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BUILDING THE LEGAL INFRASTRUCTURE FOR SPACE: A COMPARATIVE STUDY OF SPACE LAW AND GOVERNANCE IN POLAND, SLOVAKIA AND SLOVENIA

Abstract: *The space sector in the Central and Eastern European (CEE) region is undergoing a dynamic transformation – from traditional component suppliers to aspiring players with their own national space programmes. The space industry is experiencing significant growth in many independent contexts, driven by growing demand for satellite data, expansion of satellite systems manufacturing and the evolving military dimension of space exploration. In the face of these changes, effective and transparent governance of the space sector is essential, particularly in terms of ensuring a clear division of responsibilities between public authorities and providing ongoing oversight of national activities in space. CEE countries face unique challenges due to their historical context and gaps in space governance.*

This article analyses space governance in some of the countries of the CEE region under the current legal framework, taking into account the different regulatory paths adopted by individual CEE countries and the Western legislative models that have been used; it also provides recommendations for decision-makers in countries without regulations.

The authors have adopted the following structure for the article. The introduction covers the historical context, presenting the legacy of the space industry from the socialist period and defining the geographical scope, the contemporary space ambitions of the CEE region and the research questions and methodology. This is followed by

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a discussion of the international framework, including United Nations treaties, as well as the impact of membership in the European Space Agency and the European Union. The subsequent sections present the governance model and a comparative analysis of the national legal frameworks of countries that have adopted space legislation. The analysis primarily covers the space activities, their licensing, liability and insurance mechanisms, and it considers requirements for sustainable development.

Keywords: space law, CEE region, space law in Poland, space law in Slovenia

INTRODUCTION

The space industry is experiencing unprecedented growth across both civil and military sectors. In the downstream segment,[1] demand for satellite data is rising sharply across multiple industries, while the upstream segment[2] continues to attract traditional government missions alongside an expanding private sector. Two principal factors underlie this transformation: the emergence of so-called "New Space",[3] which is dominated by private companies introducing innovative technologies, reducing costs and broadening accessibility, and the accelerating militarisation of space driven by geopolitical conflict.[4] Both trends are compelling Europe to undertake fundamental reforms of its space policy, law and institutional architecture if it is to assert itself as an autonomous space power.

Two challenges are particularly acute. Firstly, despite holding a leading position in several areas – notably rocket propulsion – Europe's competitiveness gap with the United States and China continues to widen.[5] Secondly, Russia's war against Ukraine has dramatically accelerated the militarisation of space. Until recently, the European Union (EU) and the European Space Agency (ESA) had concentrated their strategies almost exclusively on civil space applications. Only in the wake of the war have EU Member States (MSs) moved to strengthen autonomous security and

[1] The use of satellite data for communication, navigation and observation purposes.

[2] The production and launch of space objects into space.

[3] P. Achilleas, *Foreword – Global change in space governance*, in: B. Bartóki-Gönczy, G. Sulyok (eds.), *The new space era – legal and political perspectives*, Ludovika University Press, Budapest: 2024, p. 9.

[4] B. Bartoky-Gonczy, K. Malinowska, *Paradigm shift in the European Union's space policy: institutional restructuring and its possible consequences for the CEE region*, 7 Frontiers in Political Science 1 (2025).

[5] M. Draghi, *The Future of European Competitiveness*, European Commission, 9 September 2024, Parts A and B, available at: https://commission.europa.eu/topics/competitiveness/draghi-report_en\; European Space Agency, *Report on the Space Economy 2024* (2024), available at: https://space-economy.esa.int\ (both accessed 31 March 2026).

defence capabilities in space,[6] prompting the adoption of a dedicated space defence strategy, the proposed EU Space Act[7] and ongoing institutional reform to address the security challenges arising from conflict on European territory.

The countries of Central and Eastern Europe (CEE) – sometimes described as the "forgotten pioneers of space"[8] – have made a significant contribution to the history of space exploration. Although their space activities began under Soviet influence, many CEE states have since established national space programmes and are now developing space legislation. Today, all CEE countries are affiliated with the ESA, either as full member states or as cooperating states, and are navigating a new wave of challenges associated with private enterprise and the New Space paradigm.[9]

The CEE region occupies a distinctive position within the broader European context. During the early decades of space exploration, CEE countries operated within the Soviet sphere, serving its strategic interests, while Western European nations pursued independent national programmes, eventually founding the ESA in 1975. Although the Soviet era produced a solid technological foundation that the post-Soviet space sector has drawn upon, CEE countries were left significantly behind in terms of industrial competitiveness. Cooperation with the ESA began in the 1990s, progressing from scientific collaboration to participation in major space missions and, ultimately, full ESA membership.

For the purposes of this study, the CEE region comprises Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.[10] Only the most legislatively and institutionally advanced among these countries are examined in detail; however, the conclusions are intended to offer a broader regulatory roadmap applicable to the region as a whole. The article examines the development of national space legislation and governance frameworks in CEE against the backdrop of evolving EU space policy – with particular attention

[6] European Commission, High Representative of the Union for Foreign Affairs and Security Policy, Joint Communication to the European Parliament and the Council. European Union. Space Strategy for Security and Defence, Brussels, 10.3.2023, JOIN(2023) 9 final.

[7] Proposal for a Regulation of the European Parliament and of the Council on the safety, resilience and sustainability of space activities in the Union (EU Space Act), COM(2025), 25 June 2025.

[8] K. Malinowska et al., *Challenges of Entering the Space Market: Case of Entrepreneurs in Central Eastern Europe*, 12 New Space 8 (2024).

[9] G. Denis et al., *From new space to big space: How commercial space dream is becoming a reality*, 166 Acta Astronautica 431 (2020), p. 433; Z. Ewell, *New Space. A Risk-Acceptance Culture, As SpaceX and others privatize space flight, how do the risks of space travel change?*, Leader's Edge Magazine, 30 September 2020, available at: https://www.leadersedge.com/p-c/newspace-a-risk-acceptance-culture (accessed 31 March 2026).

[10] OECD, *Glossary of Statistical Terms: Central and Eastern European Countries (CEECs)* (2003), available at: https://stats.oecd.org/glossary/detail.asp?ID=303 (accessed 31 March 2026).

on the paradigm shift from exclusively civil space applications towards dual-use technologies and the needs of sustainable development.

1. METHODOLOGY

To achieve the objectives of this study, the authors analysed official EU documents, including primary and secondary sources of EU law, together with EU policies and strategies in the field of space. With regard to international law, the examined materials include binding international legal instruments as well as non-binding documents such as guidelines and recommendations adopted by the United Nations. At the national level, the study draws on space legislation of the leading CEE countries in this field – Poland, Slovakia and Slovenia (the only ones in the region that have adopted national space legislation) – while governance arrangements across the broader CEE region are also taken into account. The analysis is further grounded in a review of the current scholarly literature.

Two principal methods are employed: the historical method and legal analysis. The former is used to trace the evolution of the European approach to space, changes in institutional architecture and the space heritage of CEE MSs. The latter is applied to the interpretation of legal acts and legislative instruments.

The article is structured as follows. The third section examines the evolution of the space sector across the CEE region. The fourth section presents a comparative analysis of national space legislation and legislative proposals in selected CEE countries, alongside an assessment of their administrative and governance structures.

2. HISTORY AND EVOLUTION OF THE SPACE SECTOR IN CENTRAL AND EASTERN EUROPE AS A BACKGROUND TO THE DEVELOPMENT OF SPACE LAW AND ADMINISTRATION

The development of space activities in CEE countries was largely overshadowed by the Soviet Union's dominance in space technology.[11] This was due to several factors: the advanced state of Soviet space technology, the significant resources required to develop such technologies, the close links between rocket programmes and strategic weapons systems and the political subordination of these countries to the Soviet Union. As a result, the development of space technology in the CEE

[11] C. Burgess, B. Vis, *Interkosmos: The Eastern Bloc's Early Space Program*, Springer International Publishing, Cham: 2016.

region was of little importance, with the Soviet Union providing ready-made solutions.[12] In 1967, cooperation between the Soviet Union and its satellite countries in the CEE region was formalised through an agreement between their academies of sciences, known later as the Interkosmos programme, which created a framework for cooperation between the Soviet Union and countries such as Bulgaria, Czechoslovakia, Hungary, Poland, Ukraine and Romania. Under the Interkosmos programme, the Soviet Union offered free launch services and space on its satellite platforms for scientific instruments from participating countries. It also provided access to its ground stations and the opportunity for cosmonauts from these countries to participate in manned space missions. In return, the Soviet Union gained access to data collected by instruments from countries cooperating within Interkosmos.[13] Furthermore, from a military point of view, the Soviet Union was interested in space instruments developed by Interkosmos countries in the CEE region.[14]

After the fall of the Iron Curtain in 1991, the economic, political and social situation changed radically, which also affected the space sector of the countries under its influence. Many countries had to quickly restructure their social and economic systems. At that time, CEE countries lacked a clear national strategy for space research and the space industry. The collapse of the Soviet Union opened up new opportunities, particularly the strategic move to join the European Space Agency, which was a turning point for the countries of CEE.[15] The drive for integration with the ESA stemmed from the need to leverage accumulated knowledge within a larger, more structured organisation. Although earlier cooperation with the USSR contributed to scientific progress, it did not foster the development of a strong space industry in individual CEE countries. Joining the ESA provided a clear framework for utilising regional expertise, reflecting the shared desire of CEE countries to join a larger organisation with clearly defined goals regarding space exploration.

Currently, the countries of the CEE region find themselves in a unique situation, on the one hand possessing a space heritage acquired behind the Iron Curtain, and on the other hand struggling with difficulties integrating into the value chains of the ESA. Is being a CEE country a disadvantage or an opportunity to build a truly modern space industry in the region that is capable of meeting the challenges of the changing space landscape? Perhaps it is the countries of the CEE region that will

[12] K. Ziółkowski, *Piętnaście lat działalności Centrum Badań Kosmicznych* [Fifteen years of activity of the Space Research Centre], 2(602) Urania 38 (1992).

[13] P. Elsztein, *Polska w Kosmosie* [Poland in Space], Wydawnictwo Komunikacji i Łączności, Warszawa: 1978, p. 59.

[14] Burgess & Vis, *supra* note 11.

[15] D. Sagath, M. Adriaensen, C. Giannopapa, *Past and present engagement in space activities in Central and Eastern Europe*, 148 Acta Astronautica 132 (2018).

be able to adopt modern national laws that respond to the needs of today's information society and strengthen the countries' defence systems.[16]

The governance of the space sector[17] in the CEE region is also becoming increasingly complex. The organisation of the space sector varies significantly across these countries. In most cases, responsibility for space policy remains divided among multiple administrative bodies, with no clear indication of who is ultimately responsible for a given area. This leads to inefficiency in the administration of the space sectors in most CEE countries. For example, when it comes to cooperating with NASA, Poland was for a long time the only signatory to the Artemis Accords in the region.[18] This changed with the signing of the agreements by Czechia (2023) and Romania (2022).

Although CEE countries share a common history of early space exploration and a similar start in the world of democratic space conquest, each of them finds itself in a slightly different situation in terms of implementing their space strategy and national space programme, providing institutional support for the local space industry and establishing a national space agency. However, there are also some similarities, such as maintaining relations with the ESA and, until recently, lacking national space legislation (with the exception of Poland, Slovenia and Slovakia).

Apart from each CEE country pursuing its own niche in the space sector, efforts are also underway to foster regional cooperation as a counterweight to the technologically established nations of Western Europe. A notable example is the Memorandum of Understanding among the Visegrád Group countries on enhancing cooperation in space research and the peaceful use of outer space, signed in December 2021. The Memorandum seeks to deepen collaboration between Poland, Czechia, Hungary and Slovakia through regular consultations on shared positions in the EU, ESA and UN forums, as well as expert-level exchanges on the European and global space ecosystem. In practical terms, this encompasses sharing knowledge and experience, supporting academic, scientific and industrial cooperation in space-related research and innovation, facilitating joint consortia to strengthen competitiveness in international programmes and raising the visibility of Visegrád space cooperation beyond the region. Such initiatives may help to lower the high

[16] K. Malinowska et al., C*entral and Eastern European Space Sector in the Wider European Space Ecosystem*, in: A.P. D'Costa (ed.), *New Space Economy Handbook*, Oxford University Press, Oxford: 2026, p. 976.

[17] D.L. Oltrogge, I.A. Christensen, *Space governance in the new space era*, 7(3) Journal of Space Safety Engineering 432 (2020).

[18] The Artemis Accords. Principles for Cooperation in the Civil Exploration and Use of the Moon, Mars, Comets, and Asteroids for Peaceful Purposes, available at: https://www.nasa.gov/wp-content/uploads/2022/11/Artemis-Accords-signed-13Oct2020.pdf?emrc=6a08e462651a9 (accessed 31 March 2026).

barriers to entry that have historically confined the space sector to larger states and established global actors.[19]

3. NATIONAL SPACE LEGAL FRAMEWORKS IN THE CEE REGION

3.1. International foundations of space law in the CEE region

The core of international space law consists of five treaties developed under the auspices of the United Nations since the 1960s. The foundational instrument is the Outer Space Treaty,[20] whose principles were elaborated in four subsequent agreements: the Liability Convention,[21] the Rescue Agreement,[22] the Registration Convention[23] and the Moon Agreement.[24] Together, the Space treaties form the principal component of the *corpus juris spatialis*.[25] Four of them – all except the Moon Agreement – have been ratified by the majority of CEE countries, including all three that have adopted national space legislation.[26]

[19] Memorandum of Understanding of the Visegrad Group Countries on Enhancing Cooperation in the Field of Space Research and Peaceful Use of Outer Space, 13 December 2021.

[20] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (adopted 27 January 1967, entered into force 10 October 1967), 610 UNTS 205 (Outer Space Treaty). *See also* K. Myszona-Kostrzewa, Z. Kulińska-Kępa (eds.), *Prawo kosmiczne międzynarodowe, europejskie i krajowe* [International, European, and national space law], CH Beck, Warszawa: 2025; M. Polkowska, *Eksploracja Kosmosu: zagadnienia prawno-polityczne* [Space exploration: Legal and political issues], EuroPrawo, Warszawa: 2021.

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

[22] 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 (Rescue Agreement).

[23] Convention on Registration of Objects Launched into Outer Space (adopted 14 January 1975, entered into force 15 September 1976), 1023 UNTS 15 (Registration Convention).

[24] Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (adopted 18 December 1979, entered into force 11 July 1984), 1363 UNTS 3 (Moon Agreement).

[25] L.J. Smith, *The principles of international space law and their relevance to space industry contracts*, in: L.J. Smith, I. Baumann (eds.), *Contracting for Space: Contract Practice in the European Space Sector*, Ashgate Publishing, Farnham: 2011, p. 48; S. Hobe, *The Impact of New Developments on International Space Law (New Actors, Commercialisation, Privatisation, Increase in the Number of "Space-faring Nations")*, 15(3-4) Uniform Law Review 869 (2010); M. Couston, *Droit Spatial*, Editions Ellipses, Paris: 2014, p. 9; I. Tobjasz, *Historyczne aspekty i aktualne uwarunkowania działalności w przestrzeni kosmicznej* [Historical aspects and current conditions of activities in outer space], 2(10) Obronność. Zeszyty Naukowe 163 (2014), p. 167.

[26] The adoption of the five space treaties has not been universal in the CEE region (OECD definition). Latvia and Albania are not parties to these treaties, Estonia ratified only the Outer Space Treaty, while the Moon Treaty was signed only by Romania (UN COPUOS, *Status of International Agreements relating to activities in outer space as at 1 January 2025*, A/AC.105/C.2/2025/CRP.9).

The Outer Space Treaty obliges states to authorise and continuously supervise the activities of non-governmental entities in outer space and to exercise jurisdiction and control over space objects and personnel.[27] The Liability Convention regulates state liability for damage caused by space objects, differentiating between strict and fault-based liability depending on where the damage occurs; crucially, liability is attributed exclusively to the launching state, regardless of whether the damage was caused by that state or by entities under its jurisdiction.[28] This framework provides an important basis for national rules on allocating liability between states and private operators, both as a rationale for state legislative intervention and as a model for shaping the liability regime within the space sector. The Registration Convention complements the liability regime by requiring states to register space objects, thereby establishing the jurisdictional basis for its enforcement.[29] The treaty regime is supplemented by bilateral and multilateral agreements, UN General Assembly resolutions and communications from UNOOSA and UNCOPUOS. Although constituting soft law only, these instruments play a significant role in the global space law system and frequently serve as models for national space legislation.[30]

Despite the broad ratification of the Space Treaties, to date only approximately 39 countries have enacted dedicated national space legislation – including just three CEE countries. Most ratifying states thus have not yet transposed their international obligations into domestic law. This gap is particularly significant in the context of Art. VI of the Outer Space Treaty, which requires states to bear international responsibility for national space activities and to ensure their authorisation and continuous supervision. Although the Treaty contains no explicit obligation to legislate at the national level, such an obligation can be inferred unambiguously: in any state governed by the rule of law, the authorisation and supervision of private entities cannot be arbitrary or ad hoc, but must rest on pre-established legal rules – a requirement rendered all the more pressing by the dynamic growth of the private

[27] I. Marboe, F. Hafner, *Brief Overview over national Authorisation Mechanisms in Implementation of the UN International Space Treaties*, in: F.G. von der Dunk (ed.), *National Space Legislation in Europe*, Brill, Leiden/Boston: 2011, p. 31; P. Dempsey, *National Laws Governing Commercial Space Activities: Legislation, Regulation, & Enforcement*, 36 Northwestern Journal of International Law & Business 1 (2016), pp. 7–9.

[28] *See in particular* J. Rajski, *Odpowiedzialność międzynarodowa za szkody wyrządzone przez obiekty kosmiczne* [International responsibility for damage caused by space objects], Państwowe Wydawnictwo Naukowe, Warszawa: 1974.

[29] Registration has two main purposes: (1) it aims to enable the identification of a space object, its components or debris and (2) it places the space object under the jurisdiction and control of the launching state; *see e.g.* I. Marboe, *National law*, in: F.G. von der Dunk, F. Tronchetti (eds.), *Handbook of Space Law*, Edward Elgar, Cheltenham: 2015, p. 133.

[30] See Documents and resolution database, available at: https://tinyurl.com/4v7hnwhm (accessed 31 March 2026).

space sector.[31] In 2013, the UN reinforced this expectation through a non-binding recommendation encouraging national regulation of space activities, accompanied by the Sofia Model Law,[32] which sets out minimum elements for national authorisation and supervision regimes.[33] The considerable variation in national space regulations across jurisdictions reflects both the absence of binding international instruments on authorisation and supervision and, within the European Union, the EU's lack of competence to harmonise space law.

3.2. EU space law

For many years, the regulation of upstream space activities remained outside the scope of EU interest. Regulatory activity concerned only the use of satellite services, primarily telecommunications. The liberalisation and privatisation of telecommunications markets in the late 1980s enabled the European Commission to act as a regulatory authority in the satellite telecommunications market,[34] resulting in the adoption of the so-called Satellite Directive in 1994.[35] The Directive extended the rules of the internal market to satellite telecommunications, applying the Directive on terminal equipment[36] and the Directive on competition in telecommunications services markets.[37] Similarly, the satellite market – including satellite Earth observation – was covered by the 1996 Database Directive,[38] which extended copyright protection to satellite images, thereby protecting the commercial interests of Earth observation service providers.

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[31] B. Bartóki-Gönczy, *National space law – European best practices for an effective and competitive national regulatory environment*, in: F. Cecon et al. (eds.) *Proceedings of the Central and Eastern European eDem and eGov Days 2024*, Association for Computing Machinery (ACM), New York: 2024, p. 43; B. Malinowski, *Regulatory Dilemmas of Suborbital Flight*, Springer, Cham: 2024.

[32] UN Resolution No. 68/74 of 11 December 2013 – Recommendations on national legislation for the peaceful exploration and use of outer space; International Law Association (ILA), Space Law Committee, 'Resolution 6/2012: Sofia Guidelines for a Model Law on National Space Legislation' in *75th ILA Conference Reports* (ILA, Sofia, 30 August 2012) 40; also published as UN Doc A/AC.105/C.2/2013/CRP.6 (26 March 2013) (Sofia Model Law).

[33] R. Hoffmann, *Legislating the Final Frontier – Trends and Challenges of National Space Law*, in: B. Bartóki-Gönczy, G. Sulyok (eds.), *The New Space Age – Legal and Policy Perspectives*, Ludovika University Press, Budapest: 2024, p. 186.

[34] *See* Towards a Dynamic European Economy – Green Paper on the Development of the Single Market for Telecommunications Services and Equipment, COM(87) 290 final.

[35] Commission Directive amending Directive 88/301/EEC and Directive 90/388/EEC, in particular with regard to satellite communications, OJ L 268.

[36] Commission Directive 88/301/EEC of 16 May 1988 on competition in the markets for telecommunications terminal equipment, OJ L 131.

[37] Commission Directive 90/388/EEC of 28 June 1990 on competition in the markets for telecommunications services, OJ L 192/10.

[38] Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, OJ L 77/20.

Despite ongoing EU harmonisation efforts, MSs remain independent actors in the field of space. From a legal standpoint, this derives from the Treaty on the Functioning of the European Union (TFEU), which grants the EU only limited powers to regulate space activities. Art. 189 TFEU[39] authorises the EU to "promote scientific and technical progress, industrial competitiveness and the implementation of its policies", and to this end it is empowered to develop a European space policy, support research and technological development, coordinate efforts for the exploration and use of space and establish necessary measures – which may take the form of a European space programme – while explicitly excluding the harmonisation of MSs' laws and regulations. The EU's powers in this field are parallel to those of MSs, meaning that they retain their national competences even where the EU acts in the same area and to the same extent (Art. 4(3) TFEU). MSs therefore remain free to determine their national space policy and to adopt national space legislation. Under the current circumstances, the prohibition on harmonising European space law has increasingly come to be seen as an obstacle to meeting European societies' interests in security and competitiveness, particularly given that space has been recognised as a strategic domain.

Notwithstanding these limitations, one measure being pursued to implement the EU's space and defence strategy is an EU space law framework. The concept was first announced in late 2022 in a communication from the Economic and Social Committee[40] and was subsequently presented as an integral part of the strategy in March 2023, which explained the rationale as follows:

To enhance the safety and resilience of space operations and services in the EU, as well as their security and sustainability, the Commission will consider presenting a proposal for an EU space law. This will promote the development of resilience measures in the EU, the exchange of information on incidents, and cross-border coordination and cooperation.

There is now little doubt that EU space law would establish a consistent approach across the Union, building on the joint communication on the EU approach to space traffic management.[41] The strategy further proposes that EU space

[39] OJ C 326, 26.10.2012, pp. 47–390.

[40] Opinion of the European Economic and Social Committee on the proposal for a regulation of the European Parliament and of the Council establishing a Union programme on secure communications for the period 2023-2027 (COM(2022) 57 final – 2022/0039 (COD)) and the Joint Communication to the European Parliament and the Council: An EU approach to space traffic management – the EU contribution to solving a global challenge; (JOIN(2022) 4 final), OJ C 486, 21.12.2022, pp. 172–184 (the Opinion).

[41] Joint Communication to the European Parliament and the Council: An EU approach to space traffic management – the EU contribution to solving a global challenge. JOIN/2022/4 final.

law should complement the implementation of the NIS 2 Directive,[42] the Cyber Resilience Act[43] and existing cybersecurity frameworks, by establishing specific standards and procedures for cybersecurity in the space sector. According to the mission letter of Commissioner-designate Kubilius, the law would also aim to harmonise licensing requirements in line with the Draghi report.[44] It should be noted, however, that Art. 189 TFEU explicitly excludes the harmonisation of MSs' laws and regulations – a restriction that reflects the strong reluctance of MSs, at the time of the Lisbon Treaty, to relinquish sovereignty in the field of space.[45] In the authors' view, what may be expected in practice is therefore another instance of "creeping harmonisation", achieved by recourse to the internal market's legal basis under Art. 114 TFEU.[46]

If adopted in the form of a regulation – as is currently anticipated – EU space law will leave MSs considerably less freedom to act at the national level. Based on historical experience, the MSs that have already adopted a comprehensive national space law may be forced to revise their legal frameworks. In the case of CEE, where only Poland, Slovenia and Slovakia have enacted dedicated space legislation, the remaining countries wishing to adopt a national space law will face two options: either await the adoption of EU space law in order to determine where national legislation may usefully supplement it or act now on the basis of the known policy assumptions underlying the proposed framework – that is, with a primary emphasis on safety, resilience and sustainability. In the authors' view, the latter approach would better serve the development of the European space sector. While it would likely require subsequent adjustment of national laws to align with the final text of EU space law – as occurred in other fields, notably data protection – waiting for

[42] Directive (EU) 2022/2555 of the European Parliament and of the Council of 14 December 2022 on measures for a high common level of cybersecurity across the Union, amending Regulation (EU) No 910/2014 and Directives (EU) 2018/1972 and repealing Directive (EU) 2016/1148 (NIS 2 Directive) PE/32/2022/REV/2. OJ L 333, 27 December 2022.

[43] Proposal for a Regulation of the European Parliament and of the Council on horizontal cybersecurity requirements for products with digital elements and amending Regulation (EU) 2019/1020, COM (2022) 454 final.

[44] L. Moeller, *Draghi Report – Missed Opportunity for Inclusiveness and Engagement of all European Actors in Space, ESPI Director's Perspective*, September 2024, available at: https://www.espi.or.at/perspectives/draghi-report/ (accessed 31 March 2026).

[45] S. Potter, *Approaching Harmonisation: Examining the European Union's Efforts to Create a Common EU Space Law and Assessing its Potential Legal Foundations*, European Union Working Papers, No. 77/2023, p. 16. and D. Linden, *The Impact of National Space Legislation on Private Space Ventures: Regulatory Competition versus Harmonisation*, 8(1) Journal of Science Policy & Governance 1 (2016), p. 8.

[46] *See further* S. Weatherill, *Competence Creep and Competence Control*, 23(1) Yearbook of European Law, 1 (2004).

the European instrument does not appear advantageous, given the urgent security and resilience needs that the space sector poses for the EU economy as a whole.

To date, 15 EU MSs have adopted national space legislation, which fall into two broad categories. The first comprises countries that have codified only certain aspects of space activities rather than regulating them comprehensively (such as Germany). The second comprises countries that have established a unified legal framework governing the conduct, supervision and registration of space activities in a single comprehensive act (Sweden,[47] Spain,[48] Belgium,[49] France,[50] the Netherlands,[51] Austria,[52] Denmark,[53] Luxembourg,[54] Greece,[55] Finland,[56] Portugal,[57] Slovakia,[58] Slovenia,[59] Italy[60] and Poland). Most of the latter countries supplement the law with implementing regulations in order to codify detailed, often technical rules.

[47] Act on Space Activities (1982:963).

[48] Royal Decree No. 278/1995 of 24 February 1995 issued by the Office of the President of the Council of Ministers of Spain.

[49] Act of 17 September 2005 on activities related to the launch, operation or control of space objects.

[50] Act No 2008-518 of 3 August 2008 on space activities, La loi du 1et aout 2023 de programmation militaire (LPM) 2024-2030.

[51] Regulation of the Dutch Minister of Economic Affairs of 7 February 2008, No WJZ 7119929, containing provisions governing applications for authorisation to conduct space activities and the registration of space objects.

[52] Austrian Federal Act of 2011 on Space Activity Licences and the Establishment of a National Space Register, (Austrian space law) [Bundesgesetz über die Genehmigung von Weltraumaktivitäten und die Einrichtung eines Weltraumregisters], StF: BGBl. I Nr. 132/2011 (NR: GP XXIV RV 1466 AB 1585 S. 135. BR: AB 8628 S. 803.), Ausgegeben am 27. Dezember 2011.

[53] The Danish Space Act of 2016 (Act No. 409 of 11 May 2016), and the implementing regulation on requirements for the approval of space activities in connection with the Danish Space Act of 2016 [Lov om aktiviteter i det ydre rum], LOV nr 409 af 11/05/2016, Sagsforløb 2015/1 LF 128.

[54] Act of 15 December 2020 on space activities (Loi du 15 décembre 2020 portant sur les activités spatiales et modifiant: 1° la loi modifiée du 9 juillet 1937 sur l'impôt sur les assurances dite « Versicherungssteuergesetz » ; 2° la loi modifiée du 4 décembre 1967 concernant l'impôt sur le revenu, Mémorial A1086, N° doc. parl. 7317).

[55] Law No. 4508 on the licensing of space activities – registration in the national register of space objects – establishment of the Hellenic Space Agency and other provisions (Νόμος 4508/2017 (ΦΕΚ 200/A/22-12-2017)).

[56] The Finnish Space Activities Act of 2018 (Suomen säädöskokoelma 63/2018, 12.1.2018), and the Regulation of the Finnish Ministry of Economic Affairs and Employment on Space Activities (Suomen säädöskokoelma 74/2018, 23.1.2018).

[57] Decree-Law No. 16/2019 of 22 January of the Portuguese Presidency of the Council of Ministers (Diário da República n.º 15/2019, Série I de 2019-01-22, pp. 454 – 462).

[58] Act No. 378/2024 on the regulation of space activities (č. 378/2024 Z. z.).

[59] Act of 16 March 2022 on space activities (ZVDEJ), No. 003-02-1/2022/78.

[60] Italian Law No 89 of 13 June 2025 Disposizioni in materia di economia dello spazio [Provisions on the Space Economy], Gazzetta Ufficiale n. 144 del 24 giugno 2025.

3.3. The shape of space law in CEE

When examining the common features of the legal landscape governing space activities in CEE countries, the most striking observation is the absence of dedicated space legislation in most of the region. Only three CEE countries – Poland, Slovakia and Slovenia – have adopted a comprehensive space law, notwithstanding the fact that all countries in the region show commitment to developing a regulatory framework for space activities and tend to have ratified the space treaties and joined the European Space Agency.

Against this backdrop, an ongoing debate concerns whether the absence of space legislation should automatically be regarded as a barrier to entrepreneurs seeking to enter the space market. Views on this question are divided. On the one hand, space law – which, in accordance with Art. VI of the Outer Space Treaty, invariably introduces licensing and supervision requirements – may be perceived as a regulatory burden, and its absence can be read by entrepreneurs as a signal of economic freedom. On the other hand, the absence of a national space law also means the lack of a risk-sharing mechanism under which the state may guarantee, at least in part, coverage for damage caused by space objects belonging to licensed operators. Moreover, the absence of specific regulation exposes the state itself to considerable risk: under the Outer Space Treaty, states bear full international responsibility for damage caused by their nationals in outer space, irrespective of whether domestic legislation exists. What legal experts thus identify as a regulatory gap, entrepreneurs may regard as a competitive opportunity – a view reflected in statements by industry representatives arguing that the CEE region may hold a comparative advantage over Western Europe precisely because of the lighter regulatory burden on space technology start-ups.[61]

In this context, it is worth examining the principal features of these Polish, Slovak and Slovenian laws – with respect to the scope of regulation, the main licensing conditions, sustainability requirements and liability and insurance frameworks – in order to assess how each responds to the specific needs of the space sector in the CEE region. The aim of such an analysis is to draw conclusions that may inform and guide the remaining countries of the region in their own legislative endeavours, while having in mind that the subject and scope of the national space law should first of all be adapted to the stage of development, capabilities and ambitions of the national space industry[62] and aligned with what is expressed in the national space

[61] Survey conducted among entrepreneurs in the Polish space sector, *see* M.T. Kłoda et al., *Polskie prawo kosmiczne – wyzwania i kompromisy* [Polish space law – challenges and compromises], 3(170) Przegląd Sejmowy 95 (2022).

[62] I. Marboe, *National Space Law*, in: F von der Dunk (ed.), *Handbook of Space Law*, Edward Elgar Publishing, Cheltenham: 2015, p. 185.

strategy and the assumptions of the national space programme (if one exists). For this reason, models from other countries should be adopted with caution, as they may prove unsuitable for the geographical, political and economic factors of the country and region.

3.3.1. Polish space law

Almost 15 years after the first legislative attempts, Polish space law finally became part of the global *corpus juris spatialis* when, on 13 February 2026, the Act on Space Activities was adopted by the Polish Parliament and subsequently signed by the president.[63] The Act fulfils not only Poland's international obligations as a party to the Outer Space Treaty, but also the goals set out in the Polish space strategy.[64] The ambition of the Polish legislature is above all to make space law a lever for developing the Polish space sector and ensuring the stability and predictability that are essential conditions for investment. The Act is the product of extensive efforts to reconcile the interests of the state – primarily public safety considerations – with the needs of space entrepreneurs, the prospects for sectoral development and the imperatives of sustainable development. Its underlying objective is to create a legal framework that is both realistic and facilitative rather than burdensome.

The Act regulates space activities and, to a limited extent, suborbital activities, insofar as they take place in outer space. To this end, it employs a broad, general definition of space activities (Art. 8), which encompasses the launch or attempted launch of a space object into outer space; the operation of a space object in outer space; the control of a space object in outer space; and the removal of a space object, including by deorbitation. Outer space is defined as the space more than 100 kilometres above mean sea level. The Act is also intended to apply to new categories of space activities, such as in-orbit servicing and space resource extraction. It does not cover near-space activities taking place below the boundary of outer space; such activities are intended to be regulated either as a new and separate chapter within the aviation law framework or through wholly separate legislation. Activities at high altitudes that take place at least partly in outer space will, however, be classified as space activities.[65] The licensing system confers on the president of the Polish Space Agency the power to authorise and supervise space activities, although the Agency

[63] Act of 13 February 2026 on Space Activities, Journal of Laws 2026, item 465.

[64] Polish National Space Strategy – resolution adopted by the Council of Ministers on 26 January 2017 (Polish Monitor, 17 February 2017, item 203).

[65] Explanatory memorandum to the draft act on space activities (Druk sejmowy nr 2078), available at: https://orka.sejm.gov.pl/Druki10ka.nsf/0/DAE8099475AB816BC1258D6200548D7A/%24File/2078-uzasadnienie.docx (accessed 31 March 2026).

operates as an executive body of the Ministry of Development and Technology (Art. 11).

A further central element of the Act is the system of liability for damage in space, regulated in Chapter 3 (Arts. 27–30). These provisions are designed to cover all types of space activities and to link them to the assumption of the state's partial liability. In the context of a rapidly developing space industry, it is reasonable for the state to assume a share of the risk – for example, by guaranteeing liability in excess of the sum insured under a civil liability insurance policy (Art. 30). This does not apply where damage has been caused intentionally or where activities have been carried out without authorisation. Closely related to the liability framework is the obligation to maintain insurance, regulated separately in Chapter 4 (Arts. 31–34). The Act requires entities conducting space activities to carry liability insurance cover as a condition for obtaining a licence; the required sum insured and the period of validity are to be specified in each individual licence. The Act establishes only a maximum threshold – the amount of cover required may not exceed EUR 60 million – and the specific insurance requirement will be determined based on an individual risk assessment conducted during the licensing process. This approach enables the legislature to calibrate insurance requirements to the actual level of risk and thereby avoid creating disproportionate barriers for new market entrants. Scientific and educational activities, as well as missions conducted in the interests of national security, are exempt from the insurance obligation; in such cases, the state assumes full liability for any damages. A notable feature of the liability regime is the partial extension of its scope to the supply chain associated with the operator. This solution was inspired by French and US space law (Art. 27(3)).

An important feature of the Act is its ambitious approach to safety and the sustainable development of the space sector. It provides that space activities must be conducted in a manner that ensures comprehensive protection of both the public interest and the natural environment. In particular, such activities must not endanger security and defence interests. Operators are also required to minimise risks to human life, health and property – a fundamental condition for the safety of space operations. The Act further requires that the conduct of space activities take into account the need for the long-term sustainable use of outer space for peaceful purposes, including by eliminating or minimising negative impacts on the Earth's environment and on outer space itself, through the prevention of space debris in particular.

Space objects must additionally meet specific technical standards, covering mechanical strength and resistance to the conditions of outer space, propellant and oxidiser stability, engine reliability, energy source stability, communications between

the space object and ground control, the precision of navigation and control systems and thermal control. These requirements apply to all types of space missions, including those conducted by the state. In order to promote transparency and consistency in the application of technical requirements, the president of the Agency is required to publish a list of recommended standards on the Agency's website – a solution designed to harmonise industry practices and facilitate compliance.

Overall, the Polish Act on Space Activities satisfies the requirements of the space treaties and reflects the principal characteristics that the international space law doctrine identifies as necessary features of national space legislation. It is consistent with the Polish space strategy and fits coherently within the national legal order – notably with aviation law, given its intention to regulate suborbital flights in that framework. It establishes a legal system designed to maintain safety both on Earth and in outer space and a liability regime that links the national legal framework with Poland's international obligations. On this basis, Polish space law appears well positioned to avoid creating undue barriers for entrepreneurs entering the space market: its subject matter and scope are formulated broadly and flexibly, liability for damage is shared in part by the state and insurance requirements are calibrated in each case to the actual risk involved.

3.3.2. Slovak space law

In November 2024, the parliament of the Slovak Republic adopted the Act on the Regulation of Space Activities, which entered into force on 1 February 2025.[66] Slovakia thereby became the second Central European country (after Slovenia) to enact national space legislation, joining the growing group of European states that have adopted dedicated space laws over the past decade. The Act forms an integral part of the Slovak Space Strategy 2030+, entitled "Space as an engine of growth", which sets out the country's vision for its engagement in the space economy and the development of a competitive space industry.[67]

The Slovak Act covers "regulated space activities" (section 2), defined as encompassing the commissioning of a space object – including the associated preparatory and supervisory work – as well as its launch, control and return to Earth. Although the Act does not explicitly address territorial or personal jurisdiction, subsequent provisions make it clear that the Slovak law applies to activities carried out by Slovak

[66] Act No. 378 of 28 November 2024 on the regulation of space activities and on the amendment to Act of the National Council of the Slovak Republic No. 145/1995 Coll. on administrative fees, as amended.

[67] Ministry of Education, Science, Research and Sport of the Slovak Republic, A conceptual framework of space activities in the Slovak Republic For years 2020+; Slovak Space Office, available at: https://spaceoffice.sk/ (accessed 31 March 2026).

nationals or legal entities registered in Slovakia, to activities conducted on Slovak territory and to activities on vessels and aircraft registered in Slovakia.[68]

As regards the authorisation system, the Ministry of Transport has been designated as the competent authority, since Slovakia has opted not to establish a separate space agency. The conditions for obtaining authorisation are wide-ranging: the activity must not endanger national security, public safety or public health; it must ensure compliance with Slovakia's international obligations and foreign policy commitments; it must respect the prohibition on the militarisation of outer space; and the operator must demonstrate the requisite technical expertise, submit a space debris mitigation plan and a plan for the safe termination of space activities, comply with ITU regulations on frequencies and orbital positions, maintain civil liability insurance and possess sufficient financial resources (section 3(2)). Certain exemptions from these requirements are provided for defence-related activities, which need only comply with ITU regulations and insurance requirements (section 3(4)). The Act also establishes a national register of space objects, maintained by the Ministry of Transport, which transmits the relevant information to the UN Secretary-General in accordance with the Registration Convention (sections 9–10).

Sustainability requirements constitute an important element of the regulatory framework, expressed through the obligation to submit both a space debris mitigation plan and a safe-termination plan as conditions for authorisation, thereby preventing the creation of uncontrolled objects in orbit. This reflects Slovakia's international commitments and its growing awareness of the challenges associated with the pollution of Earth's orbital environment. In this context, the Act provides for an exemption from the insurance obligation for satellites meeting ecological criteria – specifically, those weighing less than 100 kg and constructed of materials guaranteed to burn up in the atmosphere upon re-entry (section 11(3)). The exemption does not apply where a risk analysis indicates a high probability of damage. This solution, inspired by Slovenian law – which sets a comparable threshold of 150 kg – is designed to encourage operators of low-mass satellites to design environmentally responsible missions. The Act further provides for the state's right of recourse against the operator, subject to a financial limit of EUR 60 million, though the cap is not applicable where the damage has been caused intentionally.

[68] J. Handrlica, M. Novotná, *The Dawn of National Space Legislation in Central Europe and the New Act on Space Activities in the Slovak Republic*, 15 Juridical Tribune – Review of Comparative and International Law 614 (2025).

Overall, the Act represents a significant step towards a transparent, predictable legal environment for commercial space activities in Slovakia, fulfils the country's international obligations under the Outer Space Treaty and related conventions and provides a sound foundation for the development of the Slovak space industry. From the perspective of sustainability in particular, Slovak space law may serve as a useful benchmark: it reflects the Sofia Guidelines (2012), draws on European best practices in space legislation and establishes a clear, transparent authorisation and registration system.[69] One area of potential concern, however, is the minimum insurance threshold of EUR 60 million, which may constitute a significant barrier for smaller operators.

3.3.3. Slovenian space law

Slovenia joined the ranks of space-faring nations relatively recently: in September 2020, its first two satellites – Nemo HD and TRISAT – were launched, and on 16 March 2022 Slovenia adopted its Space Activities Act together with an implementing Decree on the Implementation of the Space Activities Act.[70]

The Space Activities Act comprehensively regulates the following areas (Art. 1): the licensing of space activities, including the conditions and procedures for issuing licences; the maintenance of a national register of space objects; the definition of operators' obligations; the system of liability for damage caused by space objects; and the mechanisms for supervising compliance with the Act. The Act applies to four categories of space activities (Art. 2): those carried out on Slovenian territory; those related to objects registered in the Slovenian register; those carried out outside Slovenia on vessels or aircraft registered in Slovenia; and those conducted by Slovenian nationals or legal persons established in Slovenia, regardless of where those activities take place. The Act introduces precise definitions of key concepts (Art. 3). A space object is defined as an object launched or intended for launch into space, including its component parts. Space activities encompass the launch of a space object into outer space, its operation and operational control in outer space and its return to Earth, including safe landing or controlled destruction. Space debris is defined as space objects remaining in orbit after the end of their operational life, objects generated as a result of space activities and objects that are no longer operational.

[69] M. Hoffmann, J. Kolnik, *Protecting Sustainability by National Law: The 2024/25 Space Act of the Slovak Republic*, IISL Colloquium on the Law of Outer Space, held 29 September – 3 October 2025, Sydney, Australia; available at: https://www.proceedings.com/083103-0028.html (accessed 31 March 2026).

[70] I. Ramuš Cvetkovič, *Introduction and Evaluation of Slovenian Space Activity, Policy, and Legislation Considering International Space Law*, 1(1) Central European Academy Law Review 41 (2024).

The competent licensing authority is the ministry responsible for technology (Art. 4). The conditions for obtaining a licence (Art. 5) include the operator's knowledge of space technologies and financial capacity to carry out the planned activities; compliance with the requirements of international standardisation bodies; and the absence of any threat to national defence, public order, the safety of persons and property, intelligence and security operations, public health or the environment. The operator is required to submit a risk assessment covering all of the above categories. In line with the UN Space Debris Mitigation Guidelines, operators must present measures to reduce the generation of space debris, plan a safe end-of-mission – which may include controlled re-entry, deorbitation, atmospheric burn-up or transfer to a graveyard orbit – and obtain a statement from the Ministry of the Environment confirming that the planned activity will not adversely affect the environment.

The Act establishes a national register of space objects (Art. 14), maintained by the relevant ministry. Its principal purposes are to collect data on space objects launched under Slovenian jurisdiction, transmit that data to the UN Register and ensure the flow of information to the UN Secretary-General. The public register is maintained as an electronic database, ensuring transparency and enabling effective information management.

An important feature of Slovenian space law is the operator liability regime. The Act distinguishes between two types of liability: strict liability for damage caused by a space object on the Earth's surface or to a ship or aircraft in flight and fault-based liability for damage caused in outer space – reflecting the framework of the 1972 Liability Convention. The Act also establishes a state recourse mechanism: where the Republic of Slovenia pays compensation for damage at the international level, it is entitled to seek reimbursement from the responsible operator, subject to a cap of EUR 60 million (corresponding to the compulsory insurance limit); above that threshold, the financial risk is borne by the state.

The Act requires operators to have civil liability insurance cover of at least EUR 60 million prior to launch (Art. 6), covering damage to persons, property and the environment. A system of incentives for operators of small satellites meeting certain environmental criteria provides for two categories of full exemption – applicable to ultra-light satellites and satellites in high orbits – and three categories of reduced insurance requirements, applicable to small constellations and certain propelled satellites in low and high orbits. A condition for reduced requirements is that the satellite be designed to burn up completely upon atmospheric re-entry, encouraging the use of easily combustible materials and minimising the risk of space debris (Art. 6(3)(a)).

The Act establishes a graduated system of information obligations for licensed operators. Alongside standard reporting duties, operators are required to respond immediately to crisis situations posing a threat to human safety, the environment, public order or national security. A further category of obligations concerns operational changes and, notably, the termination of space activities – including compliance with end-of-mission requirements such as deorbitation or transfer to a graveyard orbit – enabling the competent authority to update the national register and monitor ongoing compliance.

The Slovenian Space Activities Act serves as an important reference point for other CEE countries considering the adoption of national space legislation. Its added value lies in a regulatory framework that is genuinely supportive of small satellites and start-ups, a practical approach to the implementation of international obligations and procedural flexibility combined with high safety standards. Although the insurance threshold is high – as in Slovakia, the minimum stands at EUR 60 million – the Act offers a comprehensive system of exemptions and reductions calibrated to the specific parameters of the mission and the operator concerned.

4. INSTITUTIONAL STRUCTURES OF THE SPACE SECTOR IN CEE

As shown in section 4, only a few countries of the CEE region have adopted a national space law. This does not mean, however, that the others are absent on the space scene. On the contrary – most CEE countries have started their regulatory journey by establishing governance institutional structures which will eventually be complemented by comprehensive space regulatory framework. Therefore, almost all the CEE countries have implemented their own space strategies, which include elements of science, research and development or international cooperation. In this regard, certain patterns of space-sector governance are evident in the region, and they depend greatly on such indicators as historical heritage, relatively low levels of public and private investment in the space sector, a lack of awareness among local authorities of the potential of the space sector, a continuing lack of prioritisation of the space sector and limited cooperation between institutions and industry.[71] This is subject to sweeping changes according to the needs of security and defence aspects, the growth of private entities in the space ecosystem and the high risks associated with their activities, making it difficult to manage and govern space.

As mentioned in the introduction, CEE countries are in a special, not necessarily favourable situation, as they developed their space capabilities behind the Iron

[71] Malinowska, *supra* note 8.

Curtain for decades. The consequences of this legacy are now evident in the lack of developed tools for governing space activities, both institutional and private. Along with the gap in national space legislation, there is also a lack of appropriate national space agencies with the authority to coordinate national space sectors. Responsibilities for coordinating space activities are often divided among a dozen or so different entities. It is also common for these responsibilities to be shared between the relevant ministry and the national space agency, which can lead to an unclear division of responsibilities and thus too many ambiguities or unnecessary procedural complications that can have a negative impact on the development of the national sector. Furthermore, although a space agency is formally an independent legal entity (as in Poland), it may at the same time be subordinate to the relevant ministry. Such a governance structure can significantly hamper the decision-making process and the implementation of space policies or programmes. In most of them, space activities are coordinated within the main ministry, but it is also clear that these competences are delegated among various ministries responsible for specific elements of space. A small number of the countries analysed have a special national space agency established by a separate law or within the framework of national space legislation.[72]

As regards the model of space governance in CEE, most countries rely on joint coordination between several ministries and various related public agencies. Considering the concept of space governance in Western European countries, it appears that the "New Space" countries of CEE are following the same path. An issue that deserves more attention is whether the growing dependence on space technology and its civilian and military applications requires a rethinking of the role of space agencies. Nowadays, the question arises as to whether they should be given greater independence and coordination powers, rather than being subordinate to various ministries. This issue is illustrated by the following table, which indicates for each country the competent ministries and whether there are dedicated space agencies responsible for the governance of space activities.

[72] *E.g.*, the Polish Space Agency was established by the Act of 26 September 2014 on the Polish Space Agency. Journal of Laws of 2020, item 1957, later amended by the Act of 13 June 2019 amending the Act on the Polish Space Agency and the Act on Government Administration Bodies (Journal of Laws of 2019, item 1248).

Table 1.1 Division of competences for space governance in CEE countries[73]

COUNTRY	RESPONSIBLE MINISTRY	NATIONAL AGENCY/ OTHER ENTITY
Poland	Ministry of Economic Development and Technology	Polish Space Agency (Polsa)
Hungary	Ministry of Foreign Affairs and Trade	Department for Space Activities, Hungarian Ministry of Foreign Affairs and Trade
Czechia	Main ministry: Ministry of Transport Ministry of Education, Youth and Sport Ministry of Defence and Office of the Government of the Czech Republic Ministry of Industry and Trade Ministry of the Environment Ministry of Foreign Affairs other relevant public entities or ministries and governmental bodies	Czech Space Office
Slovakia	Distributed among 10 ministries: Ministry of Transport and Construction Ministry of Education, Science, Research and Sport Ministry of the Interior of the Ministry of Foreign and European Affairs of the Slovak Republic Ministry of the Environment of the Slovak Republic	Slovak Space Office
Slovenia	Ministry of Economy, Tourism and Sport	Slovenian Space Office
Croatia	Ministry of Science and Education	-
Bulgaria	Ministry of Innovation and Growth	-
Romania	Ministry of Education, Research, Youth and Sport	Romanian Space Agency (Rosa)
Lithuania	Ministry of Economy and Innovation	Lithuanian Space Office/Agency for Science, Innovation and Technology
Latvia	Ministry of Economics/Ministry of Education and Science	Latvian Space Office
Estonia	Ministry of Economic Affairs and Communications	Estonian Space Office

[73] K. Malinowska, K. Hopej, *Governance of the Space Sector in the CEE Region. Role of the space agencies*, Conference Paper, CEA, Budapest: 2024.

CONCLUSIONS – THE UNIQUE HERITAGE AND CHALLENGES OF THE CEE REGION REGARDING SPACE LAW AND GOVERNANCE

This study has analysed the legal and institutional governance of the space sector in Central and Eastern Europe against the backdrop of dynamic change in the global space industry, the growing militarisation of space and the evolving regulatory framework of the EU. The CEE region is characterised by a distinctive trajectory of space sector development – from the legacy of the Interkosmos programme and structural dependence on the Soviet Union, through political transformation and the difficulties of the post-transition period, to the current dynamic integration with ESA and the pursuit of technological independence. This development path creates both structural challenges and opportunities to build a modern, flexible space industry capable of responding to the demands of the New Space era.

A comparative analysis of the space law of three CEE states reveals a number of significant common features, reflecting both shared international obligations and the particular characteristics of the region's emerging space sector. All three have established a licensing-based authorisation system, a national register of space objects and a liability regime linking the operator's responsibility to the state's obligations under the Outer Space Treaty and the Liability Convention. A noteworthy point of convergence between the Polish and Slovak laws – both adopted more recently – is the explicit definition of outer space as the space more than 100 kilometres above sea level, thereby resolving a longstanding ambiguity in international law, providing legal certainty for operators and following the standards of the newest national space laws. On the question of insurance, an important structural divergence is observable: Polish law sets a maximum insurance threshold of EUR 60 million, subject to reduction on the basis of an individual risk assessment conducted during the licensing process, whereas both Slovenian and Slovak law establish a minimum requirement of EUR 60 million. This distinction is not merely technical: it carries material implications for market access. A mandatory minimum of EUR 60 million may constitute a significant barrier for the start-ups and small and medium-sized enterprises that increasingly populate the CEE space sector, whereas the Polish approach of adjusting the required insurance cover to the individual risk profile of each mission is arguably better suited to the realities of an emerging space market.

All three laws were adopted ahead of the proposed EU Space Act, and they therefore represent autonomous national responses to the international obligation to regulate space activities. Nevertheless, each places considerable emphasis on sustainability and the long-term responsible use of outer space – through mandatory space debris mitigation plans, end-of-mission requirements and, in the case of Slovenia and Slovakia, incentive mechanisms tied to the mass and design of satellites.

In this respect, the three CEE laws may be said to anticipate and align with the sustainability pillar of the forthcoming EU Space Act. A further shared feature – and one that goes beyond the currently proposed EU Space Act – is the treatment of military missions. Each country has provided exemptions for defence-related activities from certain regulatory requirements; yet both Polish and Slovak law retain the obligation for such missions to comply with sustainability requirements, including space debris mitigation standards. This approach reflects a broader recognition that the long-term viability of outer space as a shared resource cannot be subordinated to short-term security considerations, and it sets a standard that the EU legislator may ultimately be called upon to follow.

A final observation on the legal framework concerns the governance and administrative architecture underpinning space activities in the three countries. A common pattern across the CEE region is the fragmented distribution of institutional competences among multiple ministries and governmental bodies. In Poland, the Polish Space Agency operates as an executive body of the Ministry of Development and Technology, while national security and defence matters fall within the purview of the Ministry of Defence and radio frequency management issues to separate regulatory authorities. A similar dispersion of competences is observable in Slovakia, where the Ministry of Transport serves as the primary licensing authority, yet must coordinate with the ministries responsible for defence, foreign affairs, education and the environment at multiple stages of the authorisation process. Slovenia's model, though comparatively streamlined, likewise distributes oversight functions across several bodies. This institutional fragmentation carries practical consequences: it may impede effective governance, slow licensing procedures and – critically – complicate coherent communication between the public sector and an increasingly dynamic commercial space industry. For start-ups and innovative enterprises seeking rapid regulatory clearance, the absence of a single, well-resourced and genuinely autonomous space authority with cross-cutting competences represents a structural disadvantage compared to more established space-faring nations.

The study's findings confirm that the principal challenge to the development of the space sector in CEE is the absence of a coherent legal and institutional framework. Only three countries in the region have adopted comprehensive space legislation, while responsibility for the sector in the remaining states is dispersed across numerous ministries without a clear division of competences or transparent rules of operation. This fragmentation generates administrative inefficiency and hinders both the development of domestic industry and the fulfilment of international obligations under the Space Treaties. The comparative analysis of Polish, Slovak and Slovenian legislation further demonstrates that effective space law must be tailored to the specificities of the domestic industry and its stage of development:

mechanically transposing solutions from Western jurisdictions may prove ill-suited given the different geographical, political and economic conditions of the CEE region. Striking the right balance between security requirements and support for innovation – particularly for start-ups and companies operating in the New Space sector – is therefore crucial.

The increased legislative and political activity of the EU adds a further dimension to the regulatory landscape. The forthcoming EU Space Act creates the prospect of harmonisation, the removal of internal market barriers and the risk of curtailing the regulatory autonomy of Member States. For CEE countries that have yet to adopt national space legislation, a strategic dilemma arises: to await the adoption of the EU Space Act – at the cost of a potential competitive disadvantage – or to act immediately on the basis of the known policy assumptions underlying the future European framework, namely safety, resilience and sustainable development. In the authors' view, the latter course offers greater long-term benefit, even if it entails subsequent adjustment of national laws to align with the final text of the EU Space Act.

Across all three of the examined national laws and the proposed EU Space Act, sustainability requirements are consistently and prominently addressed – encompassing space debris mitigation standards, technical requirements for atmospheric burn-up and mandatory end-of-mission plans. This reflects a growing awareness of the long-term consequences of space exploration and the legal embodiment of intergenerational responsibility. Notably, and in contrast to the proposed EU Space Act – which excludes military space missions from its scope – the space laws of the CEE countries examined here do not exempt government or defence missions from sustainability obligations. This represents a more stringent and, in the authors' view, more principled approach, – one that the EU legislator would do well to consider as the Space Act continues through the legislative process. As the CEE space sector matures and the volume of licensed activities grows, streamlining administrative structures, ensuring clear lines of institutional responsibility and fostering a genuine regulatory partnership with industry will be the defining governance challenges of the decade ahead.