

# Could the Working Paper Lead to a Unified Legal Regime? To Resolve Legal Challenges with Respect to Aerospace Objects

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## Abstract

By analyzing the UNCOPUOS “Questionnaire on possible legal issues with regard to aerospace objects”, this paper addresses different member States’ responses and ultimately it argues that the questionnaire is one of the ways to harmonize States’ views and establish a unified legal regime for aerospace objects. Specifically, this paper evaluates Questions 1, 7, and 8, which refer to the definition of aerospace objects, and considers precedents, international customary law, and national and/ or international legal norms with respect to the passage of aerospace objects during take-off and/ or re-entry into the Earth’s atmosphere. The analysis shows that even though there is no consensus among member States about the applicable law to aerospace objects at present, they are still aware of the issues, and that the questionnaire in the working papers can be a basis for formulating international customary law or can help create future legal regimes for aerospace objects.

## 1. Introduction

The question of where airspace ends and outer space begins has been a topic of debate among States since the 1950s and is still unclear.<sup>1</sup> In 1972, Judge Manfred Lachs of the International Court of Justice (ICJ) asked “where are the frontiers of outer space; and given that said frontiers are not yet

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1 Paul Stephen Dempsey, *The Definition and Delimitation of Outer Space*, available at: <http://www.unoosa.org/documents/pdf/copuos/lsc/2017/tech-05.pdf> (last accessed 2 December 2021).

established, is there any real dilemma in their absence?”<sup>2</sup> Aerospace objects that can move in airspace and outer space or travel around boundaries where States argue the delimitation have developed rapidly. Because there are several inconsistent characteristics between the regimes of air law and space law, States have become aware of issues related to aerospace objects. These circumstances can be a real dilemma in the delimitation of the boundary between airspace and outer space. Besides, to the best of my knowledge, there is no article using the term “aerospace object” in air or space law. Moreover, neither ‘aircraft’ nor ‘airspace’ is defined in the Air Law Conventions.<sup>3</sup> In the same vein, there is no definition of ‘space objects’ and ‘outer space’ in the Space Law Conventions.<sup>4</sup> Hence, at the 31st session of the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS) held in 1992, a delegation from the Russian Federation submitted a working paper on the question concerning the legal regime for aerospace objects.<sup>5</sup> This paper was a significant starting point for future working papers on issues related to aerospace objects in the Legal Subcommittee of the UNCOPUOS.

The present paper explains about the working papers of “Questionnaire on possible legal issues with regard to aerospace objects,” including details about participating member States and summaries of each question. Though there are 10 questions in the working papers, this paper will first analyze Question 1, which is the most basic question, pertaining to the definition of an aerospace object, before focusing on Questions 7 and 8. The latter questions deal with precedents, international customary law, and national and/ or international legal norms with respect to the passage of aerospace objects during take-off and/ or re-entry into the Earth’s atmosphere. The reason why I have chosen these questions is that they are ideal for considering member States’ practices to determine if *opinio juris* has developed, since all States who participate in air space activities and space activities attend a conference. Moreover, these questions deal precisely with

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2 Yaw Out Mankata Nyampong, The Definition and Delimitation of Outer Space: The Present Need to Determine Where “Space Activities” Begin, available at: <http://www.unoosa.org/pdf/pres/lsc2014/tech-04E.pdf> (last accessed 2 December 2021).

3 UN Doc. A/AC.105/C.2/2018/CRP.9 (2018); Paul Stephen Dempsey, Public International Air Law (2<sup>nd</sup> edn, Institute and Center for Research in Air & Space Law McGill University, Montreal, QC, Canada, 2008), 757.

4 *Ibid*; see, the Convention on International Liability for Damage Caused by Space Objects, 961 UNTS 187, adopted on 29 March 1972, entered into force on 1 September 1972 (the ‘Liability Convention’) and the Convention on Registration of Objects Launched into Outer Space, 1023 UNTS 15, adopted on 14 January 1975, entered into force on 15 September 1976 (the ‘Registration Convention’). They only defined as “space object includes component parts of a space object as well as its launch vehicle and parts thereof” (Art. I (d) and Art. I (b), respectively).

5 UN Doc. A/50/20 (1995).

the existence of international customary law and legal norms on the basis of responses from the member States.

Based on the analysis of the above questions, the paper argues that they are important for formulating a new soft law or international customary law in the near future or can at least help predict future applicable law to each member State, which in turn could aid the development of unified national laws for aerospace objects.

## **2. Summary of the Working Paper “Questionnaire on Possible Legal Issues with Regard to Aerospace Objects”**

Working papers about aerospace objects are related to the definition and delimitation of outer space, which has been on the agenda of the Legal Subcommittee since 1967.<sup>6</sup> As mentioned above, in 1992, the delegation from the Russian Federation raised concerns on the legal regime for aerospace objects.<sup>7</sup> The next year after submission, at the 32<sup>nd</sup> session of the Legal Subcommittee, the Chairman of the Working Group on agenda item 4, which deals with “matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit”, distributed an informal paper entitled “Draft questionnaire concerning aerospace objects.”<sup>8</sup> Along with this paper, the Chairman also distributed another informal working paper including the draft questionnaire in 1994.<sup>9</sup> At the time, the purpose of the questionnaire was to find and gather the preliminary views of member States of the UNCOPUOS on numerous issues related to aerospace objects.<sup>10</sup> Also, the member States thought that this questionnaire could end the discussion on whether delimitation of airspace and outer space is necessary or not.<sup>11</sup> There are currently more than 20 working papers, and member States interested in this issue have replied to the questionnaire until 2009.

### **2.1. Participating Member States**

Since the working paper entitled “Questionnaire on possible legal issues with regard to aerospace objects” was first approved, 44 member States have prepared and answered the questions so far.<sup>12</sup> This is a significant number because it comprises half of the participating States of UNCOPUOS, which

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6 *Ibid.*

7 *Ibid.*

8 *Ibid.*

9 *Ibid.*

10 *Ibid.*; Katherine M. Gorove, ‘Delimitation of Outerspace and the Aerospace object – Where is the Law’ (2000) 28 *Journal of Space Law*.

11 UN Doc. A/AC.105/C.2/1995/CRP.3/Rev.3 (1997).

12 *Ibid.*

includes 92 member States.<sup>13</sup> Moreover, some of the member States have updated and submitted their answers more than twice, such as Turkey, Morocco, Chile, Greece, Costa Rica, and the former Libyan Arab Jamahiriya (and now Libya). However, it was unfortunate that States with major space capabilities, such as the United States (US), China, Japan, and France, did not provide their answers. Especially, the US has constantly maintained its stand that discussions of delimitation between air and outer space are premature and has requested the deletion of the delimitation question from the Legal Subcommittee's agenda.<sup>14</sup> As a result, many States possessing powerful technology have not participated in the questionnaire.

## 2.2. Summary of the Questionnaire

First, until 2002, there was no Question 10, which states "What are the differences between the legal regimes of airspace and outer space?". However, at the 41<sup>st</sup> session, the working group added Question 10 and amended Questions 7 and 8 from "after re-entry" to "during take-off and/ or re-entry".<sup>15</sup>

Among the 10 questions, Question 1, which asks the definition of an "aerospace object", is the most basic. Questions 2 to 4 deal with the applicable regime that differs depending on the location of the objects and the objects' functional characteristics or design features, and either air law or space law prevails depending on the destination of the objects.<sup>16</sup> These questions ask about the applicable law because an "aerospace object" can travel not only in airspace but also in outer space. Question 5 asks whether there is any distinguished regime for the take-off and landing phases. Historically, there was no space object that could take-off and land in different countries. Hence, the working group considered the difference between the take-off and landing phases, with the aim to determine the applicable regime. Question 6 asks whether while the object is in the airspace of another State, national and international air law is applicable to the object or not.<sup>17</sup> Because of the sovereignty of each State under international air law, an object cannot fly through the airspace of another State without permission. Questions 7 and 8 deal with precedents, international customary law, and national and/ or international legal norms especially when aerospace objects make passage during take-off and/ or re-entry into the Earth's

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13 United Nations Office for Outer Space Affairs, Committee on the Peaceful Uses of Outer Space: Membership Evolution, available at: <http://www.unoosa.org/oosa/en/ourwork/copuos/members/evolution.html> (last accessed 2 December 2021).

14 Gorove, *supra* note 10.

15 UN Doc. A/AC.105/787, annex II (2002) (hereinafter, "Annex II"); UN Doc. A/AC.105/635/Add.7 (2003) (hereinafter, "Add.7").

16 UN Doc. A/AC.105/635 (1996).

17 *Ibid.*

atmosphere.<sup>18</sup> Question 9 asks whether the Registration Convention is applicable to aerospace objects or not.<sup>19</sup> The last question asks differences between the legal regimes of airspace and outer space.<sup>20</sup>

### 3. Definition of “aerospace object”

Among all questions, it is necessary to examine Question 1 first because the definition of “aerospace object” is the most basic and essential component to discuss further issues.

Firstly, 19 out of 44 member States agreed on the following definition of the working group without any change: “an object which is capable both of travelling through outer space and of using its aerodynamic properties to remain in airspace for a certain period of time.”<sup>21</sup> Before looking at the definition of the working group, 4 member States voiced their concerns about using the term “aerospace object” with several reasons. Germany preferred to use the technical term “space transportation system.”<sup>22</sup> Greece and Morocco argued that “space craft” or “space vehicle” are more appropriate to eliminate any misunderstanding because the term “aerospace object” was not comprehensively defined.<sup>23</sup> With the same reasons, the Netherlands also addressed that the term “aerospace object” needs to be distinguished from other objects such as aircraft, satellites, rockets, space shuttles, space debris, and meteorites.<sup>24</sup> Indeed, scholars use “aerospace plane,” “space plane,” “aerospace vehicle,” and so on.<sup>25</sup> Specifically, one scholar cited the 1965 NASA dictionary to define an “aerospace vehicle” as “(a) vehicle capable of flight within and outside the sensible atmosphere.”<sup>26</sup> However, with the

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18 Add.7, *supra* note 15.

19 *supra* note 16.

20 *supra* note 15.

21 *Ibid.*

22 See Germany’s reply to Question 1 in the Questionnaire on Possible Legal Issues with Regard to Aerospace Objects (hereinafter “Questionnaire”), *supra* note 16.

23 See Greece and Morocco’s reply to Question 1 in the Questionnaire UN Doc. A/AC.105/849 (2005).

24 See the Netherlands’ reply to Question 1 in the Questionnaire UN Doc. A/AC.105/635/Add.8 (2003).

25 See on these terms *e.g.* T.L. Masson-Zwaan, *The Aerospace Plane: An Object at the Cross-Roads Between Air and Space Law*; in T.L. Masson-Zwaan and P.M.J. Mendes de Leon, eds., *Air and Space Law: De Lege Ferenda* (Dordrecht; Boston: Martinus Nijhoff Publishers / Kluwer Academic Publishers, 1992); Stephen Gorove, ‘Legal and Policy Issues of the Aerospace Plane’ (1988) 16 *Journal of Space Law*; George Paul Sloup, ‘The Aerospace Vehicle as a Legal Concept – On Final Approach’ (1983) 8 *Annals of Air & Space Law*; Stephan Hobe, ‘Aerospace Vehicles: Questions of Registration, Liability and Institutions – a European Perspective’ (2004) 29 *Annals of Air & Space Law*; Nandasiri Jasentuliyana, *Perspectives on International Law* (Springer, Netherland, 1995).

26 George, *supra* note 25.

exception of the above 4 member States, all others did not voice any issues about using the term “aerospace object.”

Alternative definitions were presented by 8 member States, and it is important to note that most of these definitions are similar to each other. For example, Argentina and Ecuador stated that “to remain in airspace” should be replaced by “to move through airspace” or “move in airspace.”<sup>27</sup> It is similar to the opinion of Azerbaijan, Peru, Turkey, and El Salvador, who also provided an alternative definition.<sup>28</sup> Also, Morocco, the Republic of Korea, Mexico, and Argentina expressed the view that the words “for a certain period of time” should be clarified or deleted.<sup>29</sup> Amongst these member States’ opinions, there were only two alternative definitions that included “for a certain period of time”, from Turkey and El Salvador.<sup>30</sup> There were not only issues about the exact terms but also another issue raised by 7 member States, namely the definition of the characteristics or purposes of the aerospace objects.<sup>31</sup> They mentioned that it is difficult to determine the characteristics or purposes of aerospace objects from the definition of the working group. Consequently, the Netherlands, Peru, Egypt, and Turkey included the characteristics and/ or purposes in their own definitions.<sup>32</sup>

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27 See Argentina’s reply to Question 1 in the Questionnaire UN Doc. A/AC.105/635/Add.4 (1997); See Ecuador’s reply to Question 1 in the Questionnaire, Add.7, *supra* note 15.

28 See Azerbaijan’s reply to Question 1 in the Questionnaire UN Doc. A/AC.105/635/Add.17 (2009); See Peru’s reply to Question 1 in the Questionnaire UN Doc. A/AC.105/635/Add.9 (2003) (hereinafter, “Add.9”); See Turkey’s reply to Question 1 in the Questionnaire UN Doc. A/AC.105/635/Add.11 (2005) (hereinafter, “Add.11”); See El Salvador’s reply to Question 1 in the Questionnaire, Add.7, *supra* note 15.

29 See Morocco’s reply to Question 1 in the Questionnaire, *supra* note 22; See Republic of Korea’s reply to Question 1 in the Questionnaire UN Doc. A/AC.105/635/Add.1 (1996) (hereinafter, “Add.1”); See Mexico’s reply to Question 1 in the Questionnaire, Add.7, *supra* note 15; See Argentina’s reply to Question 1 in the Questionnaire, *supra* note 26.

30 See Turkey’s reply to Question 1 in the Questionnaire, Add.11, *supra* note 27; See El Salvador’s reply to Question 1 in the Questionnaire, Add.7, *supra* note 15.

31 See Belarus’ reply to Question 1 in the Questionnaire UN Doc. A/AC.105/635/Add.16 (2008); See Algeria and Czech Republic’s reply to Question 1 in the Questionnaire, Add.7, *supra* note 15; See Morocco’s reply to Question 1 in the Questionnaire UN Doc. A/AC.105/635/Add.6 (2002); See Greece’s reply to Question 1 in the Questionnaire UN Doc. A/AC.105/635/Add.3 (1996) (hereinafter, “Add.3”); See South Africa’s reply to Question 1 in the Questionnaire, Add.7, *supra* note 15; See Rwanda’s reply to Question 1 in the Questionnaire, Add.11, *supra* note 27.

32 See the Netherlands’ reply to Question 1 in the Questionnaire, *supra* note 23; See Peru’s reply to Question 1 in the Questionnaire, Add.9, *supra* note 27; See Egypt’s reply to Question 1 in the Questionnaire UN Doc. A/AC.105/635/Add.15 (2007); See Turkey’s reply to Question 1 in the Questionnaire, Add.11, *supra* note 27.

Even though there is no unified definition of “aerospace object,” we can find common opinions and issues in these working papers. Based the opinions of some member States, I believe if the working group consults with the Scientific and Technical Subcommittee of the UNCOPUOS,<sup>33</sup> “aerospace object” or another word for the object can have a unique and fully understandable definition in the near future.

#### 4. Existence of Legal Regimes for “aerospace objects”

Other than the definition of “aerospace object”, there are nine other questions. This Chapter will specifically analyze the question about the existence of precedents and/ or international customary law governing “aerospace objects” and the existence of national and/ or international legal norms on “space objects” with respect to the passage after re-entry into the Earth’s atmosphere.<sup>34</sup> The main reason I chose these two questions is that the crucial policy issues will be able to define what legal regime including national and/ or international legal norms should be applied to aerospace objects.<sup>35</sup> Also, the working papers at the intergovernmental level are the most optimal method to confirm the member States’ practice as *opinio juris*. Because there is no article in space treaties about aerospace objects, the position of customary international law and soft laws are extremely significant to define the legal regime of aerospace objects. Moreover, only few member States are interested in the establishment of a single or unified new regime for aerospace objects.<sup>36</sup> In order for a customary international law to be formulated, the existence of extensive and virtually uniform State practices with *opinio juris* must be established.<sup>37</sup> Even though the existence of State practices is for the short term, it does not mean that a new customary international law cannot be formulated.<sup>38</sup> Thus, firstly, I will look at the

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33 See Turkey’s reply to Question 1 in the Questionnaire, Add.7, *supra* note 15.

34 *Ibid.*

35 Stephen Grove, ‘Legal and Policy Issues of the Aerospace Plane’ (1988) 16 Journal of Space Law.

36 Stephan, *supra* note 24; See Czech Republic, Germany, and Mexico’s reply to Question 3 in the Questionnaire, *supra* note 16; See Russian Federation’s reply to Question 3 in the Questionnaire, Add.1, *supra* note 28; See Italy’s reply to Question 3 in the Questionnaire UN Doc. A/AC.105/635/Add.2 (1996); See Turkey’s reply to Question 3 in the Questionnaire, Add.3, *supra* note 30; See India’s reply to Question 3 in the Questionnaire, *supra* note 26; See Algeria and South Africa’s reply to Question 3 in the Questionnaire, Add.7, *supra* note 15; See Libyan Arab Jamahiriya’s reply to Question 3 in the Questionnaire UN Doc. A/AC.105/635/Add.12 (2005).

37 *North Sea Continental Shelf*, (West Germany v. Denmark), (Judgment), 1969 ICJ Reports, (20 February); *Fisheries Jurisdiction*, (United Kingdom v. Iceland), (Separate Opinion of Judge Castro) 1974 ICJ; Brownlie, I., *Principles of public international law* (7<sup>th</sup> edn, Oxford University Press, Oxford 2008).

38 *North Sea Continental Shelf*, *supra* note 37.

question of the existence of precedents and/ or international customary law of “aerospace objects” with respect to passage after re-entry into the Earth’s atmosphere to consider whether new customary international law is in development or not. If there is no consensus among the member States’ opinions and it is not possible to find any precedents and/ or international customary law of “aerospace objects”, the question of existence of national and/ or international legal norms of “space object” can instead be helpful to understand and develop a future legal regime for an “aerospace object.”

#### **4.1. Question about Existence of Precedents and International Customary Law**

Originally, Question 7 in the working paper, which states that “Are there precedents with respect to the passage of aerospace objects during take-off and/ or re-entry into the Earth’s atmosphere and does international customary law exist with respect to such passage?” dealt with this issue.<sup>39</sup> As mentioned previously, the working group amended the text from “after re-entry into the Earth’s atmosphere” to “during take-off and/ or re-entry into the Earth’s atmosphere” in 2002.<sup>40</sup> But including the moment of take-off, I understand that this question asks both whether there are precedents or not and whether there is international customary law or not. Thus, I summarized the responses into 9 categories: either existing precedents or not and either existing international customary law or not, no comment of existing precedent and either existing international customary law or not, either existing precedent or not and no comment of existing international customary law, and no comment for both questions. Of course, no State has mentioned that there is an international customary law without precedent because of the process to establish international customary law.

Overwhelmingly, with the exception of 6 member States, all States responded that there is no international customary law about the passage of aerospace objects during take-off and/ or re-entry into the Earth’s atmosphere.<sup>41</sup> This seems to be because aerospace objects have been created and developed recently; therefore, it is too early to say there is evidence of accepted general practice.<sup>42</sup> However, some scholars argue that if an object’s primary function and/ or purpose are to operate as space objects, international customary law has been accomplished for passage to and from outer space.<sup>43</sup>

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39 Add.7, *supra* note 15.

40 Annex II, *supra* note 15; Add.7, *supra* note 15.

41 Six member States are Russian Federation, Greece, Kazakhstan, Slovakia, Benin, and Portugal.

42 See Chile’s reply to Question 7 in the Questionnaire UN Doc. A/AC.105/635/Add.10 (2004).

43 Stephen Gorove, ‘Aerospace Object – Legal and Policy Issues for Air and Space Law’ (1997) 25 *Journal of Space Law*.



On the other hand, member States were evenly divided as to whether there were precedents or not, which is quite different from the result of whether there is international customary law. Because according to the member States, even if there is a case related to aerospace objects, the case could either be a precedent or not. It means that any case can be treated differently by each State, especially with respect to aerospace objects, because there is no harmonized definition yet; this leads to more confusion for the member States whether a case should be considered to be about an aerospace object or not. For example, some States noted COSMOS-954, which fell on Canadian territory, and Skylab, which fell on Australian territory, or the re-entry of Apollo 13/ SNAP 27 into the atmosphere over the South Pacific and so on, whereas for others, it was vague whether those re-entry objects could be included in the “aerospace objects’ cases”.<sup>44</sup>

#### **4.2. Question about Existence of National and/ or International Legal Norms**

Similar to Question 7, this question was also amended with “during take-off and/ or re-entry into the Earth’s atmosphere” in 2002.<sup>45</sup> Explicitly, Question 8 in the working paper is “Are there any national and/ or international legal norms with respect to the passage of space objects during take-off and/ or re-entry into the Earth’s atmosphere?”.<sup>46</sup> I also divided the responses to this question into 8 categories, for example, existing national law and international legal norms, existing national law but no international legal norms, existing neither national law nor international legal norms, and so on. Interestingly, no member States mentioned national air law and national space law separately, though 9 member States answered specifically that international space law is applicable to aerospace objects during take-off and/ or re-entry into the Earth’s atmosphere in the absence of national law.<sup>47</sup> However, no member State stated international air law should be solely applicable.

Lastly, 12 member States answered that there are several national laws that currently apply or should apply to aerospace objects,<sup>48</sup> though most member States acknowledged that they do not have their own applicable national law for aerospace objects during take-off and/ or re-entry into the Earth’s atmosphere.

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44 See Germany and Pakistan’s reply to Question 7 in the Questionnaire, *supra* note 16; See Ecuador and Morocco’s reply to Question 7 in the Questionnaire A/AC.105/635/Add.7 (2003).

45 Annex II, *supra* note 15; Add.7, *supra* note 15.

46 Add.7, *Ibid.*

47 Nine member States are Slovakia, Nigeria, Costa Rica, South Africa, Egypt, Ukraine, Venezuela, Pakistan, and Chile.

48 12 member States are Kazakhstan, Spain, Italy, Benin, Colombia, Turkey, Libyan Arab Jamahiriya, Iraq, Syrian Arab Republic, Germany, Russian Federation, and the Netherlands.

## 5. Conclusions and Way Forward

Undoubtedly, there are and will be more legal issues in addition to the 10 questions in the working paper about aerospace objects when they become operational.<sup>49</sup> However, because of the absence of responses from powerful countries with sophisticated space activities, the meaning of the questionnaire process in the working papers is less valuable. The reason why almost half the member States, including powerful countries such as the US, Japan, and France, have not participated in the questionnaire is that there are still a few issues concerning aerospace objects because, for example, the US Space Shuttle takes off from and returns to US territory or the high seas and does not pass through third States.<sup>50</sup> Moreover, Space Shuttle is out of service since 2011. Nevertheless, in the near future, there are expected to be an increasing number of cases where aerospace objects fly over third States during take-off and return.<sup>51</sup> Therefore, this paper carefully analyzed the questionnaire, especially Questions 7 and 8, in the working paper to understand the member States' current views and how the development of future legal norms or international customary law is progressing based on their responses.

Unexpectedly, each State's opinion is different, and it seems that national or international legal norms including precedents have not been unified for aerospace objects, especially during take-off and/ or re-entry into the Earth's atmosphere. Despite this, there are still several common features in the States' individual opinions such as the definition of aerospace objects or need for cooperation with the Scientific and Technical Subcommittee. Furthermore, it is easy to find more recent similar working papers about aerospace objects, such as the working paper on "Questions on suborbital flights for scientific missions and/ or for human transportation." This paper was started in 2012 and the responses from member States are still coming in.<sup>52</sup> It means that even though member States no longer discuss the questionnaire of aerospace objects, they are aware of the issues related to these objects, including suborbital flights, and the process to establish the legal regime for the aerospace objects is not over with the questionnaire. The harmonization of States' views and development of legal documents on the objects will certainly continue.<sup>53</sup>

Therefore, even though there is no consensus among the member States about the current applicable law to aerospace objects, the questionnaire in the working papers can be one way to formulate international customary law or applicable legal norms in the near future.

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49 Stephen, *supra* note 24.

50 Gorove, *supra* note 10.

51 *Ibid.*

52 The latest response from the member State was 13 Feb. 2018, See at UN Doc. A/AC.105/1039/Add.11 (2018).

53 Vladimir Kopal, 'Some Consideration on the Legal Status of Aerospace Systems' (1994) 22 *Journal of Space Law*.

COULD THE WORKING PAPER LEAD TO A UNIFIED LEGAL REGIME? TO RESOLVE LEGAL CHALLENGES

**Appendix**

Question 1: “Can an aerospace object be defined as an object which is capable both of travelling through outer space and of using its aerodynamic properties to remain in airspace for a certain period of time?”

Agree	Comments & Recommendations	Alternative definitions
Italy, Chile, Kazakhstan, India, Iraq, Mexico, Pakistan, Philippines, Fiji, Yemen, South Africa, Ukraine, Turkey, Libyan Arab Jamahiriya, Spain, Czech Republic, Lebanon, Syrian Arab Republic, Colombia  (=19 States)	"for a certain period of time" should be clarified (Morocco, Republic of Korea, Mexico) / "for a certain period of time" should be deleted (Argentina)	"A space object is an object capable of remaining and travelling in both airspace and outer space." (Azerbaijan)
	reflects only one characteristic (Belarus) / cannot be defined as one capable of using (Algeria) / should cover different types of aerospace vehicles (Czech Republic) / should be provided on the characteristics of the aerospace objects (Morocco)	"a human-made object that can proceed to any altitude and that is subject to human control at any altitude as regards its altitude, direction and speed." (The Netherlands)
	add "for primarily exclusively space purposes" in the end (Greece) / fails to determine the purposes (Rwanda, South Africa)	"an object capable of travelling in outer space and moving in airspace in continuous flight during the launch phase or the return to Earth" (Peru)
	"to remain in airspace" should be replaced by "to move through airspace" (Argentina) / "remain in airspace for a certain period of time" to "move in airspace" (Ecuador)	"an aerospace object can be defined as a man-made space object capable both of travelling through outer space and of using its aerodynamic properties to travel through airspace for a single purpose" (Egypt)
	should include the words "or staying in" after the words "travelling through..." (Turkey)	"an aerospace object that is capable of "travelling through" outer space and using its aerodynamic properties while travelling through airspace" (Finland)
	should be established in consultation with the Scientific and Technical Subcommittee of the COPUOS (Ukraine, Germany, Turkey)	"An 'aerospace object' is an object that is capable both of travelling through outer space and of using its aerodynamic properties to move in airspace for a certain period of time for exclusively space purposes." (Turkey)
	need to be more precise (Portugal, Slovakia, Mexico, Venezuela)	"An aerospace object is an object capable of flying either in outer space or in airspace and it is also capable of carrying out activities in both environments." (Brazil)
	prefers to use the technical term "space transportation system" rather than "aerospace object" (Germany) / the term "aerospace object" may create confusion (Morocco) / "spacecraft" or "space vehicle" are more appropriate (Greece and Morocco) / needs distinguishes with other objects (The Netherlands, Morocco)	"An aerospace vehicle is any object that, with self-propulsion and steering systems, is capable of travelling to outer space and using its aerodynamic properties to remain in airspace for a certain period of time and in some cases re-entering the Earth's atmosphere." (El Salvador)
	too restricted (Madagascar)	

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- Question 7: “Are there precedents with respect to the passage of aerospace objects during take-off and/ or re-entry into the Earth’s atmosphere and does international customary law exist with respect to such passage?”

	Precedents O	Precedent X	N/A
int'l customary law O	Russian Federation, Greece, Kazakstan, Slovaki, Brenin = 5 States		Portugal = 1 States
int'l customary law X	Belarus, Egypt, Nigeria, Finland, Rwanda, Turkey & Czech Republic & Chile, South Africa, The Netherlands, Fiji, Venezuela, Mexico, Morocco = 14 States	Iraq, Pakistan, Philippines, Germany, Republic of Korea, Ukraine, Costa Rica, Argentina, India, Syrian Arab Republic, Azerbaijan, Brazil, Madagascar, Yemen = 14 States	Kuwait, Libyan Arab Jamahiriya, Spain = 3 States
N/A	Algeria, Ecuador, Colombia = 3 States	El Salvador, Peru = 2 States	Lebanon, Italy = 2 States

- Question 8: “Are there any national and/ or international legal norms with respect to the passage of space objects during take-off and/ or re-entry into the Earth’s atmosphere?”

National law & int'l legal norms	Kazakstan (the Act of the Republic of Kazakstan on Space Activity), Spain, Italy, Benin, Colombia (Commercial Code), Turkey (the Turkish Civil Aviation Code), Libyan Arab Jamahiriya, Iraq, Syrian Arab Republic = 9 States
National law / No int'l legal norms	Germany (Art. 1 of the Federal Aviation Code), Russian Federation (Art. 19 of the Russian Federation Act on Space Activity), The Netherlands (the Commercial Space Act of 1998 of the US & the Australian Space Activities Act of 1998) = 3 States
NO national & int'l legal norms	Peru, Republic of Korea, Philippines, Greece, India, Azerbaijan, Belarus, Lebanon, Ecuador, Fiji, Kuwait, Finland, Rwanda = 13 States
No national / int'l air&space law	Czech Republic, Mexico, Morocco = 3 States
NO national / int'l space law	Slovaki, Nigeria, Costa Rica, South Africa, Egypt, Ukrain, Venezuela, Pakistan, Chile = 9 States
NO national / int'l air law	
No national law	Algeria, El Salvador, Brazil, Madagascar, Yemen, Portugal = 6 States
N/A	Argentina = 1 States