

THE ADVENT OF SPACE ADMINISTRATIVE LAW IN EUROPE¹

JAKUB HANDRLICA

Abstract: Regulation of any activities in space used to be object of international public law for several decades. This had reflected the fact that states as subjects of international public law used to be the key role in the development of space activities. In the last decade, however, there is a rising tendency to govern space activities also by the means of administrative law. Commercialisation and privatisation of space, developments in space tourism and increasing number of space flights have triggered the need to establish rules on permitting, registration and surveillance. Thus, while space activities were matter of regulation by the means of international public law almost exclusively, there has been a considerable tendency towards governing by the means of administrative law. In many jurisdictions, national space acts were enacted in the last decade. This process underlines the argument on gradual emergence of a space administrative law in Europe.

Keywords: space administrative law; space activities; spaceport

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1. INTRODUCTION

Space law has been traditionally understood as a domain of international public law.² Since the 1960s, the governance of space activities has been established primarily by the instruments of international public law. These instruments have established basic principles governing the activities of states by exploration and use of Outer Space,³ rescue of astronauts,⁴ international liability or damage caused by space ob-

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² See DIEDERIKS-VERSCHOOR, I. – KOPAL, V. *An Introduction to Space Law*. 3rd ed. Boston: Kluwer Law International, 2008, pp. 12–13; VON DER DUNK, F. International space law. In: VON DER DUNK, F. (ed.). *Handbook on Space Law*. Cheltenham: Edward Elgar, 2015, pp. 20–22; LYALL, F. – LARSEN, F. *Space Law: a Treatise*. London: Routledge, 2018, pp. 10–12 etc.

³ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (adopted 5 December 1979, entered into force 11 July 1984) 610 UNTS 205.

⁴ Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (adopted 22 April 1968, entered into force 3 December 1968) 672 UNTS 119.

jects,⁵ registration of objects launched into Outer Space⁶ and activities of states on the Moon and other celestial bodies.⁷ The fact is that in all these fields, the instruments of international public law presume the central role of the state in space research, exploration and use. This is also the reason, why the Convention on International Liability for Damage Caused by Space Objects (the Liability Convention)⁸ the liability for damages caused by space objects directly to the launching state, rather than to the operator of the object. This mutual interconnection between any space activities on one hand and the state on the other has reflected the traditional notion that the states play a central and very exclusive role in the space domain.

This very traditional constellation has been gradually eroded since the 1990s. Since then, the phenomena of privatisation and commercialisation of space activities emerged in full scale.⁹ Due to technical developments, the costs needed for space endeavours decreased rapidly and consequently, the states have gradually lost their previous monopoly to space exploitation. Today, there are thousands of private corporations, being active in the space industry and thousands of private investors involved. When speaking about the commercialisation of space activities, we are not only referring to the recent endeavours of the corporations such as *Blue Origin*, *Virgin Galactic*, and *SpaceX* in the field of space tourism. Commercialisation of space also entails – for example – plans for manufacturing of pharmaceuticals (space pharmacy) and operation of nanosatellites for providing of connectivity services, or for surveillance of cultural heritage. The presentation of prospective space activities, as provided here, is only demonstrative. Much more space activities have been recently announced by private corporations in what we call the *New Space Era*.

With the loss of state's exclusivity in space exploitation, space law has to face a more complicated reality of legal relations to address.¹⁰ Not only mutual relations between the states in space are to be governed, but also the relation between the state and the private corporation with their own commercial interest in space activities. Despite being adopted in the period of the state monopoly on space exploitation, the international treaties provide for certain basic rules, governing the mutual relation between the state and commercial entities in the field of space activities.¹¹ While declaring the international

⁵ Convention on International Liability for Damage Caused by Space Objects (adopted 29 March 1972, entered into force 1 September 1972) 961 UNTS 187.

⁶ Convention on Registration of Objects Launched into Outer Space (adopted 12 November 1974, entered into force 15 September 1976) 1023 UNTS 15.

⁷ Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (adopted 5 December 1979, entered into force 11 July 1984) 1363 UNTS 3.

⁸ Art. II. (A launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or to aircraft in flight).

⁹ See LING, Y. The Future of Space Law. In: MULLER, S. – ZOURIDIS, S. – FRISHMAN, M. – KISTEMAKER, L. (eds.). *The Law of the Future and the Future of Law*. Oslo: Torkel Opsahl Academic EPublisher, 2011, pp. 551–554.

¹⁰ See CLERC, P. Towards a new legal ecosystem for the exploitation of space. In: SMITH, L. – BAUMANN, I. – WINTERMUTH, S. (eds.). *Routledge Handbook of Commercial Space Law*. London: Routledge, 2023, pp. 5–23.

¹¹ See VON DER DUNK, F. The Origins of Authorisation: Article VI of the Outer Space Treaty and International Space Law. In: VON DER DUNK, F. (ed.). *National Space Legislation in Europe*. Leiden: Brill Publishers, 2011, pp. 3–28.

responsibility of the states for “national activities in Outer Space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities”, the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (the Outer Space Treaty) also provides in its Article VI that “the activities of non-governmental entities in Outer Space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty”. At the same time, the Convention on Registration of Objects Launched into Outer Space (the Registration Convention) provides in its Article II that “when a space object is launched into earth orbit or beyond, the launching State shall register the space object by means of an entry in an appropriate registry which it shall maintain”. These basic rules of mutual relation between the state and commercial entities in the field of space exploration have been subsequently elaborated in national space legislation. The first national space acts were issued in Sweden (1982), United Kingdom (1986), South Africa (1993), Russian Federation (1993) and in Ukraine (1996). In 1997, regional space legislation was also adopted in Hongkong. All these national space acts have transferred the obligations, arising both from the Outer Space Treaty and the Registration Convention into domestic legislation.¹² The last two decades have witnessed a further boom of national space legislation in Europe and beyond. Space acts were adopted in Belgium (2005), Netherlands (2007), France (2008), Nigeria (2010), Austria (2011), Kazakhstan (2012), Indonesia (2013), Denmark (2016), Japan (2016), Greece (2017), Finland (2018), Portugal (2019), United Arab Emirates (2019), Luxembourg (2020), in Slovenia (2022) and most recently on Cyprus (2023).¹³ National space acts have been recently under the preparation also in Italy and in Spain.¹⁴ The plan for preparation of a national space act is being also recently discussed in the Czech Republic.

All these developments demonstrate that there has been a considerable substantive shift in space law. While in the past, space law used to be almost entirely a synonym for international space law, the most recent legislative developments support the argument for a gradual emergence of a space administrative law. The scope of this newly emerging space administrative law will be not limited to licencing, registration, and surveillance of space activities. It will also govern the operation of prospective spaceports, rules for emerging commercial space markets, and space tourism.¹⁵ This article aims to further elaborate this line of argumentation by analysing the content of three latest space acts, adopted in the geographical space of Europe. Further, the article aims to argue that not only the very recently adopted national space acts belong to the field of

¹² See HEMIDA, J. *Legal basis for a national space legislation*. New York: Kluwer Academic Publishers, 2004, pp. 73–74.

¹³ See VON DER DUNK, F. *Advanced introduction to space law*. Cheltenham: Edward Elgar, 2020, p. 152.

¹⁴ See SANDULLI, A. The Growth of Space Regulation in Europe. *EU Law Live Weekend Edition*. 2023, No. 165, p. 3.

¹⁵ See SMITH, L. – LEISHMAN, R. – THOMPSON, A. Legislating for spaceports, commercial space markets, and space tourism. In: SMITH, L. – BAUMANN, I. – WINTERMUTH, S. (eds.). *Routledge Handbook of Commercial Space Law*. London: Routledge, 2023, pp. 286–297. Also see BOHAČEK, P. Peaceful Use of Lasers in Space: Challenges and Pathways Forward. In: SCHMIDT, N. (ed.). *Governance of Emerging Space Challenges: the Benefits of a Responsible Cosmopolitan State Policy*. Vienna: Springer International, 2022, pp. 155–178.

administrative law, but also the academic scholarship must begin to understand space activities as integral part of the scope of its interest.

2. NEW NATIONAL SPACE ACTS IN EUROPE

PORTUGAL (2019)

In 2019, national space legislation in Portugal was adopted in the form of a decree-law (*Decreto-Lei*), as issued by the Presidency of the Council of Ministers.¹⁶ The decree-law contains an extensive Preamble, which is worth of closer analysis. Firstly, the Preamble explains that “*not only have space activities contributed towards the development of science and research, but also the space sector has become a relevant economic sector itself, in particular in the applications area. The sector of new space industries (known as New Space) integrates a new range of business stakeholders and models capable of attracting private funding, namely for areas such as the launch and operation of mega-constellations of micro and nanosatellites, with significant developments in the access to low-earth and sun-synchronized orbits.*” In this respect, the major aim of the newly adopted decree-law has been to provide the space stakeholders with a law that governs space activities in a “*simple, effective and accurate way*”. At the same time, the Preamble clearly states that the newly adopted decree-law has no ambition to presume the legal framework, which will govern the future spaceport in Portugal. Fact is, that the decree-law represents a part of the Portuguese strategy, preparing a complex national legal framework for a future operation of a spaceport, which will be situated in the archipelago of Azores.¹⁷ While the recent decree-law aims to attract potential interest in the future use of space by providing with a transparent permitting framework for space activities, the future pieces of legislation will set rules for the use of the spaceport and its administration. Thirdly, the Preamble declares intention to govern space activities in a “*technologically neutral way*”. Thus, the provisions of the decree-law were drafted with the aims to remain able to be applied to a sector in constant evolution. In this respect, the newly adopted Portuguese space legislation represents another contribution to the long-lasting quest of law for a *technology neutrality*.¹⁸

The decree-law provides that space activities shall be subject to a compulsory license, which is to be issued by the competent national authority (*Agência Espacial Portuguesa*).¹⁹ In this respect, the decree-law has introduced two specific types of licences, which will authorise launch and/or return operations, as well as for command-and-control operations. A unitary license (*licença unitária*) may be granted, which applies to each type of space operation and is granted to the respective

¹⁶ *Decreto-Lei n.º 16/2019, de 22 de janeiro.*

¹⁷ See COCCO, M. – CORREA MENDONCA, H. The Portuguese Space Act: an Innovative Framework for Space Activities. *Air and Space Law*. 2020, Vol. 45, No. 2, p. 157.

¹⁸ See GREENBERG, B. Rethinking technology neutrality. *Minnesota Law Review*. 2016, Vol. 100, No. 4, p. 1496.

¹⁹ Art. 4.

operator.²⁰ Also, space activities may be authorised by a global license (*licença global*), that applies to a number of space operations of the same type and is granted to the respective operator.²¹ While the general scheme of licensing is in principle very similar to the schemes, as provided in some earlier national space acts – for example in French, Dutch, or Finnish – the decree-law has also introduced several innovations, which seek to attract new operators to Portugal through the simplification of the legal framework.²² Firstly, the decree-law foresees a possibility to obtain a joint licence for several space operations, even if performed by different operators.²³ Secondly, a simplified licensing procedure may be implemented in certain situations, such as for operations that are carried out exclusively for scientific, R&D, educational or training purposes, or for experimental operations with low risk.²⁴ Thirdly, a pre-qualification regime has been created to expedite the licensing process, removing the need to resubmit the same information for future licences.²⁵ Lastly, the newly adopted Portuguese legislation does not only aim to attract *New Space* entrepreneurs to Portugal. It also aims at simplifying of rules for Portuguese entities, planning to carry space activities abroad. In this respect, the decree-law provides that the requirement for a licence can be waived, when following two conditions are met: (a) the operator obtained the required authorizations pursuant to the law applicable in other state and (b) an agreement that ensures compliance with international obligations must be concluded between this state and the Portuguese Republic.²⁶

With respect to the licencing of space activities, the decree-law also contains a list of obligations, arising to each licence holder.²⁷ The license holder shall carry out the following duties:

- a) to comply with and abide by international space exploitation principles, namely in terms of space treaties to which the Portuguese Republic is bound;
- b) to register space objects it launches or controls, identifying the respective owner;
- c) to get the compulsory civil liability insurance required under this decree-law (see below), and to maintain it validly;
- d) to predict and duly safeguard against any damage to Earth and the Outer Space, either directly or indirectly; and
- e) to comply with all legal and regulatory provisions in force, as well as with conditions provided for in the license granted.

Reflecting potential harm, the space activities may cause to health, property, and the environment, the decree-law provides that licence holder shall be objectively liable for damage caused by the space operation on the Earth's surface or to aircraft in flight.²⁸

²⁰ Art. 6(1)(a).

²¹ Art. 6(1)(b).

²² See COCCO, M. – CORREA MENDONCA, H. – MELO MIRANDA, C. Portugal. In: WHEELER, J. (ed.). *The Space Law Review*. 4th ed. London: Law Business Research Ltd., 2022, p. 169.

²³ Art. 6(2).

²⁴ Art. 8(4).

²⁵ Art. 5.

²⁶ Art. 4(3).

²⁷ Art. 9(2).

²⁸ Art. 19(1).

Thus, the decree-law provides for a direct link between the licence and the liability of the licence holder for damages. The interlink between the licence for space activities and the liability of the licenced person is twofold: Firstly, the decree-law provides for an obligation of a licence holder to obtain compulsory civil liability insurance and – at the same time – to validly maintain it during the whole period of the licensed period. In this respect, the decree-law foresees that the minimum capital to be insured is to be defined in an administrative rule, approved by members of the Government in charge of the finance, science, and technology.²⁹ Also in this respect, the decree-law has introduced certain innovations. In particular, the insurance may be waived or the insured amount reduced in certain cases, such as for small satellites, space operations carried out exclusively for scientific, R&D, educational or training purposes, or operations with low risk.³⁰ Secondly, the decree-law reflects the fact that in the international public law, liability for damages caused by space activities is directly linked to the launching state.³¹ In this respect, the decree-law provides that “*where the Portuguese Republic, in accordance with international obligations to which it is bound, is accountable for any damage caused by a space object, the State shall have the right of recourse against the operator that, in accordance with this Decree-Law, is responsible for that space object*”.³² The regime of this recourse right is further elaborated by subsequent provisions of the decree-law. In principle, the recourse right is of limited character. The state can use its right of recourse up to the limits provided for in an administrative rule to be approved by members of the Government in charge of the finance, science, and technology areas. However, this shall not apply where the damage has been caused by intentional fault and serious misconduct of the licence holder, or by a severe breach of obligations, as imposed by the licence. In these cases, the recourse right of the state will have no financial limitation.³³

Two additional issues, governed by the newly adopted Portuguese legislation, must be mentioned here. Firstly, the decree-law contains provisions on the transfer of a licence³⁴ and on the transfer of ownership of space objects.³⁵ The first is subject to authorisation by the competent national authority and the second is subject to notification. Secondly, the decree-law provides that the procedures for the licence, pre-qualification, registration, and transfer of space objects in connection with activities to be developed in the autonomous regions of the Azores and Madeira, are to be established by means of a regional legislative decree.³⁶ In this respect, a regional space legislation was issued in the Autonomous Region of Azores in 2019.³⁷

²⁹ Ibid.

³⁰ Art. 19(3).

³¹ Liability Convention, Art. II.

³² Art. 18(2).

³³ Art. 18(3).

³⁴ Art. 11.

³⁵ Art. 17.

³⁶ Final Provisions, p. 2.

³⁷ The content of this regional legislation is extensively analysed in COCCO – CORREA MENDONCA – MELO MIRANDA, *c. d.*, pp. 167–168.

In 2020, a national space act was adopted in the Grand Duchy of Luxembourg.³⁸ In similar vein than in the case of Portugal, also the adoption of the new Luxembourgish space act was a part of a much wider space strategy of this tiny state. The fact is, that during the 2010s, Luxembourg became a commercial space exploration hub. At the very end of 2020s, around 20 space companies have already established their presence in Luxembourg, bringing the total to 50 public and private players.³⁹ Further, by supporting the creation of SES, one of the biggest satellite operators in the world, Luxembourg has demonstrated its ability to build a favourable environment for the structural development of activities related to the use of outer space.

Reflecting these successful developments in its own space sector, the aims of the Luxembourgish legislation were twofold: Firstly, the major aim was to build a favourable environment for the structural development of activities related to the use of outer space. In this respect, it is necessary to add that the Act on the Exploitation and Use of Space Resources was adopted in Luxembourg already in 2017. Thus, the adoption of the national space act in 2020 represents another step in establishing of a transparent and efficient legal framework. Having said this, one must also bear in mind that the establishment of space legislation is a part of a much wider strategy of the Grand Duchy of Luxembourg to strengthen its position in the diplomatic relations, both at international and EU level.⁴⁰ Secondly, the adoption of a new legislation, especially focused towards space activities, has been considered as a necessity due to the increasing number of space activities, registered in Luxembourg. In particular due to the obligations, arising to the Grand Duchy of Luxembourg from the Liability Convention, there was a need to guarantee that only experienced and financially stable companies are conducting space activities.⁴¹

Similar to the above analysed Portuguese legislation, the newly adopted Luxembourgish space act also stipulates that any space activity requires an authorisation, issued by the competent Minister in charge of the space policy and legislation.⁴² This authorisation shall take the form of a ministerial order (*arrêté ministériel*). Further, the national space act of Luxembourg also contains several provisions, which are designed in a very similar way than those in the Portuguese legislation. This is the case of provisions governing withdrawal of authorisation,⁴³ transfer of authorised activities to a third person⁴⁴ and registration of space objects.⁴⁵

³⁸ *Loi du 15 décembre 2020 portant sur les activités spatiales.*

³⁹ See SERRES, M. How Luxembourg becomes Europe's commercial space exploration hub. *Annales des Mines – Réalités Industrielles*. 2019, No. 2, p. 69.

⁴⁰ See STEELE, J. Luxembourg and the Exploitation of Outer Space. *Nottingham Law Journal*. 2021, Vol. 29, No. 1, p. 32.

⁴¹ See HOFMANN, M. – BLOUNT, P. – LETERRE, G. – SALMERI, A. – ZARKAN, L. *Space Legislation of Luxembourg*. Alphen aan den Rijn: Wolters Kluwer, 2022, pp. 100–102.

⁴² Art. 5(1).

⁴³ Art. 9.

⁴⁴ Art. 12.

⁴⁵ Art. 15.

Facing the dynamic increase of commercial space activities, one of the reasons for adoption of the new space act were the efforts of the Luxembourgish legislature to avoid international responsibility of the Grand Duchy of Luxembourg under the Liability Convention. The national space act itself provides for two mechanisms to minimise such responsibility. Firstly, it provides for a rather elaborated financial and corporate requirements, the applicant needs to fulfil in order to obtain an authorisation.⁴⁶ These requirements have roots to much older provisions whose effectiveness has been proven by the success of Luxembourg's financial sector. Rather than creating an entirely separate legal framework for the space sector, the Luxembourgish legislature chose to adapt pre-existing solutions to the regulatory regime applicable to credit institutions under the Financial Sector Act. Consequently, the space legal framework of Luxembourg now imposes on space operators engaged in space activities rules and licensing conditions similar to those applicable to Luxembourgish credit institutions. Having said this, it is worth adding that while the national space act provides for an unlimited liability of the authorised operator for any damages caused during its space activity, including during any preparation works and duties,⁴⁷ the Grand Duchy of Luxembourg will bear potential responsibility as the launching state under the Liability Convention. By establishing a very rigorous regime of requirements, the Luxembourgish legislature aimed at limiting the entry to the space industry only to corporations with a very high profile in expertise and financial stability. Secondly, the national space act of Luxemburg contains a provision on the transfer of authorised space activities to a third person.⁴⁸ This provision also foresees a potential transfer of authorised space activities to a transferee operator, being not established in the Grand Duchy of Luxembourg.⁴⁹ In this respect, it is provided that the competent authority of Luxembourg shall refuse transfer authorisation in the absence of a special agreement with the state of which the transferee operator is a national. Pursuant to this provision, such agreement must guarantee the Grand Duchy of Luxembourg "*against any recourse brought against it on account of its international liability or for compensation for loss or damage*".⁵⁰

At this place, a major difference can be identified between the newly adopted space regulations in Portugal and in Luxembourg. While the newly adopted national space law of Luxembourg aims principally to facilitate commercial endeavours of private corporations in the space sectors. In contrast to the Portuguese decree-law, the national space legislation of Luxembourg does not provide for any special provisions, applicable to scientific, or research and development activities in space. While the Portuguese legislation is more elaborated and contains a number of simplified procedures, the legislation newly adopted in Luxemburg was designed in a very uniform and streamlined way. The fact is, however, that they both share certain common features.

⁴⁶ Art. 6 and Art. 13.

⁴⁷ Art. 4.

⁴⁸ Art. 12(1).

⁴⁹ Art. 12(4).

⁵⁰ *Ibid.*, in fine.

A national space act was issued in 2022 also in Slovenia.⁵¹ In a slightly different fashion than in the case of Luxembourg, the adoption of the national space act in Slovenia represents a part of a much wider space strategy of this small country in Central Europe. The Slovenian space industry primarily comprises start-ups and small and medium-sized enterprises (SMEs), initially born in the cradle of the academic sector.⁵² These entities have been mainly active in engineering and manufacturing of upstream components and platforms, development of ground segment equipment, and exploitation of space data and signals for downstream applications. In September 2020, the aerospace company *SkyLabs* became the first Slovenian company with its own technology in Space when, together with the University of Maribor, they successfully launched the first Slovenian satellite. The TRISAT nanosatellite was entirely designed, manufactured, and assembled in Slovenia.

Slovenia adopted its own national space act primarily to establish a transparent and efficient national framework for space activities to be carried out by private corporations.⁵³ Similar to the above analysed Portuguese and Luxembourgish legislation, the national space act of Slovenia also provides that space activities shall be only operated based on a licence (*dovoljenje za izvajanje vesoljske dejavnosti*).⁵⁴ In similar vein as the above analysed pieces of national legislation, the Slovenian national space act also contains provisions on conditions for issuing a licence,⁵⁵ revocation of the licence issued,⁵⁶ and the transfer of the licence to another person.⁵⁷ However, in a very strict contrast to the previously analysed Portuguese and Luxembourgish legislation, the Slovenian national space also provides that when issuing a licence, the competent authority may ask for an opinion of the European Space Agency.⁵⁸ Thus, the Slovenian legislation made a unique step towards a licencing regime, which will only occur on national level, but will potentially include an opinion of a supra-national agency.

The Slovenian legislation also provides for a direct link between the issuance of the licence and the liability of the licenced person. The licence holder shall be strictly liable for any damage caused by their space object on the surface of the Earth or to a vessel or aircraft in flight.⁵⁹ This link between the licence and the liability regime is reflected by two mechanism: Firstly, before the launch of a space object into outer space, the licence holder shall take out insurance to cover any damage caused by the space activity to persons or property. In contrast to the Portuguese legislation, which delegated the specification of the amount to be insured to a subsequent administrative rule, the

⁵¹ *Zakon o vesoljskih dejavnostih (ZVDej)*.

⁵² See PAVLOVIČ, L. Slovenia entering the space. *Electrotechnical Review*. 2016, Vol. 83, No. 3, pp. 81–86.

⁵³ See LESKOVŠEK, A. *Mednarodno pravo vesolja in nacionalne zakonodaje o vesoljskih dejavnostih*. Magistrsko diplomsko delo. Ljubljana: Pravna fakulteta, 2023, pp. 2–3.

⁵⁴ Art. 4.

⁵⁵ Art. 5.

⁵⁶ Art. 12.

⁵⁷ Art. 13.

⁵⁸ Art. 9.

⁵⁹ Art. 16.

Slovenian legislation sets the minimum amount of EUR 60,000,000 per loss event to be insured directly in the text.⁶⁰ In this respect, the Slovenian legislation also provides for cases, where insurance will not be required (see below).⁶¹ Secondly, the Slovenian national space act also provides that the state has the recourse right towards the licence holder.⁶² The construction of the recourse rights here is very similar to the scheme, as anchored in the Portuguese decree-law. The aim of these provisions is very much the same. They both reflect the international responsibility of the launching state pursuant to the Liability Convention and aim to provide this launching state a legal instrument to reimburse damages from the licence holder, as liable under the national legislation. Having said this, the Slovenian national space act provides for a cap on the amount which is to be reimbursed by the state from the respective licence holder. This cap is in principle limited to the amount insured.⁶³

The newly national space act of Slovenia also contains several innovatory provisions. In particular two of them are worth to be mentioned. Firstly, the national space act of Slovenia contains rules for transnational transfer of registered space objects. In this respect, both a transfer of to a corporation, established in another state⁶⁴ and the transfer from a corporation, established in another state to the jurisdiction of Slovenia⁶⁵ are governed. By establishing rules for these transfers, Slovenia aims to establish a transparent framework for a prospective increase of commercial transactions in space objects in the *New Space Era*. Secondly, the newly adopted Slovenian national space act has also established rules *vis-à-vis* research and development activities in space by providing for special insurance regime for low-risk space activities.⁶⁶ When fulfilling certain technical specifications,⁶⁷ these space activities will be excluded from the compulsory insurance.

3. SUMMARY

The three newly adopted national space acts, which were briefly presented by this article, clearly illustrate the gradual emergence of a space administrative law in Europe. While all the acts are in principle referring to the rules provided by respective international agreements, they substantially provide for administrative regimes of licencing, registration, and insurance. Thus, they are undeniably part of administrative law, applying the concepts which have been applied by this branch of law already in the past. At the same time, there has been a clear tendency for cross-fertilisation of mechanisms between the various newly established acts.

⁶⁰ Art. 6(1).

⁶¹ Art. 6(3).

⁶² Art. 16(3).

⁶³ *Ibid.*

⁶⁴ Art. 13(2).

⁶⁵ Art. 13(3).

⁶⁶ Art. 6(3). and Art. 6(4).

⁶⁷ *Ibid.*

The emergence of space administrative law in Europe has been caused by gradual commercialisation and privatisation of space activities. The fact, national space acts were issued in various jurisdictions has been clearly a reflection of the phenomenon of the *ubiquity of technology*. At this place, two major consequences of this phenomenon can be identified. Firstly, the fact, all these acts share in principle the very same basic instruments, support the argument that the newly emerging space administrative law is of transnational character. This is a clear consequence of the *technology ubiquity*. Secondly, the *ubiquity of technology* itself is subject of regulation by the newly emerging space administrative law. Different instruments, governing transfer of rights, arising from the space licences and the transfer of registered space objects have clearly been adopted to regulate this *ubiquity*. At the same time, these instruments currently await their realisation by adoption of particular bilateral agreements, which will certainly soon complement the substance of the space administrative law.

Prof. JUDr. Jakub Handrlica, Ph.D., DSc.
Charles University, Faculty of Law
jakub.handrlica@prf.cuni.cz
ORCID: 0000-0003-2274-0221