Conclusion

Top 10 Things to Know About Space Law and Policy

1. Space Activities Are Regulated By a Mix of International and National Rules.

The legal foundation for space activities is provided by five international treaties and a set of principles adopted by the United Nations. These rules are complemented by an increasing number of space laws enacted at the national level. Other relevant provisions can be found in the context of space-related international organizations.

2. The United Nations Plays a Central Role in the Law-Making Process Related to Outer Space.

The main international rules applicable to human activities in outer space have been elaborated within the United Nations. A dedicated committee to deal with technical and legal issues connected to space activities exists, the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS). Although the law-making activity within UNCOPUOS has gradually slowed down, the committee remains the principal forum for discussion of space-related issues such as voluntary measures to decrease the creation of orbital debris and to pursue in a constructive way the sustainability of space.

3. The Adoption of Soft Law Instruments Currently Constitutes the Most Viable Method for Addressing Space Issues on the International Level.

For several years states have been unable to agree on new binding international norms on space matters. The emergence of key issues in the area of space activities has forced the international community to pursue regulatory measures to address them. The adoption of non-binding instruments, the so-called soft laws, has emerged as the most workable way to achieve this goal. Soft law documents have typically been formulated in the context of inter-governmental and non-governmental organizations.

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SpringerBriefs in Space Development, DOI: 10.1007/978-1-4614-7870-6,

4. Space Actors Include States, Inter-governmental Organizations and Private Entities

During the first decades of the space era space activities were the exclusive domain of states. Increasingly, thanks to a favorable regulatory environment and attracted by potential profits, private entities have actively entered the space business. The impact of private operators in the space market is constantly growing. Additionally, some inter-governmental organizations play an important part in space matters.

5. Space Activities Must Be Carried Out in Conformity With Fundamental International Law Principles.

International space law is a branch of public international law. All activities in outer space must be undertaken in full compliance with fundamental principles of international law, particularly those included in the U. N. Charter. This idea is enshrined in Article III of the 1967 Outer Space Treaty. Although there are exceptions, most countries seek to conform to the provisions of the U. N. treaties and other relevant elements of space law and regulations.

6. Outer Space Is Free for Exploration and Use By All Nations Without Discrimination.

All states have the right to freely access, explore and use outer space. No country needs to obtain authorization to perform space activities or can be discriminated against based on its level of economic development. This principle is laid down in Article I of the 1967 Outer Space Treaty.

7. No Part of Outer Space, Including Celestial Bodies, Is Subject to National Appropriation.

This is a cardinal provision of space law that clearly helps to distinguish the legal situation on Earth from that in space. On Earth, states exercise their sovereign authority over physical territories. Appropriation by claim of sovereignty, use, and occupation were the traditional ways in which states would claim unowned areas. International space law prohibits such appropriation and establishes that outer space and its celestial bodies are international areas (sometimes referred to as a ‘common’), which cannot be appropriated by anybody. Such a prohibition also extends to all private entities engaged in space activities. This provision makes private ownership claims over celestial bodies fallacious and void of any legal significance. The non-appropriation principle is provided for in Article II of the 1967 Outer Space Treaty.

8. The Commercialization of Space Activities Is a Growing Trend in the Twenty-First Century.

The increasing application of space technologies, coupled with the ever-increasing request for space services in the civilian context, represent driving forces for the commercialization of outer space. Sectors previously under strict governmental control have been made more accessible to the private sectors and open to commercial endeavors. This trend has been particularly visible in the field of manufacturing and operation of communications satellites and in the launching business, but is now evolving into areas such as commercial space travel and private space habitats.

9. The Long-Term Sustainability of Space Activities is Threatened by Environmental and Security Concerns.

The possibility to carry out activities in outer space in the years to come is undermined by environmental issues and security concerns. On one side, a vast number of orbital debris threatens the safety of space objects. On the other side, the defense implications of satellites make such space facilities a potential military and strategic target. The international community has undertaken soft law initiatives to address these issues. A more traditional approach, resulting in hard law binding obligation, might be preferable in the long run.

10. The Exploration and Use of Outer Space Influence International Relations and International and National Decision-Making.

Space activities have a profound impact on modern societies both from a civilian and military perspective. Millions of people benefit from space applications on a daily basis. Furthermore, space technologies significantly augment the efficiency and precision of military operations on the ground. Consequently, ensuring free access to and use of outer space and guaranteeing security of space objects are priorities of the political agenda of the most advanced nations. National space policies and strategies delineate a country's approach towards space-related issues on a national and global scale.

End Notes

1. This definition is taken from the Law.com dictionary, and it is accessible at http://dictionary.law.com/Default.aspx?selected=1111.
2. For a definition of 'space law' see F. Lyall/P. Larsen, Space law: a treatise, Ashgate Publishing (2009), p. 2; I.H.Ph. Diederiks-Verschoor/V. Kopal, An introduction to space law, Kluwer Law International (2008), p. 6.
3. V. Kopal, Outer space—A legal issue, in C. Brünner, A. Soucek, Outer space in society, politics and law, Springer Wien, New York (2011), p. 224;
4. The 100 km demarcation has also been accepted by the Fédération Aéronatique Internationale (FAI). The FAI promulgates standards and keeps record of space activities. However, the FAI is a non-governmental body; thus its views are not binding upon States. Significantly, also the Australian Space Law Act sets the demarcation between airspace and outer space at an altitude of 100 km from sea level.
5. The 100 km margin is based on the Karman line theory. According to this theory, which is also known as the "aerodynamic lift theory", everything beyond 100 km above sea level is considered as 'outer space' because starting from this altitude any aircraft would have to fly faster than orbital speed to get enough aerodynamic lift to support itself.
6. See http://www.thefreedictionary.com/policy.
7. See F. Lyall/P. Larsen, supra footnote 2, pp. 31 ss.
8. G. Lafferranderie, Introduction, in G. Lafferranderie (ed.), Outlook on space law over the next 30 years, Essay published for the 30th anniversari of the Outer Space Treaty, Kluwer Law International (1997), pp. 2–5.
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11. UNGA Resolution 1348 (XIII), "Questions of the Peaceful Use of Outer Space", 13 December 1958.

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12. UNGA Resolution 1472 (XIV), "International Cooperation in the Peaceful Uses of Outer Space, 12 December 1959.
13. Generally, on this point see V. Kopal, United Nations and the progressive development of international space law, 7 Finnish Yearbook of International Law 1(1996).
14. UNGA Resolution 1721 (XVI), 20 December 1961.
15. UNGA Resolution 1962, 13 December 1963.
16. On the topic of soft law see A. Boyle, Soft law in international law-making", in M.D. Evans. (ed.), International law, (Oxford University Press, 2nd edition (2006), pp. 141–158; Andrew T. Guzman, Timothy L. Meyer, Explaining soft law, Berkley Program in Law and Economics, WP series, (2009).
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18. For a general analysis of the five UN space treaties see C.Q. Christol, The modern international law of outer space, Pergamon Press (1982).
19. For a comprehensive description of the provisions of the Outer Space Treaty see S. Hobe/B.Schmidt-Tedd/K.U. Schrogl (eds.), Cologne Commentary on Space Law, Vol. I—The Outer Space Treaty, Carl Heymanns Verlag, (2009).
20. For example, this is the argument used by some private companies selling extraterrestrial properties on the web. For a detailed discussion of this topic see V. Pop, The men who sold the Moon: science fiction or legal nonsense?, 17 Space Policy 195, (2001); F. Tronchetti, The non-appropriation principle as a structural norm of international law: a new way of interpreting Article II of the Outer Space Treaty, 33 Air Space Law 277, issue 3, (2008).
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24. M.J. Sundahl, Rescuing space tourists: a humanitarian duty and business need, 50 IISL Proceedings 204 (2007).
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26. A damage is a "loss of life, personal injury or other impairment of health, or loss of or damage to property of States or of persons, natural or judicial, or property of international intergovernmental organizations", Article I, a, Liability Convention.

27. The State which launches an object into space, the so-called "launching State", can be:) a State which launches or procures the launching of a space object; 2) a State from which territory or facility a space object is launched. It should be noted that the word 'launching' includes attempted launching", Article I, b, Liability Convention.
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31. Article III, Registration Convention.
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56. See the Inter-Agency Space Debris Coordination Committee's website at http://www.iadc-online.org.
57. The Space Debris Mitigation Guidelines of UNCOPUOS has been published in 2010 by the United Nations Office for Outer Space Affairs (UNOOSA) and are available at http://www.unoosa.org/pdf/bst/COPUOS_SPACE_DEBRIS_MITIGATION_GUIDELINES.pdf.

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59. Commercial Space Transportation Licensing Regulation, Part 415.39. For more information on this Regulation see L. Viikari, supra footnote 54, p. 108.
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63. See Joseph N. Pelton, Orbital Debris and Other Space Threats, Springer Press, New York (2013) for a description of the Space Data Association and its current membership.
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68. In this respect see R. Jakhu (ed.), National regulations of space activities, Heidelberg-London-New York, Springer Press (2010); M. Gerhard, K.U. Schrogl, Report of the Project 2001, Working Group on national space legislation, in K.H. Böckstiegel (ed.), Project 2001—Legal framework for the commercial use of outer space, Cologne: Carl Heymans Verlag (2002), pp. 530 ss.
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76. 1984 Commercial Space Launch Act, 14 C.F.R., 440.9 (c).
77. 1984 Commercial Space Launch Act, 14 C.F.R., 440.9 (e).
78. 1984 Commercial Space Launch Act, 14 C.F.R., 440.19 (a).
79. LOI n. 2008-518 du 3 Juin 2008 relative aux operations spatiales.
80. Article 6, French Space Operation Act.
81. Article 13, French Space Operation Act.
82. Article 14, French Space Operation Act.
83. Article 15, French Space Operation Act.
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86. Loi relative aux opérations spatiales, LOI n. 2008-518 du 3 Juin 2008.
87. See supra at p. 29.
88. Article 13, Belgian Space Law Act.
89. Article 14, Belgian Space Law Act.
90. Articles 15–17, Belgian Space Law Act.
91. Royal Decree implementing certain provisions of the law of 17 September 2005 on the activities of launching flight operations and guidance of space objects.
92. Section 3(4), Dutch Space Law Act.
93. Ibidem.
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97. The United States Munitions List (USML) is a list of articles, services, and related technology designated as defense- and space-related by the United States federal government. This designation is pursuant to sections 38 and 47(7) of the Arms Export Control Act (22 U.S.C. 2778 and 2794(7)).
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104. Article 3, Council Regulation (EC) No.428/2009.
105. Id. at Article 9 (2).
106. UNGA Resolution 1348 (XIII), "Questions of the Peaceful Use of Outer Space", 13 December 1958.
107. UNGA Resolution 1472 (XIV), "International Cooperation in the Peaceful Uses of Outer Space, 12 December 1959.
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112. Preamble, 1975 European Space Agency Convention.
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114. See http://www.aprsaf.org.

115. For information on the Sentinel Asia initiative see http://www.jaxa.jp/article/special/sentinel_asia/index_e.html.
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125. C.J. Cheng, International Arbitration System as Mechanism for the Settlement of Disputes Arising in Relation to Space Commercialization, 5 Singapore J. Int'l & Comp. L. 167 (2001).
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127. Article II, Outer Space Treaty.
128. Art. III, Outer Space Treaty.
129. For a description of the main methods of international dispute settlement see J.G. Merrils, International Dispute Settlement, 3rd ed., p. 1 (1998).
130. M.N. Shaw, International Law, Cambridge University Press 5th ed. 2003, pp. 175, 222–246.
131. Article IX, Liability Convention.
132. Article XII, Liability Convention.
133. UN Doc. A/AC.105/C.2/L.74.
134. Article XV, Liability Convention.
135. Aer. XVIII, Liability Convention.
136. On 24 January 1978 the Soviet satellite Cosmos 954 crashed into Canadian territory. The satellite caused severe pollution to the area of impact because it was fueled with nuclear power sources. Initially, Canada claimed compensation for 6 million dollars but eventually the case was settled when the Soviet Union agreed to pay 3 million dollars to Canada. As described, although both States were parties to the Convention, the case was settled between them bilaterally, without making recourse to the dispute settlement mechanism available under the Convention.
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139. Article 1 (1), 1998 ILA Draft Convention.
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141. Section III, 1998 ILA Draft Convention
142. Article 3, 1998 ILA Draft Convention.
143. Article 4, 1998 ILA Draft Convention.
144. Article 5, 1998 ILA Draft Convention.
145. Article 6 (1), 1998 ILA Draft Convention.
146. Article 6, 1998 ILA Draft Convention.
147. Article 6 (2), 1998 ILA Draft Convention.
148. For an introduction to the PCA Outer Space Optional Rules see S. Hobe, The Permanent Court of Arbitration Adopts Optional Rules for Arbitration of Disputes Relating to Outer Space Activities, 61 ZLW 61. 4 (Jg.1/2012).
149. For information about the Permanent Court of Arbitration see http://www.pca-cpa.org/showpage.asp?pag_id=363.
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152. New York United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards, art. V, June 7, 1959, 330 U.N.T.S. 38, 21 U.S.T. 2517, Art. V
153. The PCA has adopted the following procedural Rules for the settlement of disputes involving States, international organizations and private entities: the PCA Optional Rules of Procedure for Arbitrating Disputes between Two States (1992), the PCA Optional Rules for Arbitrating Disputes between Two Parties of Which Only One is a State (1993), the PCA Optional Rules for Arbitration between International Organizations and States (1996), and the PCA Optional Rules for Arbitration of Disputes between International Organizations and Private Parties (1996).
154. Article 1 (2), PCA Outer Space Optional Rules.
155. Article 10 (4), PCA Outer Space Optional Rules.
156. Article 28 (7), PCA Outer Space Optional Rules.
157. Articles 4 (5), 9 (3–4), PCA Outer Space Optional Rules.
158. Article 17 (6, 7, 8), PCA Outer Space Optional Rules.
159. See C. Al-Ekabi, Space Policies, Issues and Trend, ESPI Report 42, 2012.
160. On the economic significance of space activities see C. Venet, The economic dimension, in C. Brunner/A. Soucek (eds.), Outer Space in Society, Politics and Law (Springer Wien New York, 2011), pp. 55 ss.; OECD, The Space Economy at glance, Paris, 2007.
161. OECD. Space 2030. Exploring the Future of Space Applications. Paris, OECD 2004, 35.
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163. C. Al-Ekabi, Space Policies, Issues and Trend, ESPI Report 42, 2012.
164. On the political dimension of space activities see M. Sheenan, The international politics of space, London/New York: Routledge (2007).
165. 1999 Vienna Space Millenium Declaration.

166. National Aeronautics and Space Act of 1958. Pub. L. No.85-568, 72 Stat. pp 426–438, 29 July 1958.
167. Presidential Directive NSC-37. National Space Policy. 11 May 1978.
168. National Security Decision Directive N. 42. National Space Policy. 4 July 1982.
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184. In 2008 Russia and China put forward a Draft Treaty on the Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects (PPWT) in 2008. The Draft Treaty has received mixed responses and it is currently being reviewed by its drafters.
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About the Author

Dr. Fabio Tronchetti has been an Associate Professor at the School of Law of the Harbin Institute of Technology, People's Republic of China, since September 2009. Before, he was Lecturer and Academic Coordinator at the International Institute for Air and Space Law, Leiden University, the Netherlands. He holds a PhD in International Space Law (Leiden University) and an Advanced LL.M (Master's of Law) in International Relations (Bologna University, Italy). He has participated as a speaker in several international space law conferences and has published several articles in the fields of space law and policy and European Law. He is the author of the book *The Exploitation of Natural Resources of the Moon and Other Celestial Bodies—A Proposal for a Legal Regime* (Martinus Nijhoff/Brill, 2009). He is Member of the International Institute of Space Law, and his main areas of research are space law, European union law and public international law.

F. Tronchetti, *Fundamentals of Space Law and Policy*,
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