order to address existing infrastructure gap and accelerate economic growth across the Asia Pacific area and Center-Eastern Europe. Since its establishment, the initiative has been integrated by an Action Plan in 2015 and Guiding Opinions in 2016. Ms. Duan then illustrated that the Chinese government has decided to focus on engaging the private sector and establishing fixed assets investments, with a role also for foreign capitals (although with some prohibition related to sensitive areas, such as broadcasting satellites). Further to that, Ms. Duan showed how the B&R initiative takes into account the importance of remote sensing, with particular focus on Data Policies (as exemplified by the CHEOS data policies), Ground Station Infrastructure and Information Security & Privacy Protection. Lastly, the author discussed how the B&R program is also about navigation issues, insofar as it is meant to enhance China’s BeiDou Navigation Satellite System so that it can cover all basic services across B&R countries by the end of 2018 and then reach global coverage by the year 2020. Ms. Duan then concluded underlining the global dimension of the B&R initiative, as it represents essentially an

international cooperation program on monumental scale, meant not to substitute but to further enhance existing regional cooperation frameworks. This cooperative dimension is confirmed by dispute settlement mechanisms for B&R, that are focused on consultation between governments and arbitration with private entities. In this respect, China is eager to support all concrete programs, share common experiences and harmonize different legislations.

Last and 13th presenter was Prof. Jose Monserrato, who illustrated his paper entitled “International Cooperation in Space Is Essential in Our Time”. Prof. Monserrato’s talk focused on multilateral cooperation as absolutely indispensable in the modern era, as also recalled in all fundamental documents of international law, such as the UN Charter and the OST. The author illustrated how only international cooperation can effectively prevent global disasters and how complete nuclear disarmament is an essential measure to such end. In particular, Prof. Monserrato insisted on the urgency to intensify strong, close cooperation in the exploration and use of outer space, praising the case of the Draft Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects (PPWT). In the author’s view, space law should serve and protect all nations and should be the closest link among them. Accordingly, Prof. Monserrato concluded calling for a closer involvement of developing countries in decision making processes and reminding the importance of equity and truthfulness as essential towards a truly global cooperation.

Finally, Prof. Schmidt-Tedd and Prof. Zhao thanked the presenters and the audience for their time and declared the session officially closed.

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