

# Institutional Fragmentation of Global Space Governance and the Urgent Need for the Establishment of the Global Space Organization

*Sima Moradinasab\**

## Abstract

The existence of a wide range of international institutions, with unique mandates and competences, in regulating space activities, has resulted in institutional fragmentation of global space governance. Although the Committee on the Peaceful Uses of Outer Space (“COPOUS”) is regarded as the main actor in global space governance, the participation of other institutions including the International Telecommunication Union (“ITU”), the International Civil Aviation Organization (“ICAO”) and the International Atomic Energy Agency (“IAEA”) cannot be overlooked. As a consequence of the participation of these various institutions in regulating space activities, the structure of global space governance was diversified and fragmented simultaneously. Choosing the analytical research method, this paper aims at answering this main question how can the negative impacts of institutional fragmentation of global space governance be eliminated. The hypothesis of this article is that the establishment of the global space organization may make a significant contribution in this regard.

## 1. Introduction

The current structure of global space governance (as a set of actors tasked with regulating space activities and a set of legal rules, whether they are hard or soft)<sup>1</sup> is characterized by the participation of a wide range of international institutions having special tasks and mandates. Whilst the participation of different actors in space law rule-making (including the COPOUS, ITU, ICAO and IAEA) has diversified the existing structure of global space governance in the first place, it has indeed led to the institutional fragmentation of global space governance. Choosing the analytical research

---

\* Shahid Beheshti University.

1 V. Degrange, *Into the Twenty-First Century: Integration of Principles of Global Governance in Space Law* in: Annette Froehlich (Eds.), *A Fresh View on the Outer Space Treaty*, Springer International Publishing, Switzerland, 2018, pp. 75-87.

method, this paper aims at answering this main question that considering the detrimental effects of institutional fragmentation of global space governance on the whole structure of global space governance and on its relation with general international law, how can the negative impacts of institutional fragmentation of global space governance, as a consequence of the participation of various actors in regulating space activities, be eliminated. In this regard, the main hypothesis of this paper is that there is an urgent need for the establishment of global space organization (as one of the United Nations (“UN”) specialized agencies). For this purpose, the paper firstly considers the concept of fragmentation of international law on both substantive and institutional level. Then, in Section 3, by taking the involvement of different international institutions in global space governance into account, the problem of institutional fragmentation in space law and its impact on substantive fragmentation will be discussed. Using examples of institutional fragmentation in global space governance- as mentioned in Section 3, Section 4 argues that establishing a new global space organization (similar to the ICAO in the aviation sector) may have vital advantages, particularly for facing with institutional fragmentation of global space governance.

## 2. The Concept of Fragmentation in International Law

In a broad sense, fragmentation (as a phenomenon in international law) is divided into two main forms, i.e., “legislative or substantive” and “institutional” fragmentation. This is what was taken into consideration by the International Law Commission (“ILC”) in its Fragmentation Report where it states that “fragmentation... has been accompanied by the emergence of specialized and (relatively) autonomous rule or rule complexes, legal institutions and spheres of legal practice”.<sup>2</sup> While the ILC, by definition, does not neglect the latter form of fragmentation (i.e., the institutional one), it solely deals with the former type (i.e., the legislative fragmentation).<sup>3</sup> Thus, the problem of institutional fragmentation is to be solved by the related institutions themselves.<sup>4</sup>

Needless to say, global space governance (as a set of actors tasked with regulating space activities and a set of legal rules, whether they are hard or soft)<sup>5</sup> is characterized by fragmentation on both legislative (or substantive) and institutional level. Adoption of national space legislations (in accordance

---

2 M. Koskenniemi, Report of the Study Group of the International Law Commission, “Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law”, 13 April 2006, p. 10.

3 See M. A. Jovanović, *The Nature of International Law*, Cambridge University Press, Cambridge, 2019.

4 Koskenniemi, *supra* n. 2, p. 11.

5 Degrange, *supra* n.1.

with Article VI of the Outer Space Treaty (“OST”))<sup>6</sup> is to be deemed as the main reason of legislative fragmentation<sup>7</sup> of global space governance. Setting legislative fragmentation aside, however, this paper aims at considering institutional fragmentation of global space governance.

For this purpose, the term institutional fragmentation is defined as a fragmentation resulted from the participation of different actors on the international scene.<sup>8</sup> Accordingly, institutional fragmentation in global space governance has its origin in the involvement of different institutions tasked with regulating space activities. This being said, examples of institutional fragmentation in global space governance are taken into consideration in Section 3 below.

### 3. Different Space Institutions: Diversification or Fragmentation of Global Space Governance?

There is no doubt that the COPOUS (since 1958)<sup>9</sup> plays a crucial role in space law rule-making. As stated in the GA Resolution 1472, however, the COPOUS is mandated with reviewing international cooperation in *peaceful uses of outer space*.<sup>10</sup> It follows that the issue of arms control in outer space is excluded from the scope of the COPOUS activities and is handed over to another institution, i.e., the Committee on Disarmament of the United Nations (“CoD”).<sup>11</sup> Apart from that, as the COPOUS tasks are not broad in scope *ratione materiae*, the role of other institutions (whether they are categorized as the UN specialized agencies<sup>12</sup> or they are active outside the UN) is highlighted. In terms of the UN specialized agencies, one of the most important institutions playing a crucial role in the current framework of global space governance-particularly by allocating radio frequencies and

---

6 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, 27 January 1967, entered into force 10 October 1967, Article VI.

7 See T. Masson-Zwaan, M. J. Sundahl, National and International Norms Towards the Governance of Commercial Space Resource Activity, in: Lesley Jane Smith, Ingo Baumann and Susan-Gale Wintermuth (Eds.), Routledge Handbook of Commercial Space Law, London, 2024.

8 See A. Soucek, Outer Space in Society, Politics and Law, Christian Brunner and Alexander Soucek (Eds.), Springer International Publishing, New York, 2011.

9 A/RES/1348, Question of the Peaceful Use of Outer Space, 13 December 1958.

10 A/RES/1472, International Cooperation in the Peaceful Uses of Outer Space, 12 December 1959.

11 P. Jankowitsch, The Background and History of Space Law, in: Frans von der Dunk and Fabio Tronchetti (Eds.), Handbook of Space Law, Edward Elgar Publishing, USA, 2015, pp. 1-28.

12 R. S. Jakhu, J. N. Pelton, Global Space Governance: An International Study, Springer International Publishing, Switzerland, 2017.

orbital slots- is the ITU.<sup>13</sup> Other UN specialized agencies playing a part in global space governance are including but not limited to ICAO and IAEA dealing with (for example) regulating suborbital flights<sup>14</sup> and nuclear accidents on space objects respectively.<sup>15</sup> The last but not least is the UNESCO having a contribution in regulating the use of satellite broadcasting by adoption of the Declaration of Guiding Principles on the Use of Satellite Broadcasting for the Free Flow of Information, the Spread of Education and Greater Cultural Exchange (1972 Declaration) (“1972 Declaration”).<sup>16</sup>

Interestingly, as mentioned earlier, institutional fragmentation of global space governance is not restricted to the involvement of different UN bodies, but it extends to the participation of institutions outside the UN. The Inter-Agency Space Debris Coordination Committee (“IADC”) (as an inter-governmental organization tasked with coordinating issues pertaining to space debris) prepared the 2007 Space Debris Mitigation Guidelines<sup>17</sup> and the International Institute for the Unification of Private Law (“UNIDR/OIT”) (as an intergovernmental organization mandated with harmonizing private law) adopted the Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Space Assets (Space Assets Protocol) in 2012<sup>18</sup> are two examples of participation of institutions outside the UN in global space governance.

It is worth mentioning that the International Law Association (“ILA”), International Institute of Space Law (“IISL”) and International Astronautical Federation (“IAF”) are also playing a crucial part in global space governance, especially by having influence on progressive development of space law.<sup>19</sup> Needless to say, the importance of the ILA reports on different subjects related to space activities (including settlement of disputes arising from space activities)<sup>20</sup> and the IISL colloquiums cannot be neglected. In addition, the

---

13 About International Telecommunication Union (ITU), <https://www.itu.int/en/about/Pages/default.aspx>, (accessed 12.09.2023).

14 S. Hobe, *Space law*, Nomos Publishing, Germany, 2019.

15 G. M. Danilenko, *Outer Space and The Multilateral Treaty-Making Process*, *High Technol. Law. J.* 4 (1989) 217-247.

16 UNESCO, *Declaration of Guiding Principles on the Use of Satellite Broadcasting for the Free Flow of Information, the Spread of Education and Greater Cultural Exchange*, Paris, France, 15 November 1972.

17 *Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space*, 2010.

18 *Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Space Assets*, Berlin, 9 March 2012.

19 P. Malanczuk, *Space Law as a Branch of International Law*, *Neth. Yearb. Int. Law*, XXV (1994) 143-180.

20 *The Final Draft of the Revised Convention on the Settlement of Disputes Related to Space Activities*, 30 May 1998.

significance of the IAF is to the extent that it was one of the proposed candidates of the main institution of space law rule-making.<sup>21</sup>

At first sight, a conclusion would be that global space governance was diversified on institutional level. This conclusion, however, does not reflect a reality of the existing structure of global space governance. The reason is that as a consequence of participation of a wide range of institutions in space law rule-making, global space governance is not only diversified but also fragmented. The point is that the institutional fragmentation of global space governance may result in substantive fragmentation. This is where the norms created by these institutions are in conflict with each other. Due to the lack of any mechanisms for promoting harmonization of the rules created by these institutions, the situation will be more problematic. It cannot be overlooked that the failure of the ILC (as the main rule-making institution in general international law) in having contribution in codification or progressive development<sup>22</sup> of international space law has also aggravated the institutional fragmentation of global space governance. This was also resulted in departure of global space governance from the classical method of rule-making in general international law. All these considerations demonstrate that taking the initiative to establish a new space organization would be crucial.

#### **4. The Establishment of Global Space Organization**

The lack of a single international organization, as an active actor in global governance structure of a specific branch of international law, is not new. In the context of international environmental law, there is also no single global organization tasked with international environmental issues.<sup>23</sup> However, there is a difference between international space law and international environmental law in this respect. The reason is that, as discussed before, whereas the COPOUS is regarded as the main actor of global space governance (tasked with space law rule-making, especially those aspects related to peaceful uses of outer space), the plurality of institutions playing a role in global space governance cause institutional space fragmentation. Due to the possibility of conflict between norms created by these institutions, there is an urgent need for establishing a global space organization with a potential of alleviating institutional fragmentation of global space governance. Particularly, successful experience of the ICAO in the area of air law will incentivize us to stepping towards the establishment of global space

---

21 K. B. Keating, *Space Law and the Fourth Dimension of Our Age*, Proceedings of the First Colloquium on the Law of Outer Space, The Hague, 1958, pp. 1-126.

22 The Charter of the United Nations, 1945.

23 J. Klabbers, *International Law*, Third ed., Cambridge University Press, Cambridge, 2021.

organization. It is worth mentioning here that due to the connection between aviation and space travel, expanding the competence of the ICAO was proposed in initial steps of space law rule-making.<sup>24</sup> Despite the ICAO- at least partially- was one of the appropriate candidates of global organization in global space governance, especially given its quasi-legislative and quasi-judicial jurisdiction, this proposal was subsequently dismissed.<sup>25</sup> Yet, by the emergence of new issues as a result of progress in space activities- including space traffic management- the possible role which can be played by the ICAO is being taken into consideration once again.<sup>26</sup> These considerations show that not only the COPOUS cannot be effective in dealing with all aspects of space activities, but also eliminating the institutional fragmentation of global space governance is mainly dependent on the establishment of a new space organization- recognized as one of the UN specialized agencies-. This organization (by representing the benefits and interests of all parties involved),<sup>27</sup> may have some main advantages:

(1) it may play a crucial part in alleviating the institutional fragmentation of global space governance; (2) as a consequence of the first advantage, it may tackle with substantive fragmentation caused by the participation of different space institutions dealing with space law rule-making; (3) having quasi-judicial and quasi-legislative jurisdiction, it may make a valuable contribution in settling space-law disputes and preparing standards and recommended practices (similar to those annexed to the Convention on International Civil Aviation (“Chicago Convention”), for purpose of new issues related to space activities, including delimitation of airspace or space traffic management; and (4) it may have a significant contribution in filling the legal gaps of the existing structure of global space governance (for example, the lack international authority similar to international seabed authority for the purpose of exploitation of the natural resources of the Moon.<sup>28</sup>

## 5. Conclusion

The existence of different international institutions having a role in space law rule-making has simultaneously diversified and fragmented the current

---

24 International Law Association, Report of the Fifty-One Conference, 1964.

25 J. Rivoire, Design for a Law of Space, Proceedings of the First Colloquium on the Law of Outer Space, The Hague, 1958, pp. 1-126.

26 Hobe, *supra* n. 14.

27 F. Gaspari, A. Oliva, The Consolidation of the Five UN Space Treaties into One Comprehensive and Modernized Law of Outer Space Convention: Toward a Global Space Organization, in: George D. Kyriakopoulos, Maria, Manoli (Eds.), *The Space Treaties at Crossroads: Considerations de Lege Ferenda*, Springer International Publishing, Switzerland, 2019, pp. 183-197.

28 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 5 December 1979, entered into force 11 July 1984, Article 11.

structure of global space governance. Whilst the COPOUS is to be viewed as the main actor in the global space governance, the role played by other institutions (whether they are UN bodies or not) cannot be overlooked. Therefore, institutional fragmentation of space governance is largely derived from the involvement of these actors including but not limited to the ITU, ICAO, UNESCO, IAF and IISL. This problem can be aggravated by the influence of institutional fragmentation of space governance on substantive fragmentation (caused by conflicting norms created by these institutions). According to these considerations and by using the successful experience of the ICAO in air law, the establishment of a new global space organization (which is regarded as one of the UN specialized agencies) is needed. It appears that not only the problem of institutional fragmentation of global space governance may be handled by this space organization, but also it may have vital advantages for filling legal gaps of the main space governance instruments, including the Moon Agreement.