



## ‘Space Arbitration’ with Focus on India

Submitted by:

**Swapnil Mukherjee<sup>1</sup>, Dr. Malay Adhikari<sup>2</sup>, Dr. Nirupama<sup>3</sup>**

<sup>1</sup> Ph.D. (Law) Research Scholar (Full-time), Batch 2022 - 2025, Amity Law School, Amity University, Kolkata, Major Arterial Road, Action Area II, Rajarhat, New Town, Kolkata, West Bengal, India, Pin: 700135, Email: [swapnil.mukherjee1@s.amity.edu](mailto:swapnil.mukherjee1@s.amity.edu), [swapnilmukherjee8@gmail.com](mailto:swapnilmukherjee8@gmail.com), Contact Number: +91 9126803849, Orcid - <https://orcid.org/0009-0009-4903-7406>

<sup>2</sup> Ph.D. Guide, Assistant Professor, Amity Law School, Amity University, Kolkata, Major Arterial Road, Action Area II, Rajarhat, New Town, Kolkata, West Bengal, India, Pin: 700135, Email: [madhikari@kol.amity.edu](mailto:madhikari@kol.amity.edu), Scopus ID: 57192297537

<sup>3</sup> Ph.D. Co-Guide, Principal and Associate Professor, Durgapur Institute of Legal Studies, affiliated with Kazi Nazrul University, City Centre Ph-II, Surya Sen Sarani, Near Gandhi More, Durgapur, District – Paschim Bardhaman, West Bengal, Pin: 713208, Email: [nirupama.265@rediffmail.com](mailto:nirupama.265@rediffmail.com)

**Abstract:** The rapid growth of space activities requires better conflict solving at present. India is becoming a key player within the global space sector, especially important for it. However, India's space dispute<sup>4</sup> legal system needs improvement. It still is weak as it now stands. The 2017 Draft Space Activities Bill was designed to regulate private companies yet lacks arbitration for dispute resolution. Domestic courts create uncertainty instead since it depends upon them. Even those contracts that include arbitration clauses can face problems. These problems arise from India's Arbitration and Conciliation Act, 1996. It is not clear as to whether this law allows for arbitration in space-related disputes.

In space projects, public policy matters or state interests can often be involved. These disputes sometimes cause long legal battles. These are battles that can be quite protracted. Landlord-tenant conflicts had a similar issue in scope. This was before 2020. The *Devas v. Antrix* case brought these challenges to light. In 2015, the case

<sup>1</sup> Ph.D. (Law) Research Scholar (Full-time), Batch 2022 - 2025, Amity Law School, Amity University, Kolkata, Major Arterial Road, Action Area II, Rajarhat, New Town, Kolkata, West Bengal, India, Pin: 700135, Email: [swapnil.mukherjee1@s.amity.edu](mailto:swapnil.mukherjee1@s.amity.edu), [swapnilmukherjee8@gmail.com](mailto:swapnilmukherjee8@gmail.com), Contact Number: +91 9126803849, Orcid - <https://orcid.org/0009-0009-4903-7406>

<sup>2</sup> Ph.D. Guide, Assistant Professor, Amity Law School, Amity University, Kolkata, Major Arterial Road, Action Area II, Rajarhat, New Town, Kolkata, West Bengal, India, Pin: 700135, Email: [madhikari@kol.amity.edu](mailto:madhikari@kol.amity.edu), Scopus ID: 57192297537

<sup>3</sup> Ph.D. Co-Guide, Principal and Associate Professor, Durgapur Institute of Legal Studies, affiliated with Kazi Nazrul University, City Centre Ph-II, Surya Sen Sarani, Near Gandhi More, Durgapur, District – Paschim Bardhaman, West Bengal, Pin: 713208, Email: [nirupama.265@rediffmail.com](mailto:nirupama.265@rediffmail.com)

<sup>4</sup> <https://www.sconline.com/blog/post/2021/06/07/is-space-law-truly-rocket-science-a-comprehensive-and-critical-analysis-of-the-dispute-resolution-mechanism-in-space-related-disputes-part-2/> (Last Accessed on 11-02-2025 at 10:30 am)

occurred. Antrix, a government company, canceled a satellite deal so this led to a USD 562.5 million arbitration award against India. This case shows balancing business commitments<sup>5</sup> with government control.

The Permanent Court of Arbitration (PCA) did introduce Outer Space Rules back in 2011. For international purposes, they were created in order to handle technical disputes. These rules provide both expert arbitrators and also confidentiality protections.<sup>6</sup> Up until now, no case has made use of them. Instead, parties choose to arbitrate institutionally via bodies like the ICC and ICSID. The adoption of such frameworks has been slow within India. Arbitration is supported in an indirect manner by other countries that follow treaties such as the Outer Space Treaty (1967) and the Liability Convention (1972).<sup>7</sup>

Space disputes become more complex because of jurisdiction issues. Because outer space lacks national boundaries investment treaties apply with ambiguity. The tribunal did in *Eutelsat v. Mexico* (2021) then accept jurisdiction under the France-Mexico BIT. It says satellite operations could be linked to territorial investments. This case showed legal systems' existing flexibility.<sup>8</sup>

Gaganyaan mission exists in India. Also, India plans new satellite programs, thus it must reform its space laws. The Draft Space Bill's amendment should require arbitration clauses in the legislation. Expert decision-making should be adopted throughout India.<sup>9</sup> PCA rules happen to be a part of that very adoption. Specialized space tribunals such as the UAE's Courts of Space might give better solutions.<sup>10</sup> Arbitrator training in space law along with promotion of public-private partnerships would reduce risks. It is a good example that arbitration efficiently settled Avanti's 2018 lease dispute with Indonesia.<sup>11</sup>

The national space law of India is of great import. It must also include international liability principles. How the enforcement of arbitration awards should be clarified. In the *ABS v. KT Corp* case of 2013, unclear regulations caused risks.<sup>12</sup> In that sort of case, different regulatory approvals did occur. Arbitration came from that case. India should collaborate with groups like UNCITRAL and PCA to improve its legal system. Arbitrating and mediating could assist during complex, multi-party situations. Such methods prove helpful when parties encounter disputes.<sup>13</sup>

<sup>5</sup> <https://www.mondaq.com/india/arbitration-dispute-resolution/1472300/reaching-for-the-stars-arbitration-of-space-related-disputes> (Last Accessed on 11-02-2025 at 12:45 am)

<sup>6</sup> Arbaugh, Caroline. "Gravitating Toward Sensible Resolutions: The PCA Optional Rules for the Arbitration of Disputes Relating to Outer Space Activity." *Ga. J. Int'l & Comp. L.* 42 (2013): 825.

<sup>7</sup> Johnson, Christopher Daniel. "The Outer Space Treaty." In *Oxford Research Encyclopedia of Planetary Science*. 2018.

<sup>8</sup> Zielinski, Laura Yvonne. "Rights Without Remedies? The Role of Arbitration in Enforcing International Space Law for Private Parties." In *Regulation of Outer Space*, pp. 119-134. Routledge.

<sup>9</sup> Rai, Sumit. "Proposed Amendments to the Indian Arbitration Act: A Fraction of the Whole?." *Journal of International Dispute Settlement* 3, no. 1 (2012): 169-204.

<sup>10</sup> Garg, Meenal. "Promoting Efficiency of Arbitration in India by Using Technology." *Indian J. Arb. L.* 11 (2023): 79.

<sup>11</sup> Rai, Sumit. "Proposed Amendments to the Indian Arbitration Act: A Fraction of the Whole?." *Journal of International Dispute Settlement* 3, no. 1 (2012): 169-204.

<sup>12</sup> Schlesinger, Sabrina, Krasimira Aleksandrova, Tobias Pischon, Veronika Fedirko, Mazda Jenab, Elisabeth Trepo, Paolo Boffetta et al. "Abdominal obesity, weight gain during adulthood and risk of liver and biliary tract cancer in a European cohort." *International journal of cancer* 132, no. 3 (2013): 645-657.

<sup>13</sup> Awada, G.M., 2023. ALTERNATIVE DISPUTE RESOLUTION (ADR) FOR INTERNATIONAL COMMERCE DISPUTES THROUGH UNCITRAL. *Russian Law Journal*, 11(5), pp.2993-3008.

Without these reforms, India may battle to draw overseas funds for space plans. Unresolved disputes may weaken confidence in the space industry. A strong legal system is indeed necessary, as based upon global best practices with domestic reforms. Through this, sustainable space exploration leadership in India will be secured.<sup>14</sup>

## Introduction

The increasing commercialization of outer space activities has made private entities, governments, and international organizations begin to dispute in court. Since India makes meaningful strides in its space sector through the Indian Space Research Organisation (ISRO) as well as private sector participation, the need for an efficient dispute resolution mechanism has become imperative now.<sup>15</sup> Space arbitration emerges as an important means for resolving disputes because it offers a specialized, efficient, and flexible alternative to litigation.<sup>16</sup>

This article explores the topic of space arbitration and also its necessity within the Indian context. It also addresses challenges while the article discusses existing legal frameworks and potential solutions to improve space arbitration's implementation in India.<sup>17</sup>

## The Need for Space Arbitration

With the increasing privatization as well as globalization of space activities, disputes have surged that are related to intellectual property rights, frequency allocations, launch services, and satellite contracts.<sup>18</sup> Arbitration serves as a preferred mode of dispute resolution due to several reasons:

1. **Technical Complexity:** Since expertise beyond typical legal channels is needed, space disputes frequently concern very technical issues.
2. **Confidentiality:** Arbitration assures a level of confidentiality that truly matters in the competitive space industry.
3. **Time Efficiency:** Litigation by custom can be time-consuming. However, arbitration offers a faster resolution system.
4. **Neutrality:** Arbitration is fair ground, notably when discords concern global organizations.
5. **Flexibility:** Parties are able to choose arbitrators that have specialized knowledge. They can also tailor the procedural rules to the needs of the dispute.<sup>19</sup>

<sup>14</sup> De Man, Philip. "State practice, domestic legislation and the interpretation of fundamental principles of international space law." *Space Policy* 42 (2017): 92-102.

<sup>15</sup> Makam, Ganesh. "An Analysis of Space Law in India: Current Developments and Future Perspectives." *Available at SSRN 4487755* (2023).

<sup>16</sup> Brisibe, Tare. "Prospects for the Arbitration of Disputes in Public–Private Space Projects." *Private Law, Public Law, Metalaw and Public Policy in Space: A Liber Amicorum in Honor of Ernst Fasan* (2016): 53-66.

<sup>17</sup> Anand, Ankit, and Comraj J. Vincent. "Exploring Innovative Approach of Arbitration for the Resolution of Environmental Conflicts." *Current World Environment* 19, no. 2 (2024): 620.

<sup>18</sup> Malanczuk, Peter. "Investment Protection of Commercial Activities in Space: Treaties, Contracts, Licenses, Insurance, Arbitration." *The Journal of World Investment & Trade* 19, no. 5-6 (2018): 951-1000.

<sup>19</sup> Rau, Alan Scott, and Edward F. Sherman. "Tradition and Innovation in International Arbitration Procedure." *Tex. Int'l LJ* 30 (1995): 89.

## Legal Framework Governing Space Arbitration

### 1. International Framework

Space arbitration operates within the arbitration conventions that are within the broader field of international space law.<sup>20</sup>

Some key legal instruments include:

- **United Nations Treaties on Outer Space:** Since it created space law's basis, India signed diverse UN space treaties including the Outer Space Treaty (1967).
- **Convention on International Liability for Damage Caused by Space Objects (1972):** Liability aspects that are related to damage caused by space objects are governed by law.
- **New York Convention on Recognition and Enforcement of Foreign Arbitral Awards (1958):** It enforces arbitration awards throughout jurisdictions.
- **Permanent Court of Arbitration (PCA) Optional Rules for Arbitration of Disputes Relating to Outer Space Activities (2011):** It offers a way toward resolving disputes. This framework is thorough also space-related.<sup>21</sup>

### 2. Indian Legal Framework

India's arbitration framework is primarily governed by:

- **The Arbitration and Conciliation Act, 1996:** Based on the UNCITRAL Model Law, this Act simplifies commercial arbitration both internationally and domestically.
- **The Indian Contract Act, 1872:** Space agreements exist under contractual obligations.
- **The Space Activities Bill (Draft, 2017):** It seeks to regulate India's space sector also to provide dispute resolution mechanisms. Enactment of it still is pending now.
- **Bilateral and Multilateral Agreements:** Space cooperation agreements into which India has entered may contain arbitration clauses.<sup>22</sup>

### Challenges in Implementing Space Arbitration in India

Despite the advantages, space arbitration in India faces several challenges:

1. **Lack of a Dedicated Legal Framework:** Unlike other jurisdictions, a specific type of space arbitration law is still lacking in India.<sup>23</sup>
2. **Limited Expertise:** Space law and arbitration are subjects most legal professionals know little about.
3. **Enforcement of Arbitral Awards:** India is a signatory of the New York Convention though enforcement issues challenge it.

<sup>20</sup> Born, Gary B. "International commercial arbitration." (2020): 1-5048.

<sup>21</sup> Brisibe, Tare. "Prospects for the Arbitration of Disputes in Public-Private Space Projects." *Private Law, Public Law, Metalaw and Public Policy in Space: A Liber Amicorum in Honor of Ernst Fasan* (2016): 53-66.

<sup>22</sup> Zhao, Yun. "The Role of bilateral and multilateral agreements in international space cooperation." *Space Policy* 36 (2016): 12-18.

<sup>23</sup> Kumar, Anushka. "Evolution and Development of the Law of Arbitration in India." *Issue 2 Indian JL & Legal Rsch.* 5 (2023): 1.

4. **Jurisdictional Issues:** Space disputes across borders can be complex. Jurisdiction's applicability is paramount now.
5. **Government Involvement:** Since ISRO as well as other government entities dominate India's space sector, disputes involving state agencies often face procedural complexities.<sup>24</sup>

## The Way Forward: Strengthening Space Arbitration in India

To enhance the effectiveness of space arbitration in India, the following steps can be considered:

### 1. Legislative Reforms

- Enact the Space Activities Bill that possesses a clear arbitration mechanism.
- Explicitly include space-related disputes for amending of the Arbitration and Conciliation Act, 1996.

### 2. Establishing a Specialized Arbitration Center

- India can establish a Space Arbitration Tribunal. Institutions such as the Indian Council of Arbitration (ICA) or the Mumbai Centre for International Arbitration (MCIA) could provide support.
- Collaboration of PCA and similar groups may improve credibility.

### 3. Capacity Building and Training

- Strengthen space law as well as arbitration legal education along with training programs.
- ISRO and legal institutions with international arbitration bodies should all collaborate.

### 4. Encouraging Private Sector Participation

- Public-private partnerships or PPPs should be subject to being strengthened. Dispute resolution mechanisms must be ensured for balance.
- Draft model arbitration clauses for contracts in the event private space entities are involved.

### 5. Promoting International Cooperation

- Increase engagement with worldwide arbitration bodies.
- Urge for India's participation in the Hague International Space Resources Governance Working Group.

Space arbitration emerges as a vital mechanism for resolving disputes in the expanding Indian space sector. For India, a strong arbitration framework is a necessity, given the increasing private sector participation with ambitious space projects.<sup>25</sup>

Establishing India as a preferred jurisdiction for space arbitration needs legislative reforms, capacity building, and international cooperation. India can, in fact, address many of the challenges and foster more of a conducive environment.<sup>26</sup>

<sup>24</sup> Kaul, Ranjana. "Recent Space Reforms in India: Perspectives on Policy and Law." *J. Space L.* 44 (2020): 450.

<sup>25</sup> Brisibe, Tare. "Prospects for the Arbitration of Disputes in Public-Private Space Projects." *Private Law, Public Law, Metalaw and Public Policy in Space: A Liber Amicorum in Honor of Ernst Fasan* (2016): 53-66.

<sup>26</sup> Singha, Sukanya. "Resolving Disputes Through Arbitration In India: Issues & Challenges In International Commercial Arbitration." *Library of Progress-Library Science, Information Technology & Computer* 44, no. 3 (2024).

This positioning allows for India to take the lead globally regarding space law as well as arbitration aimed at space dispute resolution.<sup>27</sup>

About space activities, space commercialization's advent has caused disputes to surge. As organizations like the Indian Space Research Organisation (ISRO) and private enterprises propel it, India's role in the space sector is expanding, so a structured dispute resolution mechanism is important.<sup>28</sup> Space sector arbitration grows in prominence. It functions as an alternative dispute resolution (ADR) mechanism here. Space-related disputes involve complexity; contractual disagreements, liability issues, together with international collaborations cause this complexity. Space arbitration offers a viable means for resolving conflicts both efficiently and effectively.<sup>29</sup>

## The Need for Space Arbitration in India

India has been witnessing a model shift within its space policy for the reason that it transitioned out from a state-controlled monopoly and to an ecosystem that does encourage private sector participation.<sup>30</sup> More private sector activity ensures arguments about satellite launches, contract rules, idea ownership, and coverage requests will happen.<sup>31</sup> Typical lawsuits often prove unfit because much time gets consumed, jurisdictional issues arise, and very technical space disputes get involved. Arbitration is known to help resolve such conflicts with a specialized and neutral and efficient mechanism.<sup>32</sup>

## Legal Framework Governing Space Arbitration in India

India does not yet have dedicated space law, though functions via international treaties along with multiple legislative frameworks. Key legal instruments that impact space arbitration in India include:

1. **The Arbitration and Conciliation Act, 1996** – Because it incorporates principles derived from the UNCITRAL Model Law, this Act provides a statutory framework that is for arbitration in India. It allows for both domestic with international arbitration. Therefore it is a good mechanism for space-related arguments.
2. **The Outer Space Treaty, 1967** – India is a signatory so it adheres to international space law principles. This adherence is something by which the resolution of disputes is impacted.<sup>33</sup>

<sup>27</sup> Mcconaughey, Emilie, and Nicole Chalikopoulou. "Space Law and Arbitration. A Not-So-Outlandish Space Odyssey." *ASA Bulletin* 40, no. 3 (2022).

<sup>28</sup> Sachdeva, Gurbachan Singh. *The Philosophy of Space Policy: With a Case Study of India*. Taylor & Francis, 2025.

<sup>29</sup> Uluç, İnan. "BINDING ARBITRATION OF DISPUTES ARISING FROM SPACE ACCIDENTS." *Law and Justice Review* 25 (2023): 51-88.

<sup>30</sup> Wilkins, David B., David M. Trubek, and Bryon Fong. "Globalization, lawyers, and emerging economies: the rise, transformation, and significance of the new corporate legal ecosystem in India, Brazil, and China." *Harv. Int'l LJ* 61 (2020): 281.

<sup>31</sup> Melamed, Avishai, Adi Rao, Olaf de Rohan Willner, and Sarah Kreps. "Going to outer space with new space: The rise and consequences of evolving public-private partnerships." *Space Policy* 68 (2024): 101626.

<sup>32</sup> Singh, Bhupinder. "Unleashing alternative dispute resolution (ADR) in resolving complex legal-technical issues arising in cyberspace lensing e-commerce and intellectual property: proliferation of e-commerce digital economy." *Revista Brasileira de Alternative Dispute Resolution-Brazilian Journal of Alternative Dispute Resolution-RBADR* 5, no. 10 (2023): 81-105.

<sup>33</sup> Bhat, Sandeepa, Dilip Ukey, and Adithya Variath. *International Space Law in the New Space Era: Principles and Challenges*. Oxford University Press, 2024.

3. **The Liability Convention, 1972** – This convention establishes liability frameworks in regard to damages that space objects happen to cause, and it influences arbitration clauses that appear in contracts.<sup>34</sup>
4. **Bilateral and Multilateral Agreements** – India came to an agreement with spacefaring nations as well as private entities on various things, many of which do prefer arbitration for resolving disputes.<sup>35</sup>
5. **The Draft Space Activities Bill, 2017** – Though not yet enacted, this bill seeks to regulate private space activities in India and will likely incorporate provisions for dispute resolution.<sup>36</sup>

## Advantages of Arbitration for Space Disputes

Space arbitration offers numerous advantages over traditional litigation, including:

1. **Expertise of Arbitrators** – Space-related disputes require specialized knowledge. Arbitration allows for parties to appoint arbitrators that have technical and legal expertise within the space domain.
2. **Confidentiality** – Space contracts often involve proprietary information along with sensitive technologies. Arbitration is confidential. Litigation does, however, air those disputes in a public way.
3. **Speed and Efficiency** – Arbitration resolves issues faster than courts proceed given time sensitivity is needed for space missions.
4. **Enforceability of Awards** – India is indeed a signatory to the New York Convention. This eases the international enforcement of arbitral awards.
5. **Neutral Forum** – Arbitration allows parties from different jurisdictions to select a neutral venue since it avoids national biases that may arise in domestic courts.<sup>37</sup>

## Challenges in Implementing Space Arbitration in India

Despite its advantages, space arbitration in India faces several challenges:

1. **Absence of a Dedicated Space Law** – The lack of space legislation comprehensively makes dispute resolution ambiguous within.
2. **Limited Precedents** – The arbitration of space is a field that is still emerging. Its erratic nature stems from a lack of precedent.
3. **High Costs** – Arbitration, notably international arbitration, involves high costs, such as tribunal fees with expert consultations.
4. **State Sovereignty Concerns** – Government engagement about State Sovereignty Concerns in space activities may cause resistance against private arbitration mechanisms.

<sup>34</sup> Kehrer, Trevor. "Closing the liability loophole: the liability convention and the future of conflict in space." *Chi. J. Int'l L.* 20 (2019): 178.

<sup>35</sup> Zhao, Yun. "The Role of bilateral and multilateral agreements in international space cooperation." *Space Policy* 36 (2016): 12-18.

<sup>36</sup> Cansler, Serena. "To Infinity and beyond the Scope of International Space Law: A Survey of the Law Governing Private Commercial Space Activity." *Currents: J. Int'l Econ. L.* 25 (2022): 65.

<sup>37</sup> B Born, Gary. "International Arbitration and Forum Selection Agreements, Drafting and Enforcing." (2021): 1-336.

5. **Jurisdictional and Choice of Law Issues** – It is complex to determine applicable laws and which jurisdiction applies in space disputes because of multiple nations and international treaties being involved with them.<sup>38</sup>

## Key Arbitration Institutions for Space Disputes

Several international arbitration institutions offer mechanisms for resolving space disputes, including:

1. **The Permanent Court of Arbitration (PCA)** – It has established Rules for resolving disputes arising from outer space activities.
2. **The International Chamber of Commerce (ICC)** – The ICC offers up a framework with the result that commercial disputes can be resolved, even including those disputes in the space sector.
3. **The London Court of International Arbitration (LCIA)** – It is this institution that handled disputes when those disputes involved commercial space contracts.
4. **Indian Council of Arbitration (ICA)** – Indian Council of Arbitration (ICA) is in India's domestic arbitration body. Its jurisdiction has the potential for expansion to space-related disputes.<sup>39</sup>

## Developing an Effective Space Arbitration Mechanism in India

To ensure the effective implementation of space arbitration in India, several measures must be taken:

1. **Enacting a Comprehensive Space Law** – A well-defined legal framework should provide toward resolving disputes through arbitration.
2. **Establishing a Specialized Arbitration Body** – India should look into the option of establishing a space arbitration tribunal that is dedicated with expertise in space law along with technology for creating a Specialized Arbitration Body.
3. **Incorporating Arbitration Clauses in Space Contracts** – Space Contracts incorporate Arbitration Clauses within contracts dealing with ISRO, private space companies, and international collaborations.
4. **Promoting Awareness and Capacity Building** – It is important for one to train arbitrators and lawyers and industry stakeholders in space law arbitration. That would promote Awareness with Capacity Building.
5. **Strengthening International Collaboration** – India should work with global groups to match its arbitration rules to top standards.

Space arbitration effectively resolves disputes in India's growing space sector realistically. Arbitration offers for complex problems a neutral, expert-driven, and enforceable solution. Private participation is increased, contractual disputes are occurring, and liability issues are now on the rise.<sup>40</sup> To fully realize its potential India must build capacity invest in

<sup>38</sup> Khoukaz, George. "ADR that Is Out of This World: A Regime for the Resolution of Outer-Space Disputes." *J. Disp. Resol.* (2018): 265.

<sup>39</sup> Sloup, George Paul. "Peaceful resolution of outer space conflicts through the international court of justice: The line of least resistance." *DePaul L. Rev.* 20 (1971): 618.

<sup>40</sup> Singha, Sukanya. "Resolving Disputes Through Arbitration In India: Issues & Challenges In International Commercial Arbitration." *Library of Progress-Library Science, Information Technology & Computer* 44, no. 3 (2024).

arbitration promote a strong legal system. The country moves in the direction of being a major space power. Its space industry will grow sustainably if it embraces arbitration as a favored way to resolve disputes.<sup>41</sup>

As space technology rapidly advances, private entities increasingly involve themselves in the space sector, a strong dispute resolution mechanism from now is needed. Space activities often involve multiple stakeholders that do include government agencies, private corporations, also international entities. Disputes are inevitable, considering the complex nature of these activities.<sup>42</sup> Customary litigation is not always viable given its slow speed and jurisdictional problems. In this context, arbitration can resolve space-related disputes in India with both high efficiency and effectiveness.<sup>43</sup>

## Understanding Space Arbitration

Space arbitration refers to the resolution of disputes that can arise out of space-related contracts as well as activities by way of arbitration instead of through national courts. It provides dispute resolution that is neutral and confidential, also enforceable, mostly when parties are from differing jurisdictions. International treaties along with domestic arbitration laws as well as contractual agreements govern and derive the principles in space arbitration.

## The Legal Framework for Space Activities in India

Regarding space, the Department of Space governs India's activities. These activities are also governed by the Indian Space Research Organisation (ISRO).<sup>44</sup> Various policies as well as agreements regulate space activities near India, though it lacks thorough space law. These include:

1. **Satellite Communication Policy, 1997** – It is used to regulate satellite-based communication services.
2. **Remote Sensing Data Policy, 2011** – Remote Sensing Data Policy, 2011 governs the acquiring and disseminating of remote sensing data.
3. **New Space Policy, 2023** – New Space Policy, 2023 – Seeks to encourage private sector participation in space activities.
4. **The Arbitration and Conciliation Act, 1996** – The Arbitration as well as Conciliation Act, 1996 governs arbitration proceedings in India. These proceedings include all of those that are related to space disputes.

## The Growing Need for Space Arbitration in India

1. **Increase in Private Sector Participation** – Because the space sector opened up to private players under the Indian National Space Promotion and Authorization Center (IN-SPACe), more of the commercial contracts are being signed, leading to potential disputes.

<sup>41</sup> Bamigboye, Ayobami. "The Prospect of Investment Banking and Arbitration in the Space Economy." (2021).

<sup>42</sup> Williams, Maureen. "Dispute resolution regarding space activities." In *Handbook of space law*, pp. 995-1046. Edward Elgar Publishing, 2015.

<sup>43</sup> Zielinski, Laura Yvonne. "Rights Without Remedies? The Role of Arbitration in Enforcing International Space Law for Private Parties." In *Regulation of Outer Space*, pp. 119-134. Routledge.

<sup>44</sup> Kaul, Ranjana. "Recent Space Reforms in India: Perspectives on Policy and Law." *J. Space L.* 44 (2020): 450.

2. **Complex Nature of Space Agreements** – Given space sector agreements involve multiple stakeholders, advanced technology, and high-value investments, arbitration resolves disputes ideally.
3. **Jurisdictional Challenges** – Space activities involve multiple countries around. In light of this, customary courts may face jurisdictional constraints so arbitration is quite a preferred option.
4. **Confidentiality Needs** – Arbitration is confidential given that space disputes often involve sensitive technical and commercial information offering a key advantage over litigation.

## International Precedents and India's Position

Internationally, space arbitration has gained recognition because institutions such as that of the Permanent Court of Arbitration (PCA) provide particular rules for when disputes do relate to space. In this context, the 2011 PCA Optional Rules for Arbitration of Disputes Relating to Outer Space Activities are important.<sup>45</sup>

Yet, India is in arbitration adoption's beginning for space dispute resolution choices. Arbitration clauses are getting included within contracts involving ISRO as well as private entities. A more structured approach is still needed, though.<sup>46</sup>

## Key Challenges in Implementing Space Arbitration in India

1. **Absence of a Dedicated Space Law** – Absence of a Dedicated Space Law reveals India lacks a specific legal framework governing space arbitration, unlike countries with thorough space legislations.
2. **Limited Awareness and Expertise** – India shows a limited awareness as well as expertise with regard to space disputes. Specialized knowledge is vital to arbitration, and India has few experts in space arbitration.
3. **Enforcement Issues** – The enforcement of foreign arbitral awards that are in space disputes can still pose some challenges, although India is indeed a signatory to the New York Convention.
4. **Government Dominance** – Most space-related activities in India have been historically under the control of ISRO, which limits the scope for independent dispute resolution mechanisms.

## Proposed Solutions and the Way Forward

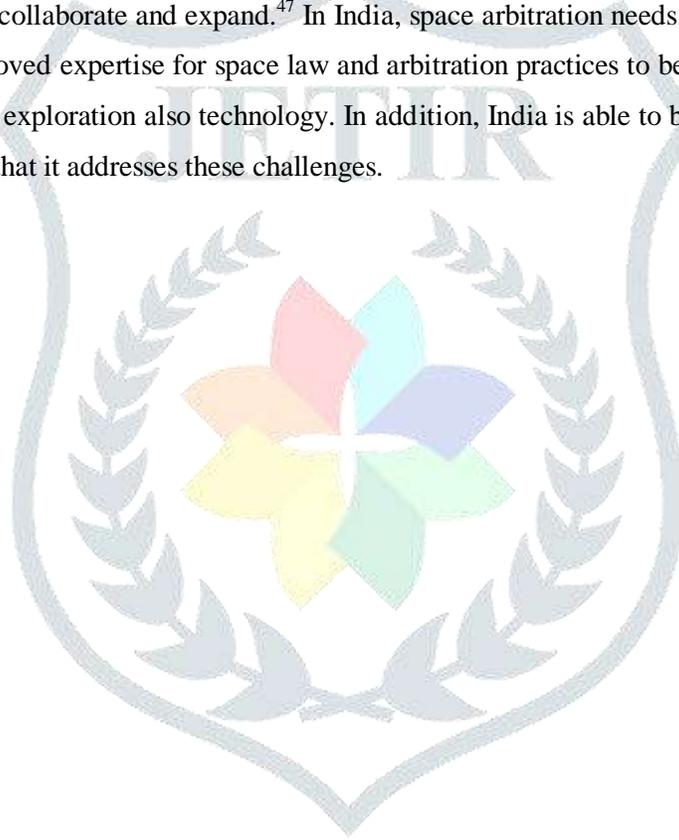
1. **Drafting a Comprehensive Space Law** – India needs a dedicated space law that includes a framework for dispute resolution as well as one that includes arbitration.
2. **Encouraging Institutional Arbitration** – Streamlining this process involves using institutions like the Mumbai Centre for International Arbitration (MCIA) or establishing an Indian space arbitration institution since Institutional Arbitration is encouraged.

<sup>45</sup> Kilgore, Susan Cone. "Arbitration rules for disputes arising from outer space activity." *The Federal Lawyer* (2018): 58-63.

<sup>46</sup> Dave, Dushyant, Martin Hunter, Fali Nariman, and Marike Paulsson, eds. *Arbitration in India*. Kluwer Law International BV, 2021.

3. **Capacity Building and Training** – By encouraging legal professionals to specialize, India can develop expertise in space arbitration. Capacity building and training can serve to help technical professionals specialize in addition.
4. **Incorporating Arbitration Clauses in Space Contracts** – Since ISRO, private players, and foreign entities incorporate arbitration clauses in contracts, arbitration becomes the primary dispute resolution mechanism.

Space arbitration presents within it a mechanism that can viably and efficiently resolve disputes in India's growing space sector. Arbitration can resolve disputes in neutral, cost-effective, and enforceable ways as the private sector participates more and international entities collaborate and expand.<sup>47</sup> In India, space arbitration needs a strong legal framework, more institutional support, plus improved expertise for space law and arbitration practices to be effective. India's achievements include advancements in space exploration also technology. In addition, India is able to become a global leader for space dispute resolution in the event that it addresses these challenges.



<sup>47</sup> Bhatnagar, Saksham. "Arbitration in Technology Disputes: Addressing Complexities in the Digital Era." *Jus Corpus LJ* 5 (2024): 336.