

NOTES FOR A PRESENTATION ON

“The Need for Space Regulatory Frameworks and Mechanisms at Global Level”

By

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1. Introduction

I greatly appreciate the honour of addressing this august gathering of experts and sharing with you my vision regarding global regulatory frameworks and mechanisms to enhance common space benefits to all humanity.

Last year in his paper, Prof. Barry Kellman stated that:

- *Space is a mess.*
- *It is a physical mess in the sense that debris endangers the satellites and other orbital systems that humanity relies on for virtually every aspect of modern life.*
- *It is also a legal mess in the sense that the law governing human activity in space is a hole-ridden quilt of treaty obligations that offer little guidance about how humanity’s future in space should advance.*
- *The mess of space will only get worse if left unchanged.*
- *We owe it to our progeny to begin cleaning it up.*

In the space sector, the most fundamental and urgent common challenge facing humanity is the need to strengthen and expand the existing global space governance system in order to achieve, effectively and in practice, the goal of sustainable use of space for peaceful purposes and for the benefit of all humankind.

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\* McGill Institute of Air and Space Law, which will celebrate its 65<sup>th</sup> anniversary in 2016, is world’s leading educational institution in the field of air and space law. For more information about the Institute, visit: <https://www.mcgill.ca/iasl/institute-air-and-space-law>. In 2014, the Institute organised an international interdisciplinary conference on “Global Space Governance”. It was attended by over 100 experts, who presented about 75 papers. Several selected papers of high quality are being published in a book that would be available from the Institute by the end of 2015. The 2014 conference unanimously adopted the so-called ‘Montreal Declaration’ (<https://www.mcgill.ca/iasl/press/manfred-lachs-conference-2014>) pursuant to which the Institute has initiated an International and Interdisciplinary Study on Global Governance of Space. This unique collaborative work of about 100 experts from various countries will be finalised by the middle of 2016 and published by Springer.

I use the term global space governance, in the same sense as has been defined by Thomas Weiss and Ramesh Thakur; i.e. global governance is “the sum of laws, norms, policies, and institutions that define, constitute, and mediate trans-border relations.”

A proper global system for space governance is a pre-condition not only to maximize benefits derived from the exploration and utilization of outer space; but also to ensure the equitable distribution of the benefits among all the members of the international community. In other words, the generation and distribution of benefits from the exploration and use of outer space must go hand-in-hand.

For this purpose, constructive knowledge-based partnerships are required at bilateral, regional and international levels. The highest form of partnership will be a uniform regulatory and institutional framework in the form of a global system for space governance.

The message of my brief presentation is to draw the attention of governments to the urgent need for regulatory frameworks and mechanisms through a strengthened and expanded global space governance system.

## 2. Rapidly Changing Nature and Scope of Space Activities

As is well-known that the existing global space order grew out of the height of the Cold War when geo-politics was essentially bi-polar. During that period only a handful of countries were involved in space activities, and space activities were limited and were mainly scientific and exploratory in nature. Military operations essentially dominated space activities and only governments were involved in the space sector. The private sector was almost non-existent, with satellite communications being the only space application for the civil society. Merely a decade or two ago, space did not matter much for the people and nations.

Today, space activities are no longer limited in scope and being undertaken only by a handful of countries. There are over seventy space agencies in the world, and thirteen countries have independent launch capability. Over sixty countries operate satellites, and there are more than 1,300 satellites currently in operation. Governments are no longer the dominant space operators. Nowadays there are more commercial satellites than military satellites in orbit. There is a new “Gold-Rush” in the heavens above, for thousands of satellites for internet services are being seriously planned. There will be an extensive increase in the number of small satellites (*cubesats*) in the future. With the global space economy valued at \$320 billion, the space sector is fast becoming an important economic activity. Humanity has become so reliant on space applications and technologies that even just a day without satellites would have unimaginable consequences. The strategic importance of space has led more and more countries to deploy their very own dedicated military satellites, and increasingly there is a blurring of satellites being used for

commercial and military purposes. Alarming, particularly for global security and peace, is the trend toward the development and testing of space weapons.

Changes in the nature and scope of space activities and in the number of space actors, clearly indicate the inadequacy of the existing global space governance and necessitate appropriate and timely changes.

### 3. Inadequacy of the Current Governance System

The current global space governance system contains broad principles and guidelines. Though they have maintained peace and security to date, there is a lack of precision and adequacy. Therefore, there is a need for specific international regulations related to several issues, some of which are: boundary between air space and outer space; status, use of protozone, international safety standards and operational procedures of aerospace vehicles; space traffic management; active debris removal and on-orbit satellite servicing; private space stations; mining of space natural resources; colonisation and human settlement on the Moon and Mars; use of force in space and weaponisation of space; space-based solar power; planetary defence; etc. More importantly, there is a need to ensure equitable sharing of benefits of outer space across the planet, especially to protect and enhance the special needs of the developing countries; i.e. practical and effective implementation of article I para 1 of the Outer Space Treaty.

Therefore, it is believed that time has come to renew and strengthen the existing global space governance system in order to achieve the goal of the sustainable use of space for peaceful purposes and for the benefit of all humankind. There is a need to implement and expand the realism of the Outer Space Treaty, rather than to discard it as the idealism of the space age.

Since the adoption of the 1979 Moon Agreement, the COPUOS has not adopted any binding international space treaty. The working method based on consensus is said to cause the lack of or delay in the decision-making process and the adoption of legally-binding instruments.

There is a reluctance on the part of some space-faring nations to develop any legally-binding rules of space governance. States seem to prefer non-binding documents. This process does not produce an effective global governance based on precise laws, rules, regulations, norms, standards and procedures which are predictable, certain and stable. It is recognised that every space activity does not have to be regulated under detailed and binding rules of international law. On the other hand, rights and obligations of the concerned players for certain activities cannot be firmly established under non-binding, voluntary and ambiguous promises. For example, suborbital and orbital flights transiting through the sovereign airspaces of other States are best regulated through a binding international treaty on the subject matter. 'Soft-law' documents cannot be dogmatically considered suitable as a replacement for 'hard-law' instruments in all situations. Rather, the choice

between ‘soft-law’ resolutions and ‘hard-law’ agreements should be made on the basis of the need for and the extent of the regulatory certainty in each case. It would be prudent to follow an all-inclusive global space governance approach that should include binding treaties, non-binding instruments, best practices, efforts towards unification or coordination of national regulations and policies, etc.

Private companies are increasingly playing more extensive role in space activities, both nationally and internationally. Their participation is crucial primarily due to the efficiency, economy and entrepreneurship of their space operations. Private initiatives should be encouraged and facilitated in order to generate and expand space benefits. However, it must never be forgotten that the sole *raison d'être* of private companies is their exclusive private interest, which is often contrary to inclusive global public interest. It is utopian to imagine the role of State (government) and its coercive power will vanish when the ideals of communism and equal sharing of benefits is fully realised. Equally, if not more, utopian belief is that private companies of (and in) some States and market forces will function perfectly for the benefit of all people and nations, without the intervention of State. Contemporary world-wide practice shows that the activities of private entities are regulated nationally, and more rigorously when they abuse their economic power contrary to the public interest. In the era of globalised economic activities, the possibility of using flag of convenience, whereby a corporation sets up shop in countries with more lax, or perhaps even non-existent laws on pertinent issues such as public safety, environmental protection or labour standards, is high. Thus space activities of private companies ought to be regulated internationally by setting up uniform legal rules and standards world-wide, particularly when dealing with activities like the mining of natural resources on asteroids and the Moon as there would dire need for international standards for safety and protection of the space and earth environment.

Again to underline the inadequacy of the current governance system in addressing the challenges and realities of outer space, we are at the dawn of an era that can be guided by peaceful coexistence and cooperation or plunged into another prolonged period marked by tensions and distrust. It is becoming obvious that the probabilities of conflicts in space are growing. Such conflicts, should they occur, would potentially be devastating for all nations, particularly those that depend more on space. Therefore, they have higher stakes in ensuring space is conflict-free, free of debris and sustainable for growth of future space operations.

Should international space law remains inadequate to address the realities and emerging issues of the day, or should international space law continues having legal ambiguities on several major issues, one can foresee the emergence of unilateral and exclusive national actions that would be contrary to the corresponding interests of other countries.

#### 4. Need for Global Space Organisation

There is no single global institution which fully oversees all space-related matters, which has the authority to take effective decisions and actions on behalf of humankind as well as to exercise coordination over all activities in the space sector on a global scale.

From the start of the space age, the main institution for global governance of space has been the United Nations, particularly the COPUOS. However, COPUOS is being abandoned as the central international body for global governance for space. Several important issues related to space governance are now being discussed outside of COPUOS and, perhaps worse still, only discussed by a few space powers. This trend has made the important issue of global space governance become a matter under the direction and operation of a select few space-faring nations.

The obvious benefits of having a dedicated intergovernmental organisation for specific sectors can be seen from some of the most relevant international institutions. The examples of the ITU and ICAO show that a permanent international institution is imperative for an effective space governance system under which space activities can expand globally.

Dr. Joseph Pelton correctly notes that "space mining, space resource recovery, cosmic hazards and planetary defense, and orbital debris removal are becoming intertwined in terms of technology and policy and that things are moving ahead faster in these areas than anyone thought would be the case even a few years ago." Therefore, it makes sense that a single international organisation is created to regulate space activities in holistic manner, of course, in consultation and collaboration with other specialised agencies of the UN and other stakeholders.

#### 5. Conclusion and Final Remarks

In essence, what we currently have is an ineffective and inadequate set of legal rules and an inefficient and insufficient institutional system for the improvement and expansion of those rules. This ought to be changed, first by strengthening the UN and its space-related bodies, and eventually by setting up of a separate specialised agency for space. Outer space is an internationally-shared domain (a global commons) whereby the action of one country is most likely to affect the interests of others. It is believed that global problems require global solutions that are sought and implemented through global participation. Recent increase in the membership of COPUOS is a positive step in the right direction. However, in order to make real progress in the global space governance, it would now be prudent to expand the role and activities of COPUOS and the Office for Outer Space Affairs, which should be provided with more financial and human resources. The expertise developed and the experience gained by these two institutions will prove useful for eventual creation of the proposed Global Space Organisation.

It is often said that there is no political will, mainly on the part of some major powers, to adopt legally binding treaties and to establish international organisations. I believe that the extent of political will is highly dependent upon the level of recognition, or lack thereof, of the benefits and risks that would result from one State's action or omission. Therefore, it is important that all governments, particularly those that are heavily dependent on space ought to realise that they are the ones who will be the largest losers if the international rule of law in space fails or remains inadequate. It is in the interest of these space-dependent States to initiate and actively pursue the redesign of a global space governance that should benefit them as well as all of humanity.

Unfortunately, it is apparent that the world is becoming a 'failed State', if it has not acquired that status already. This is so due to wide-spread tensions and hot spots, the blatant disregard of international law, attempts to stop or delay the progressive development and codification of international law, efforts to make the UN an ineffective global institution, the impending climate catastrophe, the unprecedented stockpiling of weapons of mass destruction, expanding nature and scope of terrorism that strike at the heart of our societies, increasing number of refugees and their worsening conditions, widening disparity in economic development among nations and within nations, the state of pollution in the seas, the rapid depletion of natural resources, and so many other humanitarian crises and global challenges that threaten the sustainability of our planet and very species. This overall dismal state of global affairs impacts upon, and has implications for, global space sector. The only way out of the mess, of which Prof. Kellman spoke, would be an efficient, effective and inclusive global space governance system.

It is recommended that the planned High Level Forum on UNISPACE+50 seriously and thoroughly consider the need to strengthen and expanding the existing global space governance system in order to achieve, effectively and in practice, the goal of the sustainable use of space for peaceful purposes and for the benefit of all humankind.

Thank you for your kind attention!