

BIBLIOGRAPHY

Article Journal

- Ananda Multifani Sahara. 2023. *Remediasi dan Mitigasi Sampah Ruang Angkasa Sebagai Bentuk Tanggung Jawab Negara Dalam Hukum Ruang Angkasa*, Malang: Universitas Brawijaya.
- Annisa Permata Sari Harahap. 2025. *The Liability of SpaceX Company towards the Space Debris Creation in the Perspective of International Law*, Semarang: Universitas Diponegoro.
- Rieka Putri Tampubolon. 2022. *Tanggung Jawab Negara Peluncur terkait Menanggulangi Sampah Luar Angkasa (Space Debris) di Tinjau dari Liability Convention 1972*, Jambi: Universitas Jambi.
- Fabio Tronchetti. 2013. "The Liability Convention: Time for Revision?". *Journal of Space Law*. Jackson: University of Mississippi School of Law.
- Frans G. von der Dunk. 1992. "Liability versus Responsibility in Space Law: Misconception or Misconstruction?". Nebraska: University of Nebraska - Lincoln.
<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1020&context=spacelaw>
- Gustavo Boccardo. 2018. "Planetary Protection Obligations of States Pursuant to the Space Treaties and with Special Emphasis on National Legislations Provisions". New York: New York University.
https://www.nyulawglobal.org/globalex/planetary_protection_obligations_states1.html
- Subholaxmi Mukherjee. 2025. "Celestial Claims and Cosmic Conflicts: Space Mining and the Moon Agreement in the Age of Extraterrestrial Exploitation". *International Journal on Science and Technology (IJSAT)*.
<https://www.ijsat.org/papers/2025/4/9422.pdf>
- J. Nick Benardini and Elaine Seasley. 2023. "Planetary Protection Policy and Technology Needs to Enable Future Robotic and Crewed Missions". Bangalore: Indian Institute of Science / Springer.
<https://link.springer.com/article/10.1007/s41745-023-00398-1>
- Joanne Wheeler MBE. 2025. "Space Law: International Treaties". Lexology. London.
<https://www.lexology.com/library/detail.aspx?g=faffbe6b-a20c-4751-aa97-61edfea38d3e>

- Mark Thompson. 2025. "When Space Junk Comes Home". Universe Today. <https://www.universetoday.com/articles/when-space-junk-comes-home?>
- Sraavya Poonuganti. 2022. "It's Raining Rockets: Heightening State Liability for Space Pollution". Chicago Journal of International Law. Chicago: University of Chicago Law School. <https://cjl.uchicago.edu/sites/default/files/2023-02/23ChiJIntlL490.pdf>
- Taylor Wessing. 2025. "From Orbit to Courtroom: The Legal Black Hole of Space Debris Liability". <https://www.taylorwessing.com/en/interface/2025/space-legal-and-industry-frontiers/from-orbit-to-courtroom>
- Vijeeta Bhatia. n.d. "International Environmental Law and Transboundary Environmental Harm". Legal Service India. India: Legal Service India. <https://www.legalserviceindia.com/legal/article-18990-international-environmental-law-and-transboundary-environmental-harm.html>
- Bin Cheng. 1997. *Studies in International Space Law*. Oxford: Oxford University Press, United Kingdom.
- Donald J. Kessler dan Burton G. Cour-Palais. 1978. *Collision Frequency of Artificial Satellites: The Creation of a Debris Belt*. *Journal of Geophysical Research: Space Physics*. Vol. 83, No. A6, pp. 2637–2646.
- Frans G. von der Dunk dan Fabio Tronchetti (eds.). 2015. *Handbook of Space Law*. Cheltenham: Edward Elgar Publishing, United Kingdom.
- Kadarudin. 2021. *Penelitian di Bidang Ilmu Hukum (Sebuah Pemahaman Awal)*. Makassar: Formaci.
- Philippe Sands. 2018. *Principles of International Environmental Law*. 2nd ed. Cambridge: Cambridge University Press, United Kingdom.

Legal Documents

- Cabinet Office of Japan. 2016. *Act on Launching of Spacecraft and Control of Spacecraft (Act No. 76 of 2016), and related regulations (English translation)* (Tokyo: Cabinet Office of Japan). [<https://www.japaneselawtranslation.go.jp/en/laws/view/4329/je>]
- Committee on Space Research (COSPAR). 2020. *Planetary Protection Policy* (Paris: COSPAR). [<https://cosparhq.cnes.fr/scientific-structure/panels/planetary-protection-panel/>]

European Space Agency (ESA). 2025. *Annual Space Environment Report 2025 (ESA Publication BR-365)* (Paris: European Space Agency). [https://www.esa.int/Safety_Security/Space_Debris/]

_____. 2023. *Space Debris Environment Report* (Paris: European Space Agency). [https://www.esa.int/Safety_Security/Space_Debris/]

_____. n.d. *Space Debris Mitigation Policy and National Implementation Practices* (Paris: European Space Agency). [https://www.esa.int/Safety_Security/Space_Debris/]

_____. 2025. *Space Environment Statistics Report* (Paris: European Space Agency). [https://www.esa.int/Safety_Security/Space_Debris/]

_____. 2023. *Space debris: The ESA approach* (Paris: European Space Agency). [https://www.esa.int/Safety_Security/Space_Debris/]

_____. 2023. *Transforming Article VI of the Outer Space Treaty into an Operational Obligation (ESA Space Debris Conference Proceedings)* (Paris: European Space Agency). [<https://conference.sdo.esoc.esa.int/proceedings/sdc8/paper/223/SDC8-paper223.pdf>]

Federal Aviation Administration (FAA). 2024. *Commercial Space Launch Licensing Regulations* (Washington, D.C.: Federal Aviation Administration). [<https://www.faa.gov/space/licenses>]

Federal Communications Commission (FCC). 2020. *Report and Order on Orbital Debris Mitigation Requirements, Federal Communications Commission* (Washington, D.C.: Federal Communications Commission). [<https://www.fcc.gov/document/fcc-adopts-new-rules-mitigate-orbital-debris>]

_____. 2023. *Orbital Debris Mitigation Rules* (Washington, D.C.: Federal Communications Commission). [<https://www.fcc.gov/document/fcc-updates-orbital-debris-mitigation-rules>]

_____. 2020. *Report and Order on Orbital Debris Mitigation Requirements* (Washington, D.C.: Federal Communications Commission). [<https://www.fcc.gov/document/fcc-adopts-new-rules-mitigate-orbital-debris>]

Government of Indonesia. 2013. *Government Regulation No. 21 of 2013 on Space Activities* (Indonesia: Government of Indonesia). [<https://peraturan.bpk.go.id/Details/38897/uu-no-21-tahun-2013>]

. 2023. *Government Regulation No. 7 of 2023 on the Mastery of Space Technology* (Indonesia: Government of Indonesia). [<https://peraturan.bpk.go.id/Details/243701/pp-no-7-tahun-2023>]

Inter-Agency Space Debris Coordination Committee (IADC). 2007. *IADC Space Debris Mitigation Guidelines* (Darmstadt: IADC). [https://www.iadc-home.org/documents_public/view/id/74#u]

International Telecommunication Union. 2024. *Space sustainability: Balancing exploration with responsible resource use* (Geneva: ITU). [<https://www.itu.int/hub/2024/10/space-sustainability-balancing-exploration-with-responsible-resource-use/>]

Organisation for Economic Co-operation and Development. 1972. *Recommendation of the Council on Guiding Principles concerning International Economic Aspects of Environmental Policies (Polluter Pays Principle)* (Paris: OECD). [<https://www.oecd.org/environment/outreach/37425975.pdf>]

United Kingdom. 2018. *Space Industry Act 2018* (London: The Stationery Office). [<https://www.legislation.gov.uk/ukpga/2018/5/contents/enacted>]

United States Congress. 2015. *Commercial Space Launch Competitiveness Act* (Washington, D.C.: United States Congress). [<https://www.congress.gov/114/plaws/publ90/PLAW-114publ90.pdf>]

. 1969. *National Environmental Policy Act (NEPA)* (Washington, D.C.: United States Congress). [<https://www.energy.gov/nepa/downloads/national-environmental-policy-act-1969>]

Case

Government of Canada and Government of the Union of Soviet Socialist Republics. 1978. *COSMOS 954 Claims Settlement* (Ottawa/Moscow: Bilateral Claims Settlement Agreement).

Government of the United States of America and Government of the Russian Federation. 2009. *Iridium 33 and Cosmos 2251 Collision Incident* (Low Earth Orbit: Accidental Satellite Collision Event).

Permanent Court of Arbitration (PCA). 1941. *Trail Smelter Arbitration (United States v Canada)* (The Hague: Permanent Court of Arbitration).

UN Documents

International Law Commission. 2001. *Articles on Responsibility of States for Internationally Wrongful Acts* (New York: United Nations).
[https://legal.un.org/ilc/texts/instruments/english/draft_articles/9_6_2001.pdf]
]

_____. 2001. *Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities* (New York: United Nations).
[https://legal.un.org/ilc/texts/instruments/english/draft_articles/9_7_2001.pdf]
]

United Nations. 1967. *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space* (New York: United Nations).
[<https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html>]

_____. 1967. *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Outer Space Treaty)* (New York: United Nations).
[<https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html>]

_____. 1969. *Vienna Convention on the Law of Treaties* (Vienna: United Nations).
[https://legal.un.org/ilc/texts/instruments/english/conventions/1_1_1969.pdf]

_____. 1972. *Convention on International Liability for Damage Caused by Space Objects* (New York: United Nations).
[<https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html>]

_____. 1972. *Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration)* (Stockholm: United Nations).
[<https://www.un.org/en/conferences/environment/stockholm1972>]

_____. 1975. *Convention on Registration of Objects Launched into Outer Space* (New York: United Nations).
[<https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html>]

_____. 1989. *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal* (Geneva: United Nations Environment Programme). [<https://www.basel.int/>]

_____. 1992. *Rio Declaration on Environment and Development* (New York: United Nations). U.N. Doc. A/CONF.151/26 (Vol. I)

_____. 2019. *Guidelines for the Long-term Sustainability of Outer Space Activities* (Vienna: United Nations).

[<https://www.unoosa.org/oosa/en/ourwork/topics/long-term-sustainability-of-outer-space-activities.html>]

United Nations Committee on the Peaceful Uses of Outer Space. 2007. *Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space* (Vienna: United Nations). [<https://www.unoosa.org/oosa/en/ourwork/topics/space-debris/space-debris-guidelines.html>]

. 2019. *Guidelines for the Long-Term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space* (Vienna: United Nations). [<https://www.unoosa.org/oosa/en/ourwork/topics/long-term-sustainability-of-outer-space-activities.html>]

. Various years. *Report of the Committee on the Peaceful Uses of Outer Space* (Vienna: United Nations). [<https://www.unoosa.org/oosa/en/ourwork/copuos/reports.html>]

United Nations General Assembly. 1972. *Resolution 2777 (XXVI) on the Liability Convention* (New York: United Nations). [<https://digitallibrary.un.org/>]

. 2007. *Resolution 62/217 on International Cooperation in the Peaceful Uses of Outer Space* (New York: United Nations). [<https://www.un.org/en/ga/>]

. 2021. *Resolution 76/76 on Reducing Space Threats Through Norms, Rules and Principles of Responsible Behaviours* (New York: United Nations). [<https://www.un.org/en/ga/>]

United Nations Office for Outer Space Affairs. 2010. *Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space* (Vienna: United Nations). [<https://www.unoosa.org/oosa/en/ourwork/topics/space-debris.html>]

. 2010. *Space Sustainability and Governance Reports* (Vienna: United Nations). [<https://www.unoosa.org/oosa/en/ourwork/topics/space-debris.html>]

. 2021. *Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space* (Vienna: United Nations). [https://www.unoosa.org/documents/pdf/PromotingSpaceSustainability/Publication_Final_English_June2021.pdf]

Others

BBC News. 2025. "SpaceX Falcon 9 Rocket Stage Creates Fireball Over Europe". February 2025. Accessed from <https://www.bbc.com/news/science-environment-68214587>

Chambers and Partners. 2025. "Space Law 2025 – Italy." Accessed from <https://practiceguides.chambers.com/practice-guides/space-law-2025/italy>

Loren Grush. 2024. "Satellite Megaconstellations Are Crowding Low Earth Orbit". The Verge. Accessed from <https://www.theverge.com/space/657113/starlink-amazon-satellites>

NASA. 2025. "Orbital Debris Quarterly News (Volume 29, Issue 1)". 2025. Accessed from <https://orbitaldebris.jsc.nasa.gov/quarterly-news/>

NDTV. 2026. "Starlink satellites falling to Earth raise fears of space junk chain reaction". Accessed from <https://www.ndtv.com/science/starlink-satellites-falling-to-earth-raise-fears-of-space-junk-chain-reaction-9457941>

OECD. 1972. "Recommendation of the Council on Guiding Principles concerning International Economic Aspects of Environmental Policies". Accessed from <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0102>

. 2023. "The Space Economy in Figures. Organisation for Economic Co-operation and Development". Accessed from <https://www.oecd.org/innovation/inno/space-forum/the-space-economy-in-figures-fa5494aa-en.htm>

Polish Radio. 2025. "Polish Government Pledges Compensation Over Falcon 9 Rocket Debris". 20 February 2025. Accessed from <https://www.polskieradio.pl/395/7784/artykul/3487414%2Cpolish-government-pledges-compensation-over-falcon-9-rocket-debris>

Reuters. 2025. "European Scientists Track Reentry of SpaceX Falcon 9 Debris Over Spain". 11 February 2025. Accessed from <https://www.reuters.com/technology/spacex-debris-europe-reentry-2025-02-11/>

Space.com. 2025. "SpaceX says its Falcon 9 rocket debris crash over Europe was caused by propellant leak". 26 February 2025. Accessed from <https://www.space.com/space-exploration/launches-spacecraft/fiery-falcon-9-rocket-debris-crash-over-europe-caused-by-propellant-leak-spacex-says>

- _____. 2025. "SpaceX Falcon 9 rocket debris creates dramatic fireball over Europe, crashes in Poland". 20 February 2025. Accessed from <https://www.space.com/space-exploration/launches-spacecraft/spacex-falcon-9-rocket-debris-creates-dramatic-fireball-over-europe-crashes-in-poland>
- Spaceflight Now. 2025. "SpaceX Falcon 9 Second Stage Burns Up Over Europe After Reentry". February 2025. Accessed from <https://spaceflightnow.com/2025/02/12/spacex-falcon9-reentry-europe/>
- SpaceX. 2022. "Starlink Group 4-7 Mission". Accessed from <https://www.spacex.com/launches/>
- _____. 2024. "Environmental Assessment Report for Falcon 9 and Falcon Heavy Launch Vehicles". 2024. Accessed from <https://www.spacex.com/environmental>
- _____. 2024. "Falcon 9". Accessed from <https://www.spacex.com/vehicles/falcon-9/>
- The Space Review. 2017. "The Outer Space Treaty and states' obligation to remove space debris: a US perspective". 13 November 2017. Accessed from <https://www.thespacereview.com/article/3370/1>