THE IMPORTANCE OF THE UN COPUOS IN THE SPACE DEBRIS MITIGATION: WHAT EVOLUTION FOR THE UN COPUOS?

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ABSTRACT

As one of the cornerstones of space activities and space law, the UN COPUOS has to evolve in order to keep its central place. This article aims to identify and analyse the various possibilities of this evolution. Accordingly, it addresses the question of the modification of the voting procedure thus arguing in favor of the modification of the consensus and confirming that the 'one vote per State' is still necessary for State equality.

The relation between hard and soft law is also examined and leads to the conclusion that the use of soft law is both justified and necessary. The last section of this article deals with cooperation, proving that it is a necessary element for the UN COPUOS to succeed and for States to continue to be able to deal with space evolutions and produce relevant space laws.

INTRODUCTION

Since its creation on December, 13th 1958 by the resolution 1348 of the United Nations General Assembly (UNGA) [1], the United Nations Committee on the Peaceful Uses of Outer Space, known as COPUOS, is the United Nations body that is competent for all questions relating to Outer Space. Created as an *ad hoc* committee, it was made permanent on December, 12th 1959 by the UNGA resolution 1472 [2]. With the expansion of space technologies and *de facto* of different aspects of space such as geopolitical, economic or even technical and legal ones, two sub-committees were created in 1961.

First, the Legal Sub-Committee (LSC) is competent for questions relating to legal aspects such as the implementation of national measures as well as the respect of the five space treaties by each member State. It also leads and organizes the discussions concerning the adoption of guidelines or of any legal instruments. Secondly, the Scientific and Technical Sub-Committee (STSC) deals with various issues relating to the knowledge of the space environment, but also to the equipment and devices deployed.

The two sub-committees allowed the UN COPUOS to be considered as "*one of the largest United Nations committees*" [3] and also to acquire the status of the main forum for the elaboration of legal principles concerning Outer Space due to the adoption of the five space treaties and to different soft law instruments such as the Guidelines for space debris mitigation [4]. Professor Paul B. Larsen is going as far as qualifying the UN COPUOS of being "*the existing space debris decision-making fora*" [5].

At the beginning of the UN COPUOS in 1958, only eighteen countries took part in the journey [6]. But it has evolved and it currently gathers ninety-five member States including spacefaring nations such as the United States of America (USA), Russia, or China, but also non-spacefaring nations, like Nicaragua, Ghana, or the Dominican Republic. This growth in member States shows an increasing interest from the nations to be part of discussions relating to Outer Space. Even though the UN COPUOS has far fewer members than the UN, it should not be minimized, and the growth will surely continue in the next decades as long as the UN COPUOS keeps its position as the favourite forum for space negotiations and debates [7].

While revisiting the first technical space achievements or the first times in space (1st satellite in orbit, 1st man in orbit, 1st woman in space, 1st step on the Moon) is off-topic here, it is however essential to talk about the first treaties. The five treaties adopted between 1967 and 1979 are the only ones that directly apply to Outer Space and celestial bodies, including the Moon.

Those treaties have set the basis for space law, enshrining principles established in previous UNGA resolutions such as freedom of exploration and use, or interdiction of national appropriation. Such principles, as we mentioned, were established on the basis of UNGA resolutions, as is the case for example of the UNGA resolutions 1148 of November, 14th 1957, 1348 of December, 13th 1958, 1472 of December, 12th 1959

and, with even more significance, of resolution 1721 of December, 20th 1961. This last resolution established once and for all the principles for a peaceful use of Outer Space which were then enshrined in the Outer Space Treaty of 1967 and have become some of the most important principles of the Space Age [8].

The UN COPUOS made space law grow by adding four other international binding instruments on top of the Outer Space Treaty. Those four instruments concern the rescue of astronauts [9], the liability in case of damage caused by space objects [10], the registration of all objects launched into Outer Space [11] and, lastly, the Moon and other celestial bodies [12]. While being the basis of the *corpus juris spatialis*, it is important to underline the creation dates of those instruments, all adopted between 1967 and 1984. Since 1984 and the entry into force of the Moon Agreement, no binding instrument has been adopted, either in the forum of the UN COPUOS or in any other multilateral forum.

Of course, considering the evolution of the US space policy, we can cite the Artemis Agreement, but it was only negotiated in a bilateral logic between the United States and other countries such as Japan, Australia, or Italy [13]. Despite the lack of binding multilateral instruments adopted by the UN COPUOS since 1979, it does not mean that the Space Committee has been inactive for decades. On the contrary, while not very active on the adoption of binding instruments, the Committee and its Sub-Committees have expanded the scope of the discussion. This article focuses on one of these new topics, namely space debris.

This subject, like no other, has been taking more and more importance over the years. At first, this issue was only of minor importance, very few discussions about space debris were taking place, even though the problem has been known by States since the beginning of the space era and of space exploration. Over the years, it gained in importance and resulted in some progress, such as the creation, in 2004, of a working group during the 41st session of the Scientific and Technical Sub-Committee [14] dedicated to the question of space debris and in charge of leading a reflection on the solutions to mitigate such debris.

The UN COPUOS also created a working group which deals with Long-Term Sustainability of Outer Space [15]. After years of work, each working group, has established guidelines on its subject, space debris and sustainability of Outer Space respectively. As a result, the UN COPUOS is currently enabling the emergence and creation of guidelines on the specific topic of mitigation of space debris but also on a wider perspective such as the long-term sustainability of Outer Space [16].

While talking about the UN COPUOS Space Debris Mitigation Guidelines, it is necessary to examine the instrument that inspired the members of the UN COPUOS, i.e. the Guidelines which the Inter-Agency Space Debris Coordination Committee (IADC) originally published. The IADC, which gathers 13 space agencies including national ones as well as the European Space Agency [17], established the Space Debris Mitigation Guidelines in 2007 [18]. These IADC Guidelines were themselves inspired by a 1999 report of the SCST, which resulted from the UN COPUOS growing attention to space debris since 1996. This shows that the IADC and the UN COPUOS are mutually inspired by each other even if, strictly speaking, they do not cooperate directly.

Considering the importance of the space debris issue, the relation between the IADC and the UN COPUOS is necessary. These two fora do not gather the same members: national space agencies for the former, while the latter is much broader and primarily gathers States but also observers which can be national space agencies or other space organizations such as the International Institute of Space Law (IISL), the European Space Policy Institute (ESPI), or the Committee on Space Research (COSPAR), i.e. the first UN COPUOS observer [19].

Similarly, the Committee should also pay particular attention to another institution, which, even though it does not specifically deal with space-debris-related questions, is concerned with matters that can be related, namely the Conference on Disarmament. This institution deals with all questions relating to weapons in general. In other words, the Conference is competent when it comes to questions relating to space weapons. In this context, space debris can be thought of as a result of the use of such weapons.

To sum it up, the UN COPUOS is the main forum for space matters, but in reality, it would be fairer to say that it is the central part of a much more complex system that involves States, space organizations, the IADC, the Conference on Disarmament and all the space actors in general. Space debris is a concern for everybody on Earth regardless of their direct involvement in space. Our world is space-dependent, and we need to find solutions to mitigate space debris, to avoid a dead-end situation.

While the UN COPUOS appears to be central in the achievement of that goal, we should not underestimate

other actors or all the other available levers. This article aims to pave the way for some potential solutions but its main goal is to understand how the UN COPUOS could overcome its period of legal scarcity because no binding instrument has been adopted since 1979 and the Guidelines on both Space Debris Mitigation and Long-Term Sustainability are far from enough to reduce the increasing number of space debris so as to avoid reaching the Kessler syndrome – which result in a space debris belt, which would prevent all space activities in Earth orbit including some astronomical studies and observations [20].

To examine the possible evolutions of the UN COPUOS so that it becomes more efficient in the fight for space debris mitigation, we first consider the voting procedure within the UN COPUOS – currently based on a consensus system. The consensus is used to adopt reports or guidelines. This leads us to examine the relation between hard and soft laws, specifically in the UN COPUOS and its Sub-Committees.

Finally, we come back on the necessity of cooperation and how to encourage it. At the moment, national interests appear to trump international cooperation. This article defends the view that reversing this tendency is necessary so that cooperation between all actors is strengthened, whether member States, space actors within the UN COPUOS or any other competent institution.

The various topics discussed here aim to prepare the ground for some potential evolutions and improvements in the way the UN COPUOS works so that it can keep its place in the space domain and maybe become even more effective in the mitigation of space debris and in all others subjects it is involved.

2. REFLECTION ON THE VOTING PROCEDURE IN THE UN COPUOS

2.1 REFLECTION ON THE CONSENSUS

The voting procedure of the UN COPUOS is the consensus and it seems quite complicated to change it. The history of the UN COPUOS explains the adoption of the vote by consensus against the unanimity vote on the one hand – which was championed by the USSR (the Union of Soviet Socialist Republics) and the majority vote on the other hand – which was supported by the USA. A compromise was finally reached through the adoption of the consensus voting procedure [21].

However, as Eilene Galloway mentions: "*That meant that every member of the Committee had a veto right*" [22]. As a result, it allows each State to sink any project they disagree with. Although similar to the unanimity procedure, the consensus procedure should not be confused with the former. While unanimity is the expression of the agreement of each voting member to a proposal - which means that if one does not agree, the proposition will not be validated. When the vote happens, if no States opposes it, then the proposal is passed. As a consequence, in the case of consensus, States do not express their full agreement. Some may not agree but not to the extent of opposition which would signify the failure to adopt the text [23].

From a formal perspective if these two procedures are quite similar, their legal consequences are widely different. Instruments adopted by unanimity will have a stronger impact and States will be morally more bound by such instruments whereas consensus instruments, while easier to adopt, will have a lighter impact on the behaviour of States.

Consensus was chosen so as to avoid permanent blockage as the Committee was built during the Cold War and the opposition between the two blocs was so strong that each one would have blocked any initiative coming from the opposite camp. Considering the current context and composition of the UN COPUOS and the fact that the Committee does not rely on the opposition between two blocs any longer but instead operates on multilateral rivalry, it may be time to think about an evolution of the voting procedure.

Unanimity appears to be a utopic voting procedure, considering the many oppositions between States. Consequently, it would not allow the UN COPUOS to be more effective or reliable. The main goal of such a change would be to allow member States to adopt stronger instruments that could better address the current challenges, primarily space debris.

The UN COPUOS could move towards the adoption of a qualified majority procedure. While the simple majority would not be strong enough and would create the risk that only half the members respect the adoption of legal instruments, a qualified majority, at the 2/3 or 3/5 for example, could be a reasonable solution. It would both allow to enforce instruments with a stronger base that reveals the clear agreement of a large majority and at the same time enable those who disagree to clearly express their opposition without blocking the adoption of the instrument.

2.2 REFLECTION ON THE 'ONE VOTE PER STATE' PRINCIPLE

Concerning the vote, another debatable point is discussed by Bin Cheng: 'the one vote per State' principle, which is directly inspired by the UN Charter and its article 18 paragraph 1 [24]. In his analysis of domestic law, Professor Cheng states that this rule is not the most democratic one. From the State's point of view, it appears democratic as each State is equal no matter what its size or capabilities are. From the population's and citizens' perspective however – which is the analysis of Bin Cheng, it is not the case any longer. Indeed, in this case, it means that while each State has the same importance, their citizens are not in any case taken into consideration. Even though this reflection is worth discussing, it seems complicated to individualize the vote according to the number of citizens or, for example, according to the capabilities of each State.

In a global context, such as the UN's, to favour population size instead of State equality seems inequal as it would mean that large countries will always have a preponderant vote and will weigh more on the world forum. The principle of 'one vote per State' establishes legal equality in law which is already disturbed by factual inequalities linked to the importance and weight of the economies, the diplomacy, and the technology that some States enjoy. Hence, it seems counterproductive to bring changes that could lead to more disequilibrium. In the case of the UN COPUOS and space matters, such an idea of considering the population or any other means could make the UN COPUOS disappear. The 'one vote per State' rule in the Committee guarantees equality between States, no matter whether they have space capabilities or not, and no matter how developed these capabilities are.

2.3 FINAL REFLECTION

Finally, while the voting procedure should be reviewed and maybe updated to the current situation (end of the Cold War, more member States, development of space capabilities all over the world), the 'one vote per State' rule should remain unchanged to guarantee equality between States within the UN COPUOS and between spacefaring and non-spacefaring nations. Keeping hold of this rule will allow States and the UN COPUOS to carry on with negotiations without taking the risk of losing the interest of smaller States. It will also guarantee the same weight to every State on the global work carried out by the Committee and its Sub-Committees. And lastly, it will allow States with capacities in development as well as the ones which do not have any yet, to focus on developing them.

Conversely, the consensus rule could be the object of a serious reflection within the Committee and particularly within its Legal Sub-Committee so as to examine how it could evolve and what the consequences of such a medication could be. Moreover, the UN COPUOS creates a precedent which could lead other organs of the UN to adopt the consensus rule, even though article 18 of the United Nations Charter only mentions majority or qualified majority. The passage from consensus to qualified majority could help the UN COPUOS to grow and gather more States from all over the world, just like the UNGA and its 193 member States.

Such a modification could allow the UN COPUOS to reconnect with its great past. While hard law was established as a predominant model for space law, the blockages within the Committee and its Sub-Committees render them useless and unable to adopt new hard law instrument. The tendency nowadays in the UN COPUOS and space law in general turns towards soft law even though it is non-binding.

The traditional opposition between hard and soft laws needs to change, generally speaking but more specifically in the case of the UN COPUOS if it wants to be relevant in the next decades.

3. RELATION BETWEEN HARD AND SOFT LAW WITHIN THE UN COPUOS

While treaties and binding instruments were successfully passed during the Cold War and the beginning of the Space Age, this time is clearly over, and it seems quite unlikely, maybe even utopic, to think that States could adopt a treaty within the UN COPUOS forum.

Considering the numerous oppositions between States, particularly between the USA, China, Russia and India, along with the consensus procedure, it is quite clear that no negotiation on binding law would be fruitful not because of its lack of relevance but because of State blockages.

While this period of legal scarcity could be surprising when considering the scientific and technical evolutions, the complexification of the stakes and of the space technologies have compromised the implementation of legal instruments.

The opposition is often made between hard and soft law, and it appears that it is complicated to overcome this opposition and to combine the two. Such an opposition could explain why soft law has been taking the lead for decades. Professor Mirmina underlines the fact that "*The international treaty-making process can be slow and, at times, may not even result in agreement*" [25]. Furthermore, he adds that "*Within the subcommittee, there is no consensus in favour of concluding a treaty on orbital debris; in fact, there is active opposition to it.*" [26].

The difficulty met to reach an agreement for the creation and the adoption of such a treaty is also reliant on the reluctance from States to speak about legal aspects concerning space debris [27]. Conversely, some member States do not hesitate to insist on the necessity to adopt binding instruments even though some progress has been made through the Guidelines [28].

Unsurprisingly, there is no consensus on the necessity to adopt hard law or on the contrary. Some are in favour of such an adoption while others think that such a binding instrument is not the best answer to mitigate space debris and bring an adequate answer considering the lack of knowledge on scientific, technical, or even legal matters.

The establishment of working groups and then the creation of the Guidelines marked unprecedented progress in space debris mitigation. Member States insist on the fact that the Legal Sub-Committee is one of the main pieces of the UN COPUOS and particularly for the development of legal instruments, binding or not.

Member States of the LSC plead for the Sub-Committee to remain a forum for the interpretation, application, and creation of rules for space, which makes the LSC an important actor in the standardization of space law and of space debris mitigation.

Moreover, member States are, in fact, pushing for the adoption of soft law because of all the advantages it offers for space actors, namely the possibility to deal with an issue without being bound in case of a violation of the rules. For States, it gives the opportunity to show their interest in a specific matter without sacrificing their freedom of action and their national interest.

In the case of the Space Debris Mitigation Guidelines, it is merely scientific and technical guidelines, but it is compatible with some legal aspects. The development of these Guidelines, and soft law in general, is perceived as a necessity by the States so that they can deal with matters in a timely manner, while keeping in mind that this soft law can potentially turn into hard law.

The concept of a rule of soft law being *de lege ferenda*, i.e. which will lead to the formation of a binding norm, is really widespread in international law and pushes States to opt for soft law as a potential future hard law instrument. Soft law can be chosen depending on the urgent character of an issue; for instance, in the case of space debris mitigation, despite the fact we have been talking about it for decades, it has become of legal interest only recently, because of its urgency.

3.1 SOFT LAW JUSTIFIED BY ITS POTENTIAL FOR EVOLUTION

For space debris, the capacity for evolution of soft law rules could lead to either a treaty or a customary rule. In the case of a treaty, it would entail that, considering both the importance of space debris mitigation and the good application and implementation of Space Debris Mitigation Guidelines by member States, the UN COPUOS could ask for its members, either in the Committee or in its Legal Sub-Committee, to meet and discuss so as to prepare the negotiation of a new treaty which would enshrine the Guidelines and make them binding.

But, as Professor Mirmina states *"The international treaty-making process can be slow and, at times, may not even result in agreement. The LSC on the COPUOS is unlikely to agree on legally enforceable commitments with respect to orbital debris in the foreseeable future. Within the subcommittee, there is no consensus in favor of concluding a treaty on orbital debris; in fact, there is active opposition to it.*" [29]. No certainty can exist when it comes to soft law becoming a treaty.

Moreover, Mirmina underlines the fact that no consensus exists on the mere discussion on such a treaty, which means that it would be a prowess to make all member States agree on the idea of adopting a binding instrument dealing with space debris mitigation. The debate concerning the treaty provisions promises to make blockages emerge from various States. The oppositions that would emerge during the negotiations would block the process and put a veto on the adoption of the treaty.

Interestingly, the last treaty to enter into force was the Lunar Agreement of July, 11th 1984 [30]. It gathered only 18 member States and no major spacefaring nations. Indeed, the treaty option may have to be thought

twice before beginning the process considering all the difficulties it could raise. In such a situation, two major problems could arise: first, the will of member States (or lack thereof); and secondly, the vote by consensus which could easily result in a blockage, as already mentioned.

Soft law could also evolve into a custom thus revealing its binding evolution. It may actually be the most realistic option when speaking of the evolution of a soft law rule towards bindingness. Article 38 paragraph 1 of the Statute of the International Court of Justice defines a custom as follows: "*international custom, as evidence of a general practice accepted as law*" [31]. According to this definition, the customary rule is composed of both general practice and an *opinio juris.* When both requisites are met, then the practice is considered binding and the rule becomes a custom. After the apparition of a new customary rule, all States are then bound by it.

Depending on the evolution of the custom, various notions could appear for the States involved in the process such as interested States or reluctant ones. The territorial scope of the custom would also have an impact on its universal, regional, local or bilateral nature. An evolution of the amount of time needed for a practice to turn into a custom is also to be underlined. If at first all customs were qualified as 'coutume sage' they further became 'sauvage' following the reduction of the time needed to turn a practice into a custom [32]. Professor Bin Cheng even talks about 'Instant Custom', i.e. the idea that a practice immediately evolves into a custom [33].

In the case of space debris, the fundamental question is not on the time which is necessary to make these practices part of a custom but mostly on how to do it. Of course, States which respect the Space Debris Guidelines could be the cornerstone of a nascent custom but, as Marco Ferrazzani underlines, "*The new instruments governing space activities are largely based on the experience of practice, yet not the one constituting already existing rules of customary law, but practice significantly relevant in space activities (that has not yet assumed the nature of custom or been formally codified?)*" [34].

While it is true that "*the consistent behaviour reflects the opinio juris of the involved entities*", it is necessary to keep in mind that the phenomenon of *de lege ferenda* can fail and keep the legal system unchanged as warns Setsuto Aoki [35].

Ultimately, even though soft law could evolve into a treaty or, more realistically, into a custom, there is no guarantee that it will happen. Soft law could stay soft and such a scenario is not hopeless because while non-binding, soft law can have effects on States' behaviours, on diplomacy and technology, and even on some political or legal aspects. We often focus on the bindingness of law and too often we think that it is the essential role of a rule of law but such reasoning denies the legal power of a soft law rule.

In the example of the UN COPUOS and especially of the Space Debris Mitigation Guidelines, it is likely that a binding instrument would have been nipped in the bud because of the lack of good faith and will from the States to discuss a treaty on space debris. Conversely, the Guidelines gathered all UN COPUOS members and have been enabling the growing respect of existing practices such as the '25-year rule', the passivation of space systems and the re-entry or deorbitation of future space debris.

Depending on the situation, the aim of adopting soft law cannot only be justified by its perspective of evolution but also by the necessity to adopt rules according to the urgency of a matter. In such a case, soft law has a lot of advantages compared to hard law whose process of creation is quite long and can be a source of conflict between the negotiating parties.

3.2 SOFT LAW JUSTIFIED BY THE URGENCY OF SPACE DEBRIS MITIGATION

Urgency has often favoured the development of soft law instruments because the adoption of such instruments is faster and easier. The lack of binding force helps States to be engaged in soft law because there is absolutely no risk even in case of violation, at least from a legal perspective.

The increasing number of space debris, the risk of collision and the threat of the Kessler' syndrome have been key elements that help States to acknowledge the huge importance of space debris. Space exploration is too important to be compromised by some debris floating in the Earth orbit.

Considering these elements, there were no doubt about the urgency of the issue and the necessity to adopt some legal instruments made States opt for soft law. They were ready to adopt non-binding guidelines and firmly

opposed to their evolution into binding instruments. As UN COPUOS member States stated: "*The development of the Space Debris Mitigation Guidelines of the Committee into a legally binding instrument or the development of guidelines for active space debris removal would be premature at the current time because the technology was not at an advanced enough stage.*" [36].

Professor Steven Mirmina seems to agree with this declaration and insists on the urgency at the end of his: "*The conclusion of a treaty on orbital debris in the near term is not a realistic possibility. Furthermore, a treaty to remedy the situation may not even be appropriate at present, particularly since some states would probable defer any immediate remedial action to reduce debris pending the outcome of the treaty negotiations. Yet, even though the statistical risk of damage from orbital debris currently remains small, the situation needs immediate redress.*" [37].

The choice of soft law to fight against the growing number of space debris is an approach which is not specific to space law. In international law, when a law must be effective quickly, we often resort to soft law. The best-known example is environmental law which is composed of a lot of soft law instruments able to produce effects with as little time wasted as possible and which gathers numerous States.

Soft law is of course not perfect because sometimes the measures are not strong enough or even because the rules of soft law are not respected by all States. But despite these imperfections and the criticisms that can be opposed to soft law, we cannot ignore the role it plays: it enables States to adopt measures in a timely manner which gather several States and it can pave the way for the emergence of binding rules.

3.3 FINAL REFLECTIONS

Finally, there are a lot of questions concerning the relation which could be developed between hard and soft law. For some commentators, soft law could be a long-term solution and may replace hard law in the future of space law. It is Setsuko Aoki's view when he says that "*When public interests ('mankind' concept) and private economic interests are compatible, soft law will be adequate to govern space activities."* [38]. But what is underlined by Aoki is the compatibility of both public interest and private economic interests. When compatibility lacks, then soft law is strong enough to deal with these subjects.

On the contrary, Marco Ferrazzani analyses the necessity for soft law without forgetting the *lege ferenda* phenomenon and states that "*Finally, the combination of a lack of codification and the need to find a flexible form of international cooperation gave birth to soft law in space activities. In other words, soft law instruments enable to recognize the existence of relevant practice in space activities which is capable but not yet ripe to create binding rules.*". In fact, Dr Ferrazzani adds that soft law is both essential and "*an interim step in the development of space law*" [39]. Indeed, technological progress, the risk due to the growth of orbital space debris and the lack of maturity for States to adopt binding law all contributed to the development of soft law and its implementation as the favoured instrument in space debris mitigation.

According to all these developments about hard and soft law, it appears that all the legal norms were adopted by States within the UN COPUOS. Thereby, there is no doubt about the essential role of the UN COPUOS. And if we can ask the question of its capacity to still produce norms able to deal with space debris proliferation and to mitigate it with efficiency, then the answer is positive.

Of course, there are still a lot of things to modify within the UN COPUOS to make it more relevant and more efficient, but in reality, the UN COPUOS has been evolving since its creation and member States as well. So, it is necessary to give them time to adapt to the current world and mostly to current evolutions. It surely appears that the keyword for the UN COPUOS evolution is 'cooperation' between all space actors and within all forums dealing with space matters, especially space debris.

4. COOPERATION: A KEY FOR SUCCESS AND A SOLUTION

If we consider the Covid-19 crisis, no need to say that cooperation is the key, as the African proverb says, "*Alone you go faster, together we go further*". This is true for Covid-19 and is also true in general; space is no exception.

An example of cooperation, though indirect, is the Space Debris Mitigation Guidelines we presented before for which both the IADC and the UN COPUOS were inspired by each other. But cooperation can be found in every action of the UN COPUOS: between States, organisations, Sub-Committees, on a multilateral level as well as on a regional level, this last option is

particularly encouraged by both the Committee and its Sub-Committees [40].

An action plan was initiated in 1997 during the XXth session of the UN COPUOS to promote the development of existing programs of regional cooperation and to increase the participation in such programs of universities and any interested institutions [41]. Regional cooperation is important and encouraged by the UN COPUOS, which also promotes international cooperation taking into account the global stakes that space debris present and the fact that only cooperative actions could lead to efficient mitigation [42]. For a strong cooperation, both territorial and material scopes have to be considered and that is why the Committee insists on cooperation between all actors in all the domains of space law.

If a hierarchy had to be created between the different types of cooperation, interstate cooperation would clearly come first because it has been developed for decades. Accordingly, States are key to the development of any cooperation, as illustrated by the participation of Germany to a working group of the IADC in 2009 [43].

Obviously, cooperation is also a matter of Intergovernmental and Non-Governmental Organisations. The Working Group on the Long-Term Sustainability of Outer Space stated that: "*States and international intergovernmental organizations should take measures at the national and international levels, including international cooperation and capacity-building, to increase compliance with the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space*" [44].

Cooperation can also be extended to space agencies as illustrated by the IADC and their relations with States and other organisations. The role of the space agencies in the cooperation has intensified thanks to the creation of the IADC and the coordination which exists within it. Space agencies are committed to sharing information, data, knowledge and have put actions in place which are developed and implemented cooperatively. States are the first to encourage cooperation and coordination between space agencies. Within the European Union, cooperation is also promoted through the European Space Agency which is the only regional organization leading cooperation between various national space agencies.

While cooperation has been established between spacefaring nations, major space agencies and space organizations, it also needs to be developed with all space actors regardless whether their capabilities are developed or not and whether they are newcomers or not.

The UN COPUOS and its Sub-Committees are pleading for a growing cooperation with developing countries. The Committee even considers that there exists, for major spacefaring nations, a "*moral international responsibility on their part to assist emerging spacefaring countries in the implementation of space debris mitigation guidelines*" [45], which means that the spacefaring nations should help developing nations to acquire space capabilities. The Scientific and Technical Sub-Committee declared that "*developing countries should benefit from space technologies, in particular to support their social and economic development; that it was necessary to promote cooperation to facilitate data exchange and the transfer of technology among States"* [46].

According to the Committee and the Sub-Committees, the chance to see the elaboration of a binding instrument for space debris mitigation should increase with cooperation. On this point, the Sub-Committees are the most optimistic ones on the possibility to see soft law turn into hard law through cooperation [47]. But even though cooperation could lead to hard law for space debris in the future, it would not be enough and, on this issue, soft law must prevail over binding instruments given the urgency. Of course, even if cooperation is quite important in space and in space law, the will of space actors, and especially of States, is still the determining factor for the adoption of a legal instrument.

5. CONCLUSION

To summarize, concerning the evolution of the UN COPUOS, some points seem to be relevant such as the modification of the voting procedure to move from the consensus towards a qualified majority. It would give States the possibility to easily express their agreement or their opposition to a proposal. It would also make the adoption of legal instruments easier. Once a text is adopted, then all UN COPUOS members are bounded. It is crucial, however, not to constrain them too much so as to prevent a State departure from the Committee. Such a situation could be complicated for both the State and the UN COPUOS.

Another aspect to take into account concerns the relation between hard and soft law. This does not only affect the Committee or space law in particular. It is important not to consider soft law as lesser law but to fully understand

that it is a different way to obtain results and that it sometimes achieves better results than hard law. The work of the UN COPUOS and its member States is to understand that while hard law already exists thanks to the five space treaties, soft law is needed to complete them and make space law evolve with current issues. Science and technology never wait for the law so it is necessary to react quickly and answer to the new challenges with efficient and responsive instruments.

Finally, cooperation is decisive, and it is important to understand that no matter how decisions are voted, or how fast law can react to space evolution, if States do not have the will to react and to anticipate, it is clear that any negotiation will be doomed to fail. States should act cooperatively and not from a national perspective only or by trying to be stronger than their neighbour. If States are not ready to do that then, maybe, other space actors will have to show the way, especially space agencies which should not pay heed to competition but instead favour cooperation and coordination.

If the UN COPUOS wants to keep its role as a dedicated forum for negotiations on space affairs, it is necessary for it to lead States towards cooperation instead of competition. This ability and capacity of the UN COPUOS will be determining for its future because space debris is only one of the many subjects with which the Committee should deal.

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