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The Legal Framework of Drones in Turkey and in the European Union

Serap Zuvin *
Onur Can Ucarer **

Introduction

While technologic devices became more accessible to the public with high production capacities and lowered costs for consumers, the usage of drones has increased substantially in the last decade. Unmanned aerial vehicles (“UAV”), also known as drones in the public eye, are aircraft with no pilot on board and are controlled remotely. Although drone technology has been around for a considerable amount of time, especially with usage for the purposes of military and government activities, small versions are increasingly being employed in everyday life, and the UAV industry has already grown to be a multibillion-dollar sector. Drones have seen a major growth in popularity in recent years, and more is on the way. It is estimated that the global drone market size will grow to 42.8 billion USD by 2025, almost double of the 22.5 billion in 2020¹.

As with many good things, the rise of such an innovative technology also brings with it a slew of risk and liability issues. Drones used for unlawful purposes such as drug trafficking or the trafficking of other illegal commodities, or the flight of drones in restricted areas, as we saw in 2018 London Gatwick Airport drone incident, can be named as some of the areas that require regulations to clarify the legal implications². With these questions in mind, the legal implications of the usage of drones and the potential liability of the drone operators have become important topics that have been discussed, and to some extent, regulated by countries around the world. This article is going to focus on the different approaches of the Civil Aviation Directorate of the Republic of Turkey (“CAD”) and the European Aviation and Space Agency (“EASA”) regarding the usage of drones within their jurisdictions.

The Unmanned Aerial Vehicle Instruction in Turkey

Turkey is among the countries fascinated by the drone sensation. Although in terms of domestic production Turkey is mostly active in military drone sector, the drone market is growing rapidly especially for hobby and recreational drones too. As such, the regulation of this area of aviation is quite up-to-date and Turkey has been one of the first countries in the region to issue the rules concerning the operation of drones.

After the rising use of drones by public, Turkish Parliament enacted an amendment to the Turkish Civil Aviation Law³ on 10 November 2016, in order to encompass such law to the drones as well. Such amendment authorized the CAD to create a registry for drones and set the fines that will be issued against the persons who are in violation of the rules that are issued by the CAD.

Alongside this amendment, the CAD has published the Unmanned Aerial Vehicle Instruction (“Instruction”)⁴.

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The Instruction regulates the classification of drones, registration of drones with a registry as maintained by the CAD, and certification and maintenance requirements for certain drone classes. The Instruction further clarifies the issues covering the liability of drone operators and insurance requirements, pilot license requirements, flight conditions and permits and restricted zones for flight.

The scope of the Instruction covers the drones that weigh more than 500 grams and are non-governmental. It sets forth four classes for the drones based on their weight: drones that are between 500-grams and 4 kilograms are classified as IHA0, while 4 kilograms to 25 kilograms are classified as IHA1, 25 kilograms to 150 kilograms are classified as IHA2 and the ones that weigh more than 150 kilograms are classified as IHA3. With such classification, the Instruction excludes the drones in IHA0 and IHA1 classes from the requirement of obtaining a special flight permit before their flight. Yet, for flying the drones in IHA1 class, a safety and compliance declaration has to be filed with the CAD.

The drones that are in IHA2 and IHA3 classes (above 25 kilograms) are required to obtain a special flight permit, which is valid for a term of three years. The drones in IHA3 class is further required to receive an airworthiness certificate. Furthermore, the Instruction holds the drone pilots responsible for the maintenance and repair of the drones in accordance with the guidelines published by the manufacturer of the respective drone.

Furthermore, the Instruction designates the drone operators and/or owners as liable for the damages that the drones may cause to third parties. The operators of drones that are above 25 kilograms and the drones that are used in commercial activities (regardless of their weight) are further required to obtain a mandatory third-party liability insurance for the Turkish and foreign civil aircraft that fly over the Turkish airspace.

While the drones in IHA2 and IHA3 classes are required to go through the registration procedure of manned aerial vehicles including the designation of a registration mark, the owners of drones in IHA0 and IHA1 classes are only required to register their drones to the online registry maintained by the CAD via their website. All the drones within the scope of the Instruction that are produced in Turkey, are required to be registered by the manufacturer on the same day of its production. In case the drone is imported by a company for resale within Turkey, the manager of the importing company is required to register the drone on the same date of its arrival to Turkey as well. Finally, in case a person brings a drone from outside of Turkey personally, he/she is required to register such drone to the registry within 3 days of its arrival. The online registry of the CAD includes information on the specifications of the drone and its owner/operator and pilot.

As of the end of December 2020, the number of registered drones in the Turkish registry was 44,933 and the number of registered pilots was 215,858. This data shows us that there is an exponential growth in the interest to the drones, since it demonstrates a 9-fold increase in the number of registered drones and 20-fold increase in the number of registered drone pilots within only 4 years.

The pilots of drones in IHA0 and IHA1 classes do not require obtaining any license. They are only required to include their personal information in the online registry while registering their drones. However, the pilots of drones in IHA0 class need to be at least 12 years old and the pilots of drones in IHA1 class need to be at least 15 years old. On the other hand, the pilots of drones in IHA2 and IHA3 classes are required to obtain a pilot license by the CAD after achieving the necessary courses.

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With regard to the air space in which drones can be operated, the Instruction makes a distinction between two areas: green and red zones. The designation of the air space into these two zones can be found in an online map published in the website of CAD. Flight permit is automatically granted for flying drones in IHA0 and IHA1 classes within the green zones for sportive and amateur purposes for up to 400 feet. A flight permit can be obtained from the CAD for flying within red zones, ten work days prior to the planned flight date. Obtaining a flight permit is required for all flights of the drones in IHA2 and IHA3 classes. The operators of these drones must request a permit ten work days prior to the flight.

Finally, in case of non-compliance of the aforementioned rules, the Instruction refers to the penal provisions of the Turkish Civil Aviation Law: drone flights without obtaining a flight permit and/or an authorization from the CAD may result with an imprisonment up to 3 years and/or being charged with an administrative pecuniary penalty of TL 1,731 to TL 34,813. (€170 - €3,400).

Drone Regulations in the EU

Until June 2019, each of the Member States of the EU had their own piece of legislation in the field of drones, without a harmonizing regulation that covered all jurisdictions within the Union. Absence of a harmonized regulation had been creating a lot of problems for drone operators, as they were subject to different registration and classification rules in each Member State.

In order to facilitate a more open market and a clear and foreseeable regulation to ensure the smooth growth of the drone sector, the European Union adopted Regulations 2019/947 and 2019/945 in May 2019⁶. These regulations took effect on 31 December 2020, with the provision of a transition period until 2023. The EU legal framework gives Member States certain leeway in regulating issues that are not covered by these regulations. Furthermore, during the transition period and until the EU regulations are fully implemented in 2023, Member States are required to conform their internal legislation on UAV operations with the provisions of the EU regulations. Both legal frameworks must coexist and not contradict with each other until such implementation is complete⁷.

The EU regulations set forth the rules for registration, classification and technical/operational requirements for the drones and their operators and covers all the EU Member States and Liechtenstein, Iceland, Norway and Switzerland, since they are members of European Aviation Safety Agency (“EASA”) as well.

In accordance with the EU Regulations, each drone owner/operator is required to register themselves before commencing any flight activity. However, unless the operation falls under the certified category explained below, no registrations are required for the drones. The registration is carried out by the national aviation authority of the respective EU country where the owner/operator resides.

The EU Regulations do not contain rules regarding liability and insurance and therefore it is up to the Member States to regulate this area.

The EU Regulations set forth three categories that are designated in accordance with the risk level of the operation: the open category, specific category and certified category. The requirements for operation significantly vary in accordance with the category of a drone.

The drone operations are classified as being in the open category if the operation is of low-risk and the drone weighs less than 25 kilograms. Drones in this category

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must be operated within 120 meters from the closest point of the earth and the pilot needs to maintain visual line of sight (VLOS) with the drone at all times. Furthermore, the carriage of dangerous goods and dropping of items is prohibited. The minimum age for pilots in this category is defined as 16, however Member States can reduce this age to 12 separately for their own jurisdiction.

Drones in the open category are further divided into three subcategories: A1, A2 and A3. Drones under 500 grams are classified as A1, between 500 grams and 2 kilograms are classified as A2 and between 2 kilograms and 25 kilograms as A3⁹. General operational restriction in subcategory A1 is that the operators cannot fly their drones over assemblies of people and uninvolved people. The pilot needs to read the user's manual before flights, and he/she needs to complete an online training and pass an online theoretical exam defined by the national competent authority. For the operations in A2 subcategory, the pilot is further required to keep horizontal distance of 50 meters from uninvolved people. As for the A3 subcategory, drones must be operated outside of urban areas, with a 150-meter distance from residential, commercial, industrial or recreational areas.

The drone operations that are riskier than the operations in the foregoing open category will mostly fall under the specific category. In order to fly a drone under the specific category, the operators are required to obtain an operational permit from the national aviation authority where they are registered. A lot of the operations in specific category are beyond visual line of sight.

Finally, operations that contain the highest level of risk are described to be within the certified category. EASA states that future drone operations where the drones carry passengers without a pilot on board, or the operations that carry cargo packages through pre-defined routes (such as Amazon Prime Air deliveries) would fall under the certified category. Therefore, the aircraft that is to be operated in this category will require the certification (such as the certificate of airworthiness and a type certificate) as if it was a manned aircraft.

Conclusion

As the rapid growth of the drone sector is a positive development that can enhance the way we conduct business in our daily lives. It is clear that there is a requirement for the States to regulate this area in order to minimize the risks surrounding the drone operations which would make sure that people on ground are safe. However, such regulations must also be smart and efficient, so that they do not halt down the technologic progress and innovations that these devices can bring into peoples' lives.

The rules to operate drones around the world are deeply varied, and this was one of the main concerns of the actors in the drone sector. The new EU Regulations have taken a significant step in harmonizing the rules of drone operations within the Member States, and it can be seen that large drone businesses such as the DJI have welcomed these rules, since they enable all the residents of Member States to learn a single set of rules, instead of one for each country they would like to fly their drones in¹⁰.

Therefore, nowadays, the operation of drones is no longer an unregulated area, unlike half a decade ago. However, an important issue now is the lack of harmonization of the rules in different countries around the world. Complex and varying rules may hamper the rapid growth of this industry, since it confuses the users and restricts access in some regions. A strong and cooperative coordination between the countries in the same regions is vital to ensure that technologic innovation is

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embraced while also making sure that the security risks are minimalized.

¹ <https://droneii.com/the-drone-market-size-2020-2025-5-key-takeaways>

² <https://www.bbc.com/news/uk-england-sussex-46741687>

³ Law no. 2920 published in the Official Gazette dated 19 October 1983 and numbered 18196.

⁴ SHT-İHA published by the TCAD on 22 February 2016. Accessible via: http://web.shgm.gov.tr/documents/sivilhavacilik/files/mevzuat/sektorel/talimatlar/2020/SHT-IHA_Rev-04.pdf

⁵ <https://www.sabah.com.tr/teknokulis/haberler/2020/12/07/turkiye-ihalarla-ucusa-gecti>

⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R0947>

⁷ https://www.internationallawoffice.com/Newsletters/Aviation/Spain/Augusta-Abogados/New-UAS-regulation-set-to-be-approvedutm_source=ILO+Newsletter&utm_medium=email&utm_content=Newsletter+2021-05-26&utm_campaign=Aviation+Newsletter

⁸ <https://www.easa.europa.eu/domains/civil-drones-rpas/open-category-civil-drones>

⁹ According to Article 22 of the Regulation, the upper limit for A2 will be 4 kilograms after 1 January 2023.

¹⁰ <https://www.dji.com/newsroom/news/embrace-new-eu-drone-regulation>

Single Economic Unit or Separate Legal Entities? Legal Issues Arising from EU State Aid Measures Granted to Airline Groups of Companies in the Context of the Covid-19 Pandemic¹

Sidney Mathoux *

Abstract

The recent judgement of May 19th 2021, case T-643/20 (Ryanair v Commission), issued by the General Court of the European Union, offers the opportunity to deepen some important matters related to the European aviation sector and, more generally, to European corporate law; in particular, a brief overview of such judgement allows to analyze the discipline of EU State aid granted in favor of airline group of companies, which has recently raised some important legal issues about the identification of the real beneficiary of a State aid measure in case of a group of companies, with the consequent need to avoid a possible cumulation of State aid's granting within the same group.

In the aforementioned judgement, the EU General Court, annulling a decision of the European Commission which authorized the granting of a State aid in favor of KLM airline, has assessed the principle that when a State aid has already been granted to another subsidiary (i.e. Air France) of the same group (in such case, the Air France - KLM group), the Commission must, during its compatibility examination, accurately evaluate the links between the various subsidiaries of the group in order to determine whether it forms - in fact - one economic unit, considered as a single beneficiary, especially when there is reason to suspect that cumulation of State aid within the same group would have adverse effects on EU competition.

Therefore, this paper aims to briefly describe such recent judgement of EU General Court and to offer a quick overview of the most relevant legal topics related to the identification of the real beneficiary within a group of companies with regard to the granting of a State aid measure, with regard to the criteria followed by doctrine and jurisprudence.

Factual background - the granting of EU State aid measures to Air France and KLM

During the toughest months of the Covid-19 outbreak, when the freedom of movement was severely restricted or even prohibited, airlines were among the most affected companies since the abrupt collapse of passengers² has had (and is still having) devastating financial effects on such companies. In this context, the European Commission, on several occasions, has attempted to mitigate these adverse impacts with the approval of some aid measures; in particular, on May 4th 2020, the EU Commission approved, under EU State aid rules, a EUR 7 billion French aid measure consisting of a State guarantee on loans and a shareholder loan to Air France in order to provide urgent liquidity to the airline in the context of the coronavirus outbreak³.

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Similarly, the Commission then approved, on July 13th 2020, a distinct EUR 3.4 billion Dutch aid to KLM, in the form of a guarantee and a state loan, with the same aim to provide the airline with the necessary liquidity to deal with the adverse economic effects of the COVID-19 pandemic.

Both aid measures were approved in compliance with the “Temporary Framework for State aid measures to support the economy in the current COVID-19 outbreak” (whose main characteristics will be briefly described in a following paragraph).

Many other European airlines have applied to the EU Commission for the granting of such aid measures; however, these two specific aforementioned aids were challenged by Ryanair, on the basis of a possible violation of EU competition rules of law.

Judgement of 19.5.2021 - Case T-643/20 - Ryanair v Commission - EU General Court

On October 23rd 2020, Ryanair brought before the General Court of the European Union an action for the annulment against the above-described Commission Decision on State Aid in favor of KLM (better identified as n° C 2020 - 4871 of July 13th 2020).

In particular, Ryanair claimed a distortion of EU competition law principles, since, according to its point of view, the Commission, in assuming such decision, did not take into account the impact of the aid previously granted to Air France, even though, like KLM, the Dutch airline is part of the single Air France - KLM group. In Ryanair’s view, the first aid granted to Air France on May 4th 2020 was in fact granted for the benefit of the entire Air France - KLM group, while, in its decision, the Commission merely stated that the “*Air France subsidiary of the Air France - KLM group is not the beneficiary of the aid measure*”. The Commission, however, according to Ryanair’s claim, failed to examine if the aid previously granted to the rest of the group might have benefited KLM, whose accounts are supposedly consolidated with those of Air France.

Ryanair, in challenging the decision, invoked several other pleas in law for its annulment and in particular: 1) the infringement of the principles of non-discrimination, free provision of services and freedom of establishment; 2) the misapplication of Article 107, paragraph 3, point b of the TFEU; 3) the lack of formal investigation procedure by the Commission; 4) the breach of the duty to state reasons.

The General Court has shared the arguments presented by Ryanair and, consequently, has annulled the Commission Decision; however, the judgement has not decided on the merits and has not provided a final resolution of the Air France - KLM case, but has merely noted the “*inadequate and fragmentary nature of the information available to the Court*”, thus stating that the Commission Decision in favor of KLM airline was inadequate and unfounded under several and different profiles.

In particular, in rendering its decision, the EU General Court has noted that KLM and Air France belong to the same group and that, in fact, Air France had benefited from pandemic-related aid approved by the Commission a few months earlier. According to the General Court, the Commission did not explain in its decision why the aid in favor of the French company had no impact on the compatibility of the aid in favor of KLM. Furthermore, the Commission’s decision did not include any information concerning Air France and KLM shareholders, nor any information on the functional, economic and organic links between the subsidiaries and the holding company. In this regard, the Commission Decision merely stated that the Dutch authorities had con-

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firmed that the financing granted to KLM would not be used by Air France.

However, according to the EU General Court decision, when an aid has already been granted to another subsidiary of the same group, the Commission must, during its compatibility examination, evaluate the links between the various subsidiaries of the group to determine whether it forms one economic unit, considered as a single beneficiary, especially when there is reason to suspect that cumulation of State aid within the same group would have adverse effects on competition. Failing such examination, the Commission Decision has been annulled and suspended, pending the adoption of a new decision by the European Commission under Article 108 TFEU.

Following the EU General Court's judgement, on July 19th 2021, the European Commission has adopted the requested new decision, thus reapproving the EUR 3.4 billion Dutch aid measure consisting of a State guarantee on loans and a subordinated State loan to KLM, in order to provide urgent liquidity to the airline. Although it is not possible, as of now, to analyze in more detail the Commission's decision, as long as confidentiality issues have not been resolved and the related content is not available for publishing, it is already possible to summarize the following points: in rendering its second decision, EU Commission has provided further information on the functioning of the Air France-KLM group and on the contractual arrangements in place regulating the granting of aid by the Netherlands and France. This has been possible thanks to a more detailed assessment of the Dutch and French aid measures and of their effective beneficiaries. According to such elements, the Commission has concluded that the State aid measure is necessary, appropriate and proportionate to remedy a serious disturbance in the economy of a Member State (i.e. Netherlands), in line with Article 107(3)(b) TFEU and the conditions set out in the Temporary Framework.

The general EU legal framework concerning State aid

In order to fully understand all the issues covered by the General Court judgement, it is worth highlighting that the granting of State aid represents one of the most peculiar aspects of EU Competition Law.

The basic assumption related to such topic is that a company that receives government support gains an advantage over its competitors. Therefore, EU Treaties prohibit State aid unless it is justified by reasons of general economic development. In particular, article 107(1) of the Treaty on the Functioning of the European Union (TFEU) defines a state aid as *“Any aid granted by an EU country, or through State resources in any form, which distorts or threatens to distort competition by favoring certain undertakings or the production of certain goods must, in so far as it affects trade between EU countries, be incompatible with the internal market”*.

In order to fully understand the legal framework of State aid policy, reference must be made to the *‘Commission Notice on the notion of State aid as referred to in Article 107(1) of the Treaty on the Functioning of the European Union’⁴*, which provides that 4 cumulative criteria shall be met for the presence of State aid:

- the support must be granted by the State or through State resources;
- it must favor one or more undertakings – there must be a selective advantage;
- the support must distort or must have the potential to distort competition; and
- it must affect trade between EU countries.

*AVIATION***Temporary Framework for State aid measures during Covid-19 outbreak**

The devastating and ongoing effects of COVID-19 have slightly altered and ‘softened’ such discipline.

In particular, the European Commission, in order to enable Member States to use the full flexibility foreseen under State aid rules to support the economy in the context of the COVID-19 outbreak, has adopted a State aid Temporary Framework⁵ on March 19th 2020, as subsequently amended five times, which is directly based on Article 107(3)(b) of the TFEU. As clarified by the EU Commission, the Temporary Framework complements the ample possibilities for Member States to design measures in line with existing EU State aid rules. In particular, Member States are authorized, under the Temporary Framework, to temporarily render aid measures in favor of national companies which struggle in financial difficulties due to the effects of the Covid-19 outbreak, measures that shall be compatible with EU State aid rules but that can partially derogate to such discipline. The Temporary Framework has then been amended, integrated and extended (as for now, until December 31st, 2021 by its Fifth Amendment issued on January 28th, 2021) five times, taking into account the protracted pandemic crisis.

Nearly all Member States have benefited of such possibility, with particular regard to providing strong financial support to national airlines, among the most affected business activities by the pandemic.

Group of companies - Overview of the Air France - KLM Group

After having clarified such preliminary points, it is now worth highlighting the main legal issues that have been object of the EU General Court’s decision, briefly summarized in the first paragraphs; in particular, a matter of great interest is represented by the identification of the real beneficiary of a State aid measure within the context of a group of companies.

Firstly, a group of companies can be defined as the a legal corporate structure pursuant to which a company sets up another company in which it retains a controlling holding, or when it acquires a controlling holding in another company; at the same time, control can be defined as the power to direct another company’s policies and decisions⁶.

This is the typical structure that multinational enterprises operating in an increasingly globalized world assume; the advantages of setting up a group of companies are multiple and clear: diversification of business risk, delocalization, presence in multiple markets, division of responsibilities and aggregation of multiple and diversified skills. For their dimensions and their impelling necessity of being present across several countries, airline companies are typically organized in the form of group of companies and no exception is made by Air France - KLM Group, group arising from the merger in 2004 between the French airline Air France and the Dutch airline KLM⁷, which, at that time, represented two among the biggest players in the European aviation system and the most important airlines, respectively, in France and Netherlands. As of now, Air France - KLM is the largest European airline group: according to the data provided by the Group, Air France and KLM carry more than 77 million passengers per year and operate 548 aircraft, enabling them to fly to 318 destinations in 118 countries.

Despite the several advantages that the group organization may offer to the big corporations, such structure may, at the same time, pose some relevant issues with regard to the granting of State aid under European Law: hypothetically, different legal entities, only formally belonging to one single group of companies but referable to one economic unit, may obtain several and different State aid from different EU Member States, thus duplicating the aid and altering the market competition.

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With regard to such issue, paragraph 11 of the Commission Notice on the notion of State aid as referred to in Article 107(1) TFEU, has stated that *“Several separate legal entities may be considered to form one economic unit for the purposes of the application of State aid rules. That economic unit is then considered to be the relevant undertaking. In this respect, the Court of Justice considers the existence of a controlling share and other functional, economic and organic links to be relevant”*.

It is therefore of primary importance to identify if, behind a group of companies, there are - indeed - separate legal entities or the group structure is, in fact, a corporate veil in order to ‘hide’ one economic unit. Such assessment is made through several criteria and links, which have constituted the core object of the EU General Court judgement, in response to the Ryanair request for annulment of the Commission Decision in favor of KLM.

The identification of the Real Beneficiary for the purposes of the application of State Aid Rules - mentions to Enterprise Liability Theory and Parental Liability Theory

As described above, the judgement of EU General Court has stated that legal entities may be considered to form one economic unit for the purposes of the application of State aid rules; with particular regard to such matter, the question as to whether an economic unit exists arises primarily where the beneficiary of the aid needs to be identified behind a group of companies⁸. In order to perform such analysis, it is necessary to take into consideration the existence of a controlling share and the existence of other functional, economic and organic links between such legal entities.

In this regard, the EU General Court’s judgement has clearly listed such links and criteria, by summarizing the existing legal framework. In doing so, the EU General Court affirms that EU case-law has recognized that, where legally distinct natural or legal persons constitute an economic unit, they should be treated as a single undertaking for the purposes of EU competition law.

As for the criteria and the functional, economic and organic links, necessary to assess the existence of a single economic unit for the application of State aid rules, the most relevant ones identified by the EU General Court in its recent judgement are the following:

- the participation of the concerned company to a group of companies which is directly or indirectly controlled by one of those companies, together with the pursuit of identical or parallel economic activities, and the companies concerned having no economic autonomy: the EU General Court, in order to assess such point, has made reference to judgement “Pollmeier Malchow v Commission”, T-137/02, EU:T:2004:304, paragraphs 68 to 70;
- the formation of a single group controlled by one entity, despite the constitution of new companies each having a separate legal personality: reference is made by EU General Court to paragraph 11 of Judgement Intermills v Commission, 323/82, EU:C:1984:345 which has stated that *“it is clear from the information supplied by the applicants themselves that following the restructuring both SA INTERMILLS and the three manufacturing companies are controlled by the Walloon regional executive and that, following the transfer of the plant to the three newly constituted companies, SA INTERMILLS continues to have an interest in those companies. It must therefore be accepted that, in spite of the fact that the three manufacturing companies each has a legal personality separate from the former SA INTERMILLS, all those undertakings together form a single group, at least as far as the aid granted by the Belgian autori-*



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ties is concerned. The Commission was therefore justified in considering the entire group to be a single 'undertaking' for the purposes of the application of article 92 of the treaty”.

- the possibility, for an entity owning a controlling shareholding in another company, to exercise functions relating to control, direction and financial support in relation to that company, going beyond the simple placing of capital by an investor, and the existence of organic and functional links between them: for the application of such criteria, reference is made to judgment of 16 December 2010, *AceaElectrabel Produzione v Commission*, C-480/09 P, EU:C:2010:787, paragraph 51 which states that “*What may reveal that it is possible to exercise functions relating to control, direction and financial support - going beyond the simple placing of capital by an investor - and illustrate the existence of organic and functional links between an entity owning a controlling shareholding in a company and the controlled company itself, is the fact that members of the management committee and the controlling body of that entity are appointed to the equivalent bodies of the controlled company*”;
- the existence of relevant contractual clauses: the EU General Court, in order to assess such point, refers to judgment of 16 December 2010, *AceaElectrabel Produzione v Commission*, C-480/09 P, EU:C:2010:787, paragraph 57.

Taking into consideration all the aforementioned criteria, the EU General Court has then affirmed that it is up to the Commission, which is the competent body for the granting of State aid, to exercise particular vigilance in examining the links between companies belonging to the same group where there are grounds to fear the effects on competition of an accumulation of State aid within the same group.

With regard to the specific case, the EU General Court has affirmed that Air France and KLM are two companies which are part of the same group, headed by the Air France-KLM holding company; however, the contested Commission’s decision describes the shareholder structure of the Air France-KLM holding company, but does not, by contrast, contain any information concerning the shareholder structure of its two subsidiaries, Air France and KLM. It is therefore impossible for the General Court to formulate accurate conclusions and evaluate the organic links between the Air France - KLM holding company and its subsidiaries Air France and KLM.

Although EU General Court’s decision has not effectively rendered a decision with regard to Air France - KLM case, it represents a relevant decision within the context of EU case law since it has thoroughly analyzed some critical issues related to the structured group of companies.

In fact, these matters can be grouped into the larger field of corporate law problems related to group of companies, which have been object of several debates and analysis by doctrine and jurisprudence.

In particular, the Enterprise Liability Theory (of US derivation) and the Parental Liability Theory (of European derivation but strictly linked to the first one) have allowed judges and scholars to identify possible abuses of the limited liability regime and of the separation of legal entities allowed by the Group of companies’ structure, by redirecting the entire liability to the parent company.

The Enterprise Liability Theory has typically been defined, by US case law, as the situation “*when corporations are not operated as separate entities but rather integrate their resources to achieve a common business purpose, each constituent cor-*

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poration may be held liable for debts incurred in pursuit of that business purpose⁹". In such cases, such corporations are deemed as 'fragments' of a single enterprise¹⁰. In order to identify a common business purpose within a group of companies, US case law has identified four necessary and typical elements: the interrelation of operations; centralized control of labor relations; common management; common ownership or financial control¹¹. In this way, creditors of the parent company and/or subsidiaries can make claims for compensation to any company belonging to the group of companies; it has been affirmed that "where two or more corporations operate a single business, the courts have been unwilling to allow affiliated corporations that are not directly involved to escape liability simply because of the business fragmentation"¹².

The same principles expressed by such theory has been similarly applied in civil law countries, to such an extent that EU doctrine and jurisprudence have introduced the so called 'Parental Liability Theory', which enables, with regard to a plurality of legal entities reunited into one single group, to identify and hold accountable one single-center of decision-making and interests. In such case, the holding company is directly responsible for the activities of the affiliates in case such affiliates have acted merely on behalf of the holding company.

Therefore, the separation of legal personality within a group of companies is not sufficient by itself to exclude parent company; as stated by European case law, "the fact that a subsidiary has separate legal personality is not sufficient to exclude the possibility of its conduct being imputed to the parent company, especially where the subsidiary does not independently decide its own conduct on the market, but carries out, in all material respects, the instructions given to it by the parent company"¹³. Similarly, EU judges have stated that: "The fact that a subsidiary has separate legal personality is not sufficient to exclude the possibility of imputing its conduct to the parent company. Such may be the case in particular where the subsidiary, although having separate legal personality, does not decide independently upon its own conduct on the market, but carries out, in all material respects, the instructions given to it by the parent company"¹⁴.

Conclusion

The recent EU General Court's judgement analyzed by this brief paper shows that, within the context of EU Aviation law and with particular regard to the granting of State aid measures to airline groups of companies, a key aspect is represented by a preliminary and detailed assessment of the various subsidiaries of the relevant group, in order to determine whether such group forms one economic unit, considered as a single beneficiary, thus preventing possible adverse effects on EU competition.

In particular, many criteria have been provided by EU case law as well as by the rules of law of corporate law - such as the US Enterprise Liability Theory and the EU Parental Liability Theory. However, in order to properly apply such criteria, which pose several and complex practical issues, it is of essence to have a proper understanding of the corporate structure of the relevant group and of the ownership structure of the parent company and of its subsidiaries.

The Judgement of the EU General Court sets an important case-law precedent and will very likely lay the foundations for many other Commission and EU Court of Justice decisions in the field of State aid, considering the presence of many complex group of companies and taking into account the financial crisis caused by Covid-19 pandemic, which is causing several companies to demand for State aid measures.

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Furthermore, it is not unlikely to believe that EU legislator will directly deal with this matter in the near future, by introducing new parameters and requirements in order for large group of companies to ask for aid measures, eventually accepting the criteria set out by EU General Court in its decision in order to prevent possible abuses.

¹ The views expressed in this article are purely those of the author, and thus may not in any circumstances be regarded as an official position.

² The most recent data shows, during the months of April and May 2020, a drop in the demand and supply of flights of up to 99% and, on average, of the 75% with respect to the same period of 2019.

³ https://ec.europa.eu/commission/presscorner/detail/en/IP_20_796

⁴ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2016.262.01.0001.01.ENG&toc=OJ:C:2016:262:TOC

⁵ https://ec.europa.eu/competition-policy/state-aid/coronavirus/temporary-framework_en

⁶ Böckli, Davies, Ferran, Ferrarini, Garrido Garcia, Hopt, Opalski, Pietrancosta, Roth, Skog, Soltysinski, Winner, Winter, Wymeersch “A proposal for reforming group law in the European Union - Comparative observations on the way forward, October 2016”.

⁷ <https://www.klm.it/information/corporate/about-air-france-klm>

⁸ Reference is made by the EU General Court to judgments of 14 November 1984, *Intermills v Commission*, 323/82, EU:C:1984:345, paragraphs 11 and 12, and of 8 September 2009, *AceaElectrabel v Commission*, T-303/05, not published, EU:T:2009:312, paragraph 101.

⁹ *Paramount Petroleum Co. V. Taylor Rental Ctr.*, 712 S.W.2d 534, 536 (Tex. Ct. App. 1986).

¹⁰ A. Daccò, *Alcune riflessioni in merito ai recenti orientamenti in materia di gruppi societari nel diritto statunitense*, in *Riv. Soc.*, 1997.

¹¹ *Radio Union v. Broadcast Service of Mobile, Inc.*, 380 U.S. 255, 1965, 156.

The Future Long-Term Sustainability of Commercial Small Satellite Missions in Outer Space: Legal Aspects

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Abstract

The growth of the commercial space industry with the promotion of small satellite missions in outer space has created many new challenges in this environment. This article surveys the effectiveness of the existing rules and regulations related to launching such satellites through different space law documents, such as international guidelines of UNCOPUOS, which are regarded as soft law. Alongside the legal efforts of countries and organizations at international level, there is also national legislation of some countries like the federal agencies in the USA for regulating and formulating the legal framework of commercial space activities. There is a massive lack of a coherent legal regulatory regime for future protection of the outer space from the perspective of long-term sustainability (LTS). So, it is recommended through the researches on treaties, soft law documents, and national regulations that all of the space related national and international organizations have to collaborate with countries, UNCOPUOS, ITU, and other responsible organizations in order to regulate the activities of commercial small satellites in outer space and also prepare a feasible Space Debris Mitigation Plan.

Introduction

There are many reasons for States to develop space activities, such as industrial advancement, social benefit, and commercial profit¹. In addition to States, many private entities are developing privately financed space launch facilities for commercial usage nowadays. So also the private sector is a powerful space actor in the outer space and has a great fraction of the operational satellites in orbit. Some important private sector actors want to launch constellations of many small satellites into orbit¹ and many of these states and private subjects have commercial plans related to outer space. One of the earliest ones was the Reagan administration that made the commercialization a cornerstone of its space program; however, space's commercialization has begun seriously nowadays³. The commercial space industry is flourishing, and the great number of small satellite utilization in the realm of this industry is one of the most increasing hazards for the outer space environment⁴. The outer space is used by many states, non-governmental entities and international intergovernmental organizations. So there are many concerns now, like different kinds of space debris in the environment of outer space, the large complexity of space operations, the emergence of constellations, and the danger of collision and interference with the operation of other space objects. This developed trend to an increasing use of more commercial small satellites in outer space may require new legal strategies towards the biggest threats for ensuring LTS. The commercial space industry, private enterprises and the function of small satellite constellations could be some of the most

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important examples of these menaces, which are mentioned in this article. Private entities compete for various resources in the outer space environment, and states may intervene with the aim of protecting different national interests⁵.

The commercialization of outer space industry is growing day by day and there are many modern private companies involved in such sector, among which the most renowned one is SpaceX. SpaceX is a company that has the quality to launch satellites at low costs, and it owns launchers that are able to carry out multiple launches which implement many large and small satellites. For example, the launch rocket named SpaceX's large Falcon 9 can launch ninety small satellites within a single process of launch and the other launch operators, including Blue Origin and Arianespace, have initiated the business of different small satellite missions' launches. Many communication satellite companies want to launch some small satellites, like O3B, Leosat, Northstar, One Web, Radarsat, Terra Bella, and SpaceX which are for many commercial usages. SpaceX plans to launch 4425 small satellites for communication purposes⁶. There are also some instant commercial launches such as Swarm Technologies Inc., a US satellite for communication; such company is an upstart that in the year 2018 has launched 4 pico satellites from India without the FCC authorization. The FCC hadn't accepted Swarm's suggestion for the concerns on the risks of collisions because of the potential hardships in order to track specific small satellites. Although, the number of several commercial constellations of satellites which have planned to launch to the environment of outer space with various goals is rapidly growing⁷.

Private space activities should consider all of the details in the OST that are for the international liability of States for all similar private activities, however private entities has not given any explanation in any of the relevant international space treaties so far⁸. So the privatization of various space activities issued by their relevant States that declare national space legislation. For example, the main spacefaring nations such as Ukraine, USA, France, the Russian Federation, the United Kingdom (UK), Canada, South Korea and Germany have issued permissions for licensing systems by means of their national laws⁹. In particular, there are two existing laws that are mainly about remote sensing in view of specific security concerns with the ideas about really high resolution remote sensing data. These national laws are the Act of Remote Sensing of Canada in 2005 and the German Act on Satellite Data Security in 2007¹⁰.

With the fast increase of commercial enterprises in the realm of the space profession, there is the urgent need to issue and formulate several legal rules in order to regulate the environment of outer space. Even though the various current regulations of international law have not encouraged private commercial space operator in order to extract the environment of outer space, the legal regulations of international law do not restrict utilization of outer space but it is necessary to adopt a logical international framework which shall regulate all of the processes of utilization and utilization of outer space¹¹.

Small satellites are the most popular ones for the usage of commercial space operators which often involve new actors to participate in space operations - in particular, nongovernmental actors and private companies¹² along with countries and commercial activities. During the month February 2009 a collision between two satellites named Cosmos 2251 and Iridium 33 occurred in outer space, such satellites were totally destroyed and the related telecommunications services were interrupted; such collision therefore created thousands of segments of space debris in outer space¹³. According to NASA data, even smaller space objects in the space environment can possibly hit small satellites¹⁴. It is believed that the best solution to remedy to such

issue is finding ways to actively remove large space objects and collecting space debris; an example of such goal is shown by the following figure, bearing in mind that finding a good solution with regard to small satellites is still a priority at international level.

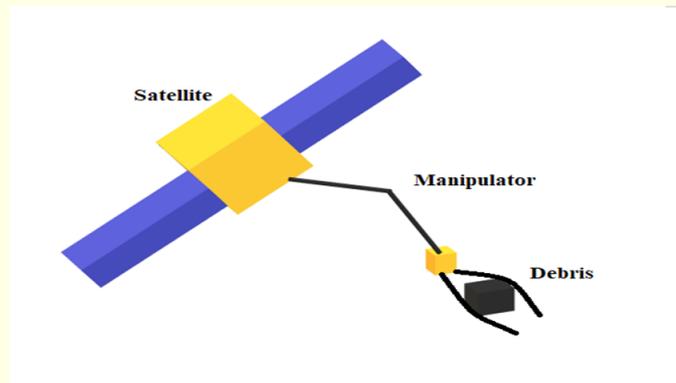


Figure 1: A design for robotic arm to collect space debris

Constellations are composed by several small satellites and they represent a great possibility since they have the ability to execute new missions in outer space with commercial purposes and since their cost is low, in order for them to be launched to outer space in large numbers - such launches are even more than traditional satellites which launched before. Constellations also can perform a lot of concurrent and divided mensuration and observations of interesting searching or global events, for example, constellations of small satellites for earth observation, like Planet Labs Flock and Spire Lemur-2, and also for the purpose of broadband communications, like what SpaceX and OneWeb have done, on an unprecedented manner with different benefits like economical, commercial and environmental ones¹⁵. Constellations of many satellites launched to outer space are not themselves chipping in space debris problem, but they impose new legal questions. The Small satellite constellations pose particular issues that are different from those arising from single satellite operations of the past¹⁶.

The critical threats to LTS

All of the national and international organizations, countries, and other entities try to prohibit every doubtful space missions to outer space that could represent a danger for the security and safety of this environment. The United Nations SDGs has illustrated different goals of the UN in order to achieve a sustainable future for the coming generations¹⁷. The outer space environment represents, theoretically, a wide area for various types of space activities, especially the processes of small satellites for commercial purposes but, in case these entities do not limit the level of risk of their, space missions, a sustainable outer space is no longer conceivable. Moreover, the UNCOPIUOS is improving significant guidelines for the maintenance and protection of LTS¹⁸. The most important issue now is the execution of activities that are implemented in order to protect the capability of satellite operations. This issue has social, economic, and especially legal values as a technique in order to reduce the number of collisions and creating space debris in the environment of outer space¹⁹. Therefore, sustainable use of the outer space area and its preservation should be the common objective of the international cooperation for space activities in order to incorporate the environmental conservation of outer space, with regard to which the States' conduct must be unflinching²⁰. Despite all these efforts, there are different threats to LTS which could become the most powerful danger for the environ-



ment of the outer space. The increase of the number of space debris is due by the improvement of the number of commercial small satellites in outer space and this proves that there is a large need for sufficient consideration of instruments that have different purposes for the mitigation of space debris. Even though, different articles which are modeling the orbital evolution of space debris explain that the application only of mitigation measures will not be enough to guarantee the future usage of outer space²¹⁽¹⁾.

Different researches show the perspective to those considerations that are inherent in the creation of a space traffic management regime. This regime should be evaluated from a substantial and conceptual point of view and UNISPACE + 50 make an important role in fortifying global space governance, making it an essential segment of the global 2030 Space Agenda²².

As it is obvious now the large number of commercial small satellites which have been launched to outer space increases public safety concerns. Some of them are not navigable and they cannot be controlled among other space objects, including space debris and most of them are commercial recently because of the tendency towards economic benefits also by private entities. The danger of collision is very critical when encountering non-navigable space debris²³. The fast advancement in the amount of space debris has dangerous risks for space activities that every state has carried out in this environment and it represents the most serious threat for the sustainability of outer space. For instance, an unprecedented collision between a Russian satellite with the weight of 900 Kg, named Cosmos 2251, and an active US commercial satellite which weighs around 500 Kg, named Iridium 33. This is a renowned accident between two small satellites that has changed the immune 'status' associated to outer space, considered that it was a huge disaster that stressed the need to avoid further similar accidents. A safe and secure space environment is necessary for the sustainable development of the space operations for all states because of different purposes like commercial and security types²⁴. Considering various activities and efforts for space debris mitigation in outer space, it has been concluded that the law requires endeavors for formulating it and these endeavors could play a substantial role and become a basis for the creation of different kinds of rules. This guidance is helpful also for space debris remediation that should be contained in the legal regime for outer space activities²⁵. So the commercial space industry, private enterprises, and the function of small satellite constellations would be some of the most important examples of these threats to outer space, if their activities in the environment of outer space couldn't limit and control by some serious rules and regulations.

The current legal regulatory regime of commercial small satellites from the perspective of LTS

Together with all the treaties aimed at regulating all aspects of the outer space activities like OST, the LTS Guidelines, which were drafted by the UNCOPUOS and shared by the United Nations General Assembly 4th Committee, are the best examples of legal efforts for LTS. In addition to the guidelines of UNCOPUOS, there are some draft reports related to the formulating regulations for outer space which have also been adopted by the UNCOPUOS. The Committee noted that activities of small satellites, must be performed in compliance with the current international regulatory framework. There are a lot of different ideas on this topic: for example, some delegations expressed the opinion that the existing legal regime on outer space ensured the safety, transparency, and sustainability of operations involving small satellite activities and that no ad-hoc legal regime and no other mechanisms that could impose limitations on the building, design, launch or use of space ob-

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jects, should be Created⁽ⁱⁱⁱ⁾²⁶. So small satellite missions are the topic of guidelines and draft reports of UNCOPUOS on LTS of outer space and in these legal documents have been tried to regulate their missions.

The legal regime of space debris mitigation and rules related to commercial small satellite missions

Making space debris is not legally prohibited in the international area, but it should be undoubtedly limited. There are several sources of laws and policies for the preservation of the outer space environment which could generally be used for every aspect related to satellites including commercial small satellite missions. Article IX of the outer space treaty provides that States which have pursued operations in outer space should elide the hazardous contamination of outer space and should accept suitable measures to prevent such contamination, and it is in a wide international area. The Inter-Agency Space Debris Coordination Committee (IADC) has issued a series of useful guidelines in relation to the growing increase of the concern on space debris in the environment of outer space. The IADC guidelines have explained mitigation related statements such as de-orbiting, re-orbiting, and breaking up. Furthermore, in the year 2010, the UNCOPUOS has drafted official guidelines of UN Space Debris mitigation which are more political. A lot of national agencies have also issued their own debris mitigation instructions and policies and it could help this regulating. So far, no other conclusion is possible than that small satellites are indeed principally covered by the Liability Convention, and that they do not warrant any fundamentally different approach from a liability perspective, since, according to the Convention, size does not matter²⁷. With regard to liability, with the fast increase of commercial enterprises in the realm of space profession, a lot of national and public endeavors must prepare to formulate and control various legal perspectives of the environment of the outer space. Even though the various regulations of international law have not encouraged private commercial space operator in order to extract the environment of outer space, the legal regulations of international law do not restrict utilization of outer space but it really needs a logical international framework that construct to advice all of the processes of utilization and derivation of outer space. All of these rules would help LTS in a logical way. For launch service agreement, it is crucial to provide safety of small satellite missions in order to launch securely and, in this regard, they would need information about project programs and payload. Based on the launch providers' launch services agreement, coating a launch vehicle defeat would expand to a small satellite as a secondary payload, although, every contractual arrangement on launching satellites is distinct²⁸. Private entities are related to their governments and they are only available to use outer space when they have the authorization of their governments; so they can operate in this environment based on their dependency on governments. According to article 6 of OST, private entrepreneurs that are going to launch small satellites should apply for their licenses to use the outer space environment. In the year 2015, the working group of the ITU has mentioned that small satellites do their missions in outer space in accordance with national and international regulations, to protect the LTS of small satellites, and commercial small satellites have the same process. The private small satellite should ask their national government in order to request the ITU for allocation of certain frequencies and orbital slots at first⁽ⁱⁱⁱ⁾. So the regulations of the process of launching commercial small satellites to outer space would coordinate this system.

Soft law in LTS

Alongside hard law, there is also soft law that different entities like governmental and nongovernmental entities and also states are forced to accept nowadays²⁹.

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Soft law is legally nonbinding itself but what is debatable now is the topic related to the effective non-bindingness of soft law, with the assessment if this results in non-compliance or not³⁰. Space debris which are dead satellites drifting in the crowded sections of the geostationary orbital region poses a collision threat with operating satellites. The UN's International Telecommunication Union (ITU) also declared before clear hard law Radio Regulations requiring satellite operators to promote their soon-to-die satellites from the geostationary orbit (GSO) into higher graveyard orbit^(III)³¹.

It has widely accepted that in relation to soft law, states and international intergovernmental organizations should voluntarily take national measures or other applicable mechanisms, in order to ensure that the guidelines are enforced to the biggest extent real and practicable, following their respective needs, conditions, and with their duties based on applicable international law, such as the provisions of the UN treaties and principles on outer space.

States and international intergovernmental organizations are promulgated to govern existing methods and establish new procedures to meet requirements associated with the guidelines.

The best accomplishment of these guidelines could be performed for example through international cooperation³². It is not limited to UNCOPUOS or UNGA resolutions to ensure sustainable outer space access and use. It could be on a similar procedure undertaken by other regional IGOs, such as the European Space Agency or the European Union, African Union, Organization of American States (OAS), or the other regional IGOs adopting guidelines for member implementation³³. So, there is a hope to protect LTS, manage the number of small satellites and control the commercialization of outer space by regulating and operating these type of soft laws throughout the world and maybe this theory could be a beneficent way for the recent situation and the future.

The characteristics of LTS Guidelines?

The LTS of outer space operations is a subject that has pointed to the issue of the increasing number of satellite missions and environmental safety through the debates of the LTS space missions. So this issue has been deepened in this article because of the concerns about the outer space environment with growingly outer space actors' especially private actors with commercial purposes, outer space debris, and the existence of intentional satellite collisions. Furthermore, all of the countries in the world affirmed that the discussion on LTS guidelines should assert that all countries are reinforced to implement it voluntarily, and they are still open to revision following developments and implementation practices under COPUOS procedures. The LTS guidelines in the annex to the COPUOS A/74/20 report encompass strategies to ensure sustainable outer space activities, like the approach in normative policy and regulation. Even though such guidelines are not legally binding and are regarded as soft law, countries, which accepted the guidelines, are implementing them very systematically with the regulations of international law³⁴. The LTS guidelines of the UNCOPUOS have rendered the increasingly verification that the LTS of outer space access is endangered. The LTS Guidelines contains 4 parts:

- Policy and regulatory framework for space activities
- Security of space procedures
- International cooperation, capacity building
- Awareness and technical and scientific and development and inquiry³⁵

The impact of soft law (UNCOPOUS Guidelines and Reports) on LTS

To protect the increasing space competition between different countries and the

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endangering space environment every space law documents should be surveyed, the Scientific and Technical Subcommittee of the UNCOPUOS has also added researches about LTS to its agenda in February 2010. In the June of 2017, the Working Group of the UNCOPUOS has presented a draft working paper^{36(IV)}. The draft caused heated discussion, and the members, like the United States and China, have rendered their opinions and proposed adjustments for the Guidelines. According to the story of the LTS of Outer Space Activities Working Group which has issued in the year 2018, twenty-one guideline terms have been framed and some terms of the guidelines have not reached consensus, and the remaining work is going to be challenging and promising^{37,38(V)}. Corresponding working and expert groups were established to develop a set of guidelines for sustainable space conduct that would be widely accepted and voluntarily implemented by the international society and its guidelines are deemed very useful in order to supervise commercial small satellite missions. The guidelines should make a framework for controlling the LTS of operations in outer space, for example, providing for protection of the outer space environment, be voluntary, and not legally binding regulations, be in conformity with current international regulatory frameworks for space missions³⁹. The Committee has pushed countries and international intergovernmental organizations to voluntarily take part in guaranteeing that the guidelines are implemented to the greatest extent.

The role of USA national legislation in LTS

The national legislation would have a more powerful effect on regulating the commercial small satellite missions in outer space; so we have taken a look at USA legislation on commercial small satellites very briefly. The FCC of United States has governed the communication micro-satellites based on the Communications Act and the Federal Regulations on Satellite Communications, and proportionate the frequency orbit resources of micro-satellites to the ITU following the Radio Regulations. In the March of 2013, the FCC declared the Guidance on obtaining licenses for small satellites. Micro-satellite missions need to evaluate the space debris have made by the micro-satellites to be launched and meet specific demolition standards to guarantee minimal influence on space vehicles and the ground. The licensing regulations of FCC satellites were chiefly for commercial satellites, and were limited to 2 application parts: geostationary satellite system and non-geostationary satellite system. Although with the utilization of small satellites in outer space, the FCC found out that the high application fees and the long application period did not apply to the supervision of small satellite systems. So, the FCC issued the Notice on Proposed Rule Making proposing to revise the satellite licensing rules, by making a new application category specifically for small satellites, and issued the draft rules for the simplified small satellite licensing process in 2019 and on August of 2019, the FCC issued the streamlining licensing procedures for Small Satellites^{40(VI)}. The streamlining licensing procedures have declared that they are not compulsory and their purpose is to cover smaller constellations of satellites that have planned to supply broadband service or other satellite systems that need fixed spectrum availability^{41(VII)}.

Conclusion

The improvement of space debris caused by the constellations of commercial small satellites and the risk of collisions could endanger the LTS of the outer space environment. Moreover, the improvement of long-lived orbital debris arising from the deliberate destruction of space systems raises the risk of in-orbit collisions and the potential for misunderstanding and miscalculations that could lead to conflict in the environment of outer space⁴². So this situation requires international cooperation by states and organizations in order to prevent damages to the sustainability of the environment of the outer space and establish a coherent legal regulatory regime on

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space sustainability. It is recommended that a feasible Space Debris Mitigation Plan should be prepared in order to control space debris mitigation measures. This Mitigation Plan should include a series of vital issues, like management program to address space debris mitigation activities, a project for the mitigation and assessment of risks related to space debris, the measures to minimize the dangers about malfunctions that have a potential for generating space debris, etc.⁴³ On the other hand, there is no exact and coherent legal regulatory regime aimed at protecting the increasing number of commercial small satellites in outer space from the perspective of LTS. Every effort made within such context is conducted by UNCOPUOS, ITU, or other related organizations which almost involve soft law in the drafting of framework guidelines and reports. There should be regulations for all aspects of launching such satellites, for example, for the launch service agreement, it is crucial to provide safety of small satellite missions for launching securely or regulations for radio frequencies and orbits. This article has surveyed the effectiveness of the existing legal framework on launching such satellites through different space law documents, like international guidelines which are regarded as soft law. Alongside the legal efforts of countries and organizations at international level, a relevant role is played by national legislation of some countries. As there was the need to regulate in detail private space activities, it is worth highlighting that the OST is related exclusively to States' international liability and not for any private activities like this, but private entities had not explained in any of the international space treaties. So the existence of a legal regulatory regime for different rules of the commercial small satellite launches to outer space requires not only international cooperation but also it needs national legislation efforts. This article explores that the world will not face a sustainable outer space in the future with underestimating the existence of a legal regulatory regime on the commercial small satellite missions, and cooperation in this regard should happen on both national and international levels.

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European Union Sets New Ambitions for Space

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In years 2021 - 2027, the European Union will continue and expand its engagement in space, relying on the historically highest budget dedicated to space activities. EU's presence in space will be also marked by the introduction of new initiatives and ambitions and a more prominent place given to security-related activities.

The required legal basis for EU's continued space engagement has been formally set in April 2021. After more than 2 years of trilateral interinstitutional negotiations at the EU level (European Commission, European Parliament, Council of the European Union), the Council and the Parliament, the two legislative bodies of the EU, finalised the adoption of the new Regulation establishing the EU Space programme and the EU Agency for the Space Programme".

As a result of this adoption, the European Union:

- has created a single space programme grouping together the existing flagship programmes Galileo / EGNOS and Copernicus and two new programme components GOVSATCOM (governmental satellite communications) and SSA (Space Situational Awareness)
- has allocated €14.9 billion (current prices) to the pursuit of objectives associated with the various components:
 - Galileo/EGNOS: €9.01 billion
 - Copernicus: €5.42 billion
 - GOVSATCOM/SSA: €440 million

The EU GNSS Agency, which was mainly responsible for Galileo / EGNOS until now, has been transformed into the EU Agency for the Space Programme (EUSPA) in 2021, enlarging its responsibilities to other components of the EU Space Programme.

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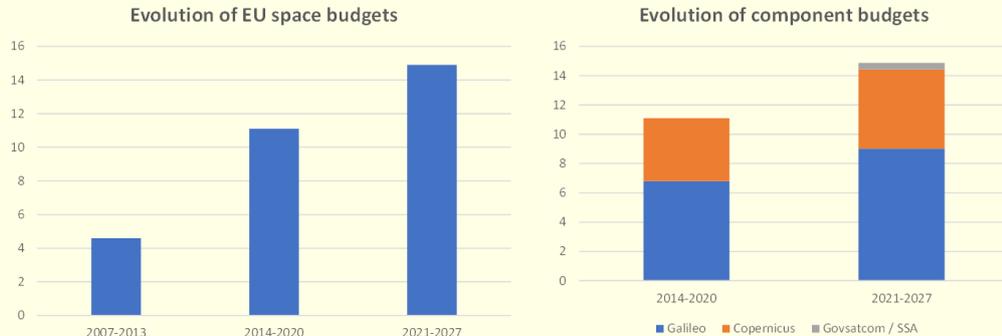


Figure 1: EU space budget keeps growing (figures in € billions, current prices)

Galileo / EGNOS and Copernicus: programmes continue and eye next evolutions

The new MFF 2021-2027 ensures the continuity of flagship programmes Galileo/EGNOS and Copernicus. Major milestones were reached during the MFF 2014-2020: Galileo and Copernicus progressed through the deployment phase of their space components (22 Galileo FOC satellites and Sentinels 1A & 1B, 2A & 2B, 3A & 3B, 5P and 6) and gradually increased user uptake. In 2016, after declaring Early Operational Capability (EOC), Galileo started offering Initial Services. Copernicus initiated the provision of the remaining of its 6 thematic services (atmosphere, marine, climate change, and security services in addition to land and emergency management services launched in 2012) and continue to provide data under full, free and open data policy principle.

The increased budgets for Galileo/EGNOS and Copernicus for the new MFF 2021-2027 provide resources for continuity in operations and infrastructure, enhancement of capabilities, further development of services and a deeper integration of satellite navigation and Earth Observation data in other policy areas and economic sectors. Procurement of 6 new Copernicus missions and 12 Galileo 2nd generation satellites have been conducted in 2020 and early 2021.

SSA and GOVSATCOM: new programme lines towards stronger EU engagement in security and defence matters

While both Galileo and Copernicus offer security applications, the integration of Space Situational Awareness and GOVSATCOM as components of the EU Space Programme (although with smaller budgets) underlines the growing importance of the security and defence dimension of EU engagement in space. SSA and GOVSATCOM build on activities initiated during the MFF 2014-2020. The next MFF gives both lines of action greater political significance and a long-term vision.

- Space Situational Awareness (SSA): With the objective of monitoring and preventing space hazards, the SSA component build upon the work by several member states in the 2015-established EU Space Surveillance and Tracking



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(EUSST) Support Framework and expand the cooperative framework to include new domains and more EU member states. Beyond SST, the SSA component will also include an early-stage EU engagement in space weather and near-Earth objects.

- GOVSATCOM: The GOVSATCOM initiative is addressing the need for a secure, guaranteed, and autonomous governmental satellite communications capability for the EU and its Member States. Until 2025, GOVSATCOM will primarily rely on existing capacity, pooling and sharing national assets. Some of the early programme developments (until and throughout 2020) have included major involvement of the European Defence Agency.

Timeline of the negotiation and adoption of the Regulation on the EU Space Programme 2021-2027

The negotiation of the new Regulation establishing the EU Space Programme for the 2021-2027 and EUSPA comprised of a series of institutional and interinstitutional negotiations:

- In June 2018, the European Commission released its original proposal¹. An opinion on the proposal was released by the European Economic and Social Committee in October 2018², and by the Committee of the regions in December 2018³.
- In December 2018, the European Parliament adopted its version during the plenary proposing several amendments⁴ and the Romanian Presidency of the Council of the European Union was granted a negotiating mandate in the same month⁵.
- In January 2019, the Council reached the first interinstitutional Agreement on a majority of the text (leaving aside mostly budgetary and Brexit provisions). It started negotiation with the European Parliament in the First Trilogue on January 15th, 2019, and subsequently reached a partial interinstitutional agreement in the second Trilogue, on February 26th/ 27th, 2019⁶.
- Following the suggestion by the European Parliament for certain amendments, and the consequential presentation of the updated partial agreement in March 2019⁷, the Romanian Presidency reached a comprehensive Common Understanding with the representatives of the European Parliament on a partial draft in the plenary on April 17th, 2019⁸.
- In November 2020, the European Council agreed on the full text⁹. It received the mandate to negotiate with the European Parliament on November 5th, 2020.
- After a third Trilogue meeting, on December 15th, Council and Parliament negotiators reached a provisional political agreement on the proposed regulation.
- The compromise text was approved by Council's Permanent Representatives Committee on December 18th, 2020¹⁰.
- In April 2021, the Council and European Parliament formally adopted the regulation. The EU Space Programme entered into force retroactively on 1 January 2021.

Timeline of the negotiation and adoption of the EU space budget

The final figure of the 2021-2027 EU space budget is somewhat lower compared to what the European Commission had initially proposed in June 2018. The impact of Brexit and of the COVID-19 crisis contributed to this reduction. The initial proposal of

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€14.2 billion and the 2020 approval of €13.2 billion in constant prices correspond respectively to €16 and €14.9 billion in current prices¹¹.

The list below illustrates the budgetary evolution of the EU Space Programme budget 2021-2027 in both constant and current prices¹²:

- May 2018 (Commission Proposal): The European Commission presents the “New Space Programme” and proposes a space budget of €16 billion (current) / €14.2 billion (constant) for the MFF 2021-2027.
- November 2018 (EP Position): The EP requested an increase of the EU Space programme to 16.9 billion (current)/€15 billion (constant prices).
- November 2019 (Finnish presidency Proposal): The Finnish Presidency revises the MFF budget to consider Brexit and sets a ceiling at 1.07% of EU Gross National Income (GNI). As a result, the budget of the EU Space Programme is proposed to be reduced to €14.3 billion (current)/ €12.7 billion (constant).
- February 2020 (Ch. Michel): The MMF Proposal by the European Council President Ch Michel would elevate space budget to €13.2 billion (constant) but there was no majority.
- May 2020 (Commission Proposal): Following the COVID-19 pandemic, the Commission presents a revised MFF proposal, of which €14.9 billion (current) / €13.2 billion (constant) are allocated to the EU Space Programme.
- July 2020 (Council position): the European Council accepts the revised space programme budget proposal of the E, which was €14.9 billion (current)/€13.2 billion (constant).
- December 2020 (Political Compromise): The political agreement reached by the Council and the EP included some top-ups to the MFF version agreed by the Council in July, but it has not translated into growth on the space programme budget.

While the final revised budget remains lower than the original proposal, the overall space envelope still represents a €3.8 billion increase compared to the previous MFF 2014-2020 (€11.1 billion, current). This highlights a 36% increase of the space envelope compared to the previous MFF. The share of the space budget in proportion to the entire MFF envelope has also increased: the revised 2020 space budget represents 1.2% of the total MFF while space represented only 1% of the total MFF budget for 2014-2020.

About the involvement of the United Kingdom in the EU Space Programme after Brexit

The UK's departure from the EU, effective January 1, 2021, impacts UK involvement in the components of the EU Space Programme, to which the UK already participated. According to the post-Brexit “EU-UK Trade and Cooperation Agreement” reached late December 2020¹³:

- The UK no longer participates in Galileo and EGNOS programmes. The UK will not have access to the encrypted Galileo Public Regulated Service and cannot play any part in the development of Galileo or EGNOS. UK entities will, however, be able to use the ‘open’ signal to develop products and services for consumers and can use the open PNT services provided by Galileo and EGNOS. EU subsidiaries of UK businesses are eligible to bid for future work on the EU GNSS programmes.
- The UK's participation in the Copernicus programme will continue, pending a further agreement to be worked out in 2021. As Copernicus is not fully funded

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solely by the EU and the UK remains an ESA Member State, under all circumstances, the UK will continue to participate in the Copernicus Space Component (CSC-4) of the Copernicus programme through ESA.

- While UK users can continue to access EU Space Surveillance and Tracking services, the UK is no longer eligible to participate in the EU SST programme, contribute to providing operational services or take part in the scientific and technical groups that make up the programme.

UK memberships in EUMETSAT and ECMWF remain unaffected by Brexit.

On May 24th, European Commissioner Thierry Breton visited EUSPA, and during its speech expressed its vision regarding Copernicus programme. The Commissioner specified that Copernicus had security and sovereignty-related elements that could not be co-owned with non-EU nations. The role of the UK in the Copernicus programme is still under negotiation¹⁴.

European Union Agency for the Space Programme (EUSPA)

Following the entrance into force of the EU Space Programme Regulation, the new Agency, EUSPA, has succeeded the European GNSS Agency (GSA). The agency has enlarged competences of its predecessor GSA and evolved its mandate to take full advantage of its contribution to the EU Space Programme¹⁵. Indeed, as defined by the EU Space Programme Regulation, its mission is to be operational Agency of the EU Space Programme. It adopts a user-oriented approach to contribute to sustainable growth and security and safety of the European Union.

EUSPA tasks include the exploitation, management, and operational security of EGNOS and Galileo, in addition to the operational aspects of Galileo Security Monitoring Centre (GSMC). EUSPA is tasked with the security accreditation for all the components of the EU Space Programme, and of the coordination of user-related aspects of GOVSATCOM, in close collaboration with Member States and other involved entities such as EU Agencies. The Agency also implements activities related to the development of downstream applications for all EU Space Programme components.

In this regard the Agency will be responsible for communication, promotion, and market uptake development of Galileo, EGNOS and now also COPERNICUS together with the Entrusted Entities of the European Earth Observation programme, with focus in maximising synergies in the field of space innovation for all components of the EU Space Programme.

Finally, tasks will also include specific actions in support of an innovative and competitive Union space sector (e.g., to promote space hubs, to provide education and training, to foster wide participation of SMEs and start-ups).

The roles, responsibilities and obligations of the EC, the EUSPA, and ESA with regard to each component of the space programme was negotiated in the Financial Framework Partnership Agreement (FFPA), which has been signed on June 22nd, 2021. The FFPA will also deal with the shared costs for European space programmes (especially in the relevant Contribution Agreements) and provides the coordination and control mechanisms. The main goal is to avoid duplication in effort in the implementation of the Regulation.

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Other EU financial instruments for space and new European Commission's space initiatives

The EU Space Programme and its related budgetary allocation do not encompass all EU activities in the space sector. Other EU programmes and funds support strategic objectives such as technology non-dependence, innovation, security and defence or, more recently, support to private space investment. The support to space initiatives is incorporated most notably in the three instruments:

- **Horizon Europe** will follow Horizon 2020 as the new EU Framework Programme for Research & Innovation. The overall financial envelope for Horizon Europe has been set to €95.5 billion (current prices). Its support to space technologies and applications, primarily within the Cluster 4 “Digital, Industry and Space”, is thematically linked to the EU Space programme (development of Copernicus and Galileo services, SSA and GOVSATCOM-related activities...) and to other strategic innovation areas (reusable launchers, European technology non-dependence, space science...).
- The **European Defence Fund (EDF)** will contribute to the implementation of growing EU's ambition in security and defence. The EDF formally launches in 2021 with a €7 billion budget over 7 years¹⁶. It is, above else, an industrial programme, providing funding for both early-stage research and late-stage capability development and acquisition. The EDF will likely build upon space-themed projects supported by its precursor, the European defence industrial development programme (EDIDP) and would provide co-funding opportunities for Permanent Structured Cooperation (PESCO) projects, some of which focus on space defence capabilities as well.
- The **InvestEU** programme will be the Union's chief investment instrument aimed to foster innovation and facilitate access to funding. InvestEU will aim to mobilise more than €400 billion through EU budgetary guarantee of around €26 billion¹⁷. It will bring under a single roof various concurrent investment tools, including the European Fund for Strategic Investments (EFSI) and the InnovFin Equity programme. EU commissioner Thierry Breton has also signalled plans to establish €1 billion European Space Fund, to help EU start-ups and SMEs to raise investment¹⁸.

Throughout 2020 and 2021, the European Commission unveiled several additional initiatives in the space domain.

Commissioner Thierry Breton and industrial stakeholders have expressed their interest in moving forward with the development of a “**new integrated, secure and autonomous space connectivity system**”. A consortium of European companies (gathering major actors for a unique bid) was awarded a €7.1million contract in December 2020 to execute the first study¹⁹. This initiative builds on the GOVSATCOM component of the EU Space Programme and include the development of a new multi-orbit connectivity system to complement GOVSATCOM preliminary services. It would also promote innovative quantum cryptography technologies in relation with the Quantum Communication Infrastructure initiative.

In addition, following the initial assessment of the first consortium's interim report, the Commissioner Breton called for a new study to be conducted in the framework of the European Commission's planned secure connectivity project. The second study is expected to be led by start-ups and small companies that are part of the “European New Space ecosystem”, with the Commission thus electing to adopt a different approach from the first study led by established leaders of the European space industry

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such as Eutelsat, SES, Airbus and Thales Alenia Space. The objective of the second study is to explore potentially more innovative solutions to those proposed in the first interim report²⁰.

Thierry Breton expressed on multiple occasions also additional Commission areas of focus, such as Space Traffic Management, autonomous access to space with new generation of launchers (including reusable vehicles) or innovative support to space entrepreneurship²¹.

Concerning **Space Traffic Management**, two projects^{22,23}, under the Horizon 2020 programme were formed in 2020, gathering large consortia of European industry, institutional and academic stakeholders with the objective to investigate the way forward for Europe in the increasingly important sphere of STM. With regards to **space entrepreneurship**, the CASSINI initiative was launched under the management of DG DEFIS. Intended to increase the number and improve the market penetration of space- start-ups, it consolidates existing initiatives as well as envisages new ones, covering the entire entrepreneurial cycle²⁴.

In February 2021, the European Commission presented its **Action Plan on Synergies between civil, defence and space industries** with three headline objectives: to enhance the complementarity between relevant EU programmes and instruments ('synergies'), to promote that EU funding for space and defence-related R&D benefits European citizens ('spin-offs') and to facilitate the use of civil research and innovation in European defence projects ('spin-ins'). As part of the Action plan, the European Commission has launched **three flagship projects on space traffic management, space-based global secure communications system and EU drone technologies**. The publication of the Action plan follows the rapprochement between defence and space under the umbrella of the new Directorate General for Defence Industry and Space (DG DEFIS), which was officially formed on January 1st, 2020. This growing EU interest in the exploitation of synergies between space and security & defence could be observed in the inclusion of numerous space-related R&D calls and cooperation projects in EU's security & defence cooperation frameworks and funding mechanisms, such as European Defence Industrial Development Programme (EDIDP), Permanent Structured Cooperation (PESCO) and Preparatory Action on Defence Research (PADR).

10th EU-ESA Space Council

While EU space-related activities often showcase initiatives taken at the level of the European Commission (EU's executive arm), in November 2020, EU member states, meeting in another EU body, the Council of the EU, adopted a notable political position in the form of Council conclusions on "Orientations on the European contribution in establishing key principles for the global space economy"²⁵. In this document, the EU Council, under the German presidency, set European objectives to enhance of competitiveness, foster European security, resilience and autonomy in space, as well as recovery from the COVID-19 crisis.

This EU Council meeting was followed by the 10th EU-ESA Space Council, which took place for the 2nd year in a row. Although a joint declaration after the 10th EU-ESA Space Council has not been published, EU and ESA representatives outlined some significant key messages in the press conference²⁶:

Europe must **maintain its role as leading space power** in a fast-changing environment, retaining that this role is built on large collective effort and through a solid budget, capable to assure the support and expansion of Copernicus and Galileo.

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To remain a global space power, Europe has to **engage with new challenges**, such as building an STM framework, and launching new flagship project, namely a European constellation for communications, and combine the institutional nature with commercial feasibility and success.

Strengthen the access to market, leveraging the strong contributions that could come from start-ups, as well as the attraction of private investments; enhancing the coordination of public and private funding schemes; and fostering new markets uptake of downstream products in non-space sectors.

Consolidate autonomy in the access to space, a field where the European representatives have multiple visions that could eventually contribute to achieve different goals (e.g., reinforcement of the Guyana Space Centre, democratisation of access to space, new launcher portfolio...).

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EU and ASEAN Concluded the World's First Bloc-To-Bloc Air Transport Agreement

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In a move that deeply changes aspects of air traffic between Europe and Asia, the European Union ("EU") and its Member States and the Association of Southeast Asian Nations ("ASEAN") have concluded the negotiations on the ASEAN-EU Comprehensive Air Transport Agreement ("AE CATA") on 2 June 2021.

The AE CATA is the world's first bloc-to-bloc air transport agreement and will strengthen connectivity and economic development among the EU and the member states of ASEAN. Under this agreement, airlines of EU and ASEAN:

- will have greater opportunities to operate passenger and cargo services between and beyond both regions;
- will be able to fly any number of services between both regions;
- will be able to fly up to 14 weekly passenger services, and any number of cargo services via and beyond to any third country.

The scope of the AE CATA is to bolster the rebuilding of air connectivity between Europe and Southeast Asia which collapsed through the COVID-19 pandemic and open up new growth opportunities for the aviation industry in both regions. At the same time, both parties expressed the intent to maintain close discussions and coordination to minimize disruptions to air services caused by the pandemic.

The pace-setting AE CATA reflects the latest policy thinking in air transport regulation, including robust fair competition provisions and doing business issues. More importantly, the AE CATA provides a foundation for closer cooperation between ASEAN and the EU, extending the existing ARISE-ASEAN Regional Integration Support from EU cooperation program in areas such as aviation safety, air traffic management, consumer protection, and environmental and social matters as well as technical assistance and capacity building.

There is no doubt that the AE CATA shows a deeper cooperation between EU and ASEAN builds upon existing initiatives such as the Enhanced ASEAN Regional Integration Support from the EU (ARISE Plus) programme on technical assistance and capacity building; the EU-South East Asia on Cooperation on Mitigating Climate Change impact from Civil Aviation: Carbon Offsetting and Reduction Scheme for International Aviation (EU-SEA CCCA CORSIA), which supports CORSIA implementation; and the EU-South East Asia Aviation Partnership Project (EU-SEA APP).

The AE CATA, once formalized, will guarantee that:

- airlines of the combined 37 member states (i.e. 27 EU member states plus 10 ASEAN member states) can operate any number of non-stop flights between countries in both regions;

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- The airlines will be permitted to operate up to 14 weekly passenger services with one stop within the other region to pick up passengers on the return leg (i.e. Fifth Freedom Rights);
- there will be no limits on flights with one stop to pick up cargo.

Some have cast doubts on the AE CATA's effectiveness because of the issue of airport slots. Because airports have only a limited number of slots to cater to planes, those sites currently running at near capacity will not be able to significantly increase the number of slots given to planes flying between Southeast Asia and Europe.

In addition to the probable above said slot issue, it should be taken into consideration the effective relevant question consisting on the potential agreement about Fifth Freedom Rights provided for by the AE CATA: in other words, there is no doubt that the Fifth Freedom Rights are the essential part of this agreement, because such rights allow airlines of both side to build and booster air transport networks between two specific states, even if the relevant demand is quite weak; the right granted to an airline to stop in a state (which is a different state respect to the state of departure and the state of arrival) and pick up a passenger and let him flying for the continuing leg of the flight to the state of destination boosters such airline opportunity to conveniently restart its transport activity after the turbulence period due to collapse for Covid-19.

ASEAN and the EU will now submit the AE CATA for legal scrubbing in preparation for signature at a later date to be confirmed.



Meet & Greet

Aviation Law Committee of the International Bar Association (IBA)

29 July 2021

As Membership Officer of the Aviation Law Committee (ALC) of the International Bar Association (IBA), Prof. Anna Masutti will be speaker at The Meet & Greet of the ALC which will be virtually held on 29 July 2021, from 16:00 to 17:00 CET.

The meeting will start with an introduction speech from the ALC's Chair, Mrs. Serap Zuvin, which will introduce a prominent speaker from the sector: with the initiation of the Committee's Diversity and Inclusion Officer, Mr. Neil Montgomery, the ALC arranged the presence of a speaker from the company Hybrid Air Vehicles to talk about the innovative Airlander. The speaker will focus on the legal perspective of the Airlander, especially its aim to zero CO2 emissions. After the discussion, the participants will have the opportunity to interact during a Q&A session.

For more information, please click here: <https://www.ibanet.org/unit/Maritime+and+Aviation+Law+Section/committee/Aviation+Law+Committee/3097>

Air Transport and Future Challenges for a Sustainable and Safe Mobility

AXA XL and ANRA Webinar

28 September 2021

The impact of the global Covid-19 pandemic and the subsequent travel restrictions on the air transport are well known. What we need to plan the restart?

AXA XL and ANRA will discuss about such topic during the webinar "Air Transport and Future Challenges for a Sustainable and Safe Mobility" which will be held on 28 September 2021, from 15:00 to 16:30 CET.

During the webinar Mrs. Federica Bisetti (Aviation Underwriter of AXA XL in Italy) will analyse which insurance issues are related to the use of new technologies for environmental sustainability.

Prof. Anna Masutti will discuss on the main guidelines for the aviation in order to facilitate the ecological transition.

Lastly, Mrs. Angela Natale (President of Boeing Italy) will explain how to increase safety in flight through new technologies and evaluate effective screening protocols to promote a safe re-opening of international air traffic.

European Air Law Association (EALA) Annual Conference

Copenhagen

4-5 November 2021

Prof. Anna Masutti will be speaker at the 33rd Annual Conference of the European Air Law Association (EALA) which will be held in Copenhagen on 4-5 November 2021.

For more information, please click here: <https://eala.aero/#events>