JOURNAL OF MULTIDISCIPLINARY SCIENCES AND INNOVATIONS
VOLUME 5, ISSUE 05
MONTHLY JOURNALS
ISSN NUMBER: 2751-4390
IMPACT FACTOR: 9,08

SPACE DIPLOMACY IN UZBEKISTAN'S FOREIGN POLICY: STRATEGIC CHOICE, GEOPOLITICAL TRANSFORMATION, AND PROSPECTS FOR REGIONAL LEADERSHIP

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ABSTRACT

This article analyzes the strategic significance of space diplomacy in the contemporary system of international relations and its growing role in Uzbekistan's foreign policy. In the twenty-first century, space technologies have become one of the key factors determining states' economic development, national security, international image, and geopolitical influence. Consequently, space diplomacy is increasingly emerging as a distinct instrument of foreign policy. Uzbekistan has recently intensified its engagement in the space sector through the establishment of the UzSpace Agency in 2019, accession to the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) in 2022, and the expansion of cooperation with international space companies and organizations. The study employs historical-comparative, empirical, institutional, and analytical methods. The article examines the transformation of the space sector in Central Asia, Uzbekistan's space strategy, soft power policy, international partnerships, technological challenges, and future prospects. The findings demonstrate that space diplomacy is becoming an important tool for geopolitical influence, technological modernization, and regional leadership for Uzbekistan.

Keywords

Space diplomacy, geopolitics, soft power, foreign policy, UzSpace, COPUOS, international cooperation, Central Asia, space strategy, technological diplomacy.

INTRODUCTION

In the twenty-first century, global politics is increasingly shaped by technological factors. Artificial intelligence, quantum technologies, digital economies, and space technologies have become key indicators of national power and strategic influence. Among these, space technologies occupy a particularly important position because they directly affect economic development, national security, scientific innovation, and geopolitical competition [7](Elefteriu, 2024).

The global space economy has already exceeded half a trillion dollars and is projected to reach nearly one trillion dollars by 2030. Satellite systems have become essential for telecommunications, internet infrastructure, navigation, meteorology, agriculture, environmental monitoring, and defense systems. As a result, geopolitical rivalry is no longer confined to land or maritime domains but increasingly extends into outer space.

The growing competition between the United States and China, as well as the rapid expansion of private aerospace companies such as SpaceX, Blue Origin, and OneWeb, illustrates the strategic importance of outer space in modern international relations.

Under these conditions, the concept of space diplomacy has emerged as a new direction in foreign policy. Space diplomacy refers to the use of space technologies, scientific cooperation, satellite programs, and international space partnerships as instruments for expanding geopolitical influence and strengthening international prestige.

Uzbekistan has also joined this global transformation. The establishment of the UzSpace Agency in 2019 represented an important institutional step toward the development of a national space policy [1](Uzbekcosmos Agency, 2023). In recent years, Uzbekistan's accession to COPUOS, international memoranda of cooperation, satellite monitoring initiatives, and the development of a national space strategy have demonstrated the emergence of a new strategic direction in the country's foreign policy.

The main objective of this study is to analyze the strategic significance of space diplomacy in Uzbekistan's foreign policy and to assess the country's geopolitical opportunities in Central Asia.

LITERATURE REVIEW

Space diplomacy is a relatively new field within the study of international relations. Recent scholarship increasingly views space activity as an important component of geopolitical competition, technological power, and international influence.

Elefteriu argues that space power has become one of the central dimensions of modern geopolitical rivalry and emphasizes that control over space technologies significantly enhances political and economic influence [7](Elefteriu, 2024). Similarly, Gussarova's research on Kazakhstan demonstrates that Central Asia is gradually becoming part of the global transformation of the space sector [8](Gussarova, 2024).

Studies published by UNOOSA and COPUOS emphasize the importance of international cooperation, space governance, and legal regulation in ensuring the peaceful use of outer space [6](UNOOSA, 2024). Secure World Foundation reports also highlight the growing importance of space sustainability and global space governance mechanisms [12](Secure World Foundation, 2025).

Joseph Nye's theory of "soft power" provides an important conceptual framework for understanding space diplomacy. States increasingly use scientific achievements, technological innovation, and space exploration projects to strengthen their international attractiveness and prestige.

Despite the growing international literature on space diplomacy, there are still very limited academic studies examining Uzbekistan's space strategy and its geopolitical implications. This article seeks to contribute to filling this research gap.

THEORETICAL FRAMEWORK

This study is based on geopolitical realism, soft power theory, and the concept of technological diplomacy.

Halford Mackinder's geopolitical theory argues that control over strategic territories determines global political dominance. In the contemporary era, the notion of strategic space increasingly extends beyond land and sea into outer space. Space technologies provide states with advantages

in communications, intelligence, navigation, and security.

Zbigniew Brzezinski emphasized that technological superiority is one of the key sources of geopolitical influence. In this context, space technologies represent one of the highest forms of technological capability.

Joseph Nye's concept of soft power explains how states can influence others through attractiveness, innovation, and cooperation rather than military coercion. Space programs contribute significantly to the scientific and technological image of states and therefore strengthen their soft power capabilities.

The concept of technological diplomacy is also highly relevant to this study. Technological diplomacy refers to the use of advanced technologies as instruments of international cooperation and foreign policy influence. Uzbekistan's emerging space policy can be understood at the intersection of these theoretical approaches.

RESEARCH METHODOLOGY

The study employs historical-comparative, empirical, institutional, and analytical methods.

The historical-comparative method is used to compare the development of space policies among Central Asian states. The empirical method is based on official reports, statistical data, and policy documents from UzSpace, UNOOSA, UzDaily, Euronews, Qazinform, and other international sources.

Institutional analysis is applied to examine the organizational structure of the UzSpace Agency and its mechanisms of international cooperation. In addition, analytical methods are used to evaluate the strategic impact of space diplomacy on Uzbekistan's foreign policy and regional positioning.

THE DEVELOPMENT OF SPACE POLICY IN CENTRAL ASIA

The foundations of Central Asia's space history were established during the Soviet period. The Baikonur Cosmodrome in Kazakhstan became one of the most important sites in the history of global space exploration.

Following independence, Kazakhstan successfully utilized this legacy and developed the KazCosmos Agency, becoming the leading space actor in Central Asia [8](Gussarova, 2024).

Kyrgyzstan, Tajikistan, and Turkmenistan still largely depend on foreign satellite services and external technological support. Uzbekistan, however, has recently adopted a more active and strategic approach toward the space sector.

The establishment of the UzSpace Agency in 2019 symbolized Uzbekistan's official entry into the regional space transformation process [1](Uzbekcosmos Agency, 2023). The agency focuses on satellite monitoring, geoinformation technologies, remote sensing, and international cooperation.

In 2022, Uzbekistan joined COPUOS and became a full participant in the international system of

space governance [6](UNOOSA, 2024). This significantly strengthened the country's legitimacy in the field of space diplomacy.

THE STRATEGIC SIGNIFICANCE OF UZBEKISTAN'S SPACE DIPLOMACY

Space diplomacy is increasingly becoming an important geostrategic instrument in Uzbekistan's foreign policy. The "Uzbekistan–2030" Strategy identifies innovation, technological modernization, and the attraction of international investment as key national priorities [13](Uzbekistan–2030 Strategy).

Space technologies play a critical role in achieving these objectives. Uzbekistan has signed cooperation agreements with South Korea, Pakistan, Azerbaijan, Italy, the UAE, and several international organizations.

Partnerships with companies such as Airbus, OneWeb, Maxar, and Vast Space demonstrate Uzbekistan's growing integration into the global space ecosystem [4](Vast Space, 2024).

In 2025, during the Dubai Airshow, Uzbekistan and the UAE discussed satellite production, technology transfer, and educational cooperation in the space sector [3](UzDaily, 2025).

Furthermore, Uzbekistan's initiative to host the International Astronautical Congress (IAC) in Samarkand in 2028 reflects the country's ambition to become a regional center for international space diplomacy [9](Euronews, 2025).

Space diplomacy also serves as an instrument of soft power for Uzbekistan. The historical legacy of Mirzo Ulugbek and Samarkand's scientific heritage are increasingly connected with the country's modern technological identity.

ECONOMIC AND TECHNOLOGICAL EFFECTIVENESS

Space technologies are becoming an important driver of economic modernization in Uzbekistan. Satellite monitoring systems are actively used in agriculture, environmental management, urban planning, and water resource monitoring.

According to official reports, more than one hundred thousand violations related to illegal construction, unauthorized mining, and misuse of land resources were identified through satellite monitoring systems in 2024 [2](Government of Uzbekistan, 2024).

Satellite technologies are also contributing to the development of digital governance systems, environmental sustainability, and smart infrastructure.

In addition, the adoption of the Law "On Space Activities" in 2025 represented an important step toward establishing a legal framework for the regulation of Uzbekistan's national space sector [5](UzDaily, 2025).

CHALLENGES AND LIMITATIONS

Despite these achievements, Uzbekistan's space strategy still faces several structural challenges.

The first major challenge is technological dependence. Uzbekistan does not yet possess an independent satellite production base and remains dependent on foreign technologies and external expertise.

The second challenge is the shortage of highly qualified specialists in aerospace engineering, astronomy, and advanced technological research.

Financial constraints also represent a significant issue. Space programs require substantial long-term investments, making international partnerships and public-private cooperation strategically necessary.

Regional competition is another important factor. Kazakhstan remains the strongest space actor in Central Asia due to the Baikonur Cosmodrome and its extensive historical experience in the sector.

FUTURE PROSPECTS

In the future, Uzbekistan has the potential to significantly strengthen its geopolitical and technological influence in Central Asia through space diplomacy.

The planned launch of the “Mirzo Ulugbek” national satellite project in 2028 could become an important milestone in the development of the country’s independent space capabilities [10](Qazinform, 2025).

The possible organization of the IAC-2028 Congress in Samarkand may further transform Uzbekistan into one of the important centers of international space cooperation.

In order to achieve these goals, Uzbekistan should prioritize several strategic directions:

- developing national aerospace education;
- strengthening private sector participation in the space industry;
- expanding cooperation with international scientific centers;
- developing domestic satellite technologies;
- establishing a regional platform for space cooperation in Central Asia.

If these strategies are implemented consistently, Uzbekistan could emerge as one of the leading space diplomacy actors in Central Asia.

CONCLUSION

The findings of this study demonstrate that space diplomacy is becoming an increasingly important strategic direction in Uzbekistan’s foreign policy.

The establishment of the UzSpace Agency, accession to COPUOS, international partnerships with major space companies, and the development of national space programs are accelerating Uzbekistan’s integration into the global space system.

Space diplomacy serves not only as a tool of technological modernization and economic development, but also as an instrument of soft power and geopolitical influence.

However, challenges related to technological dependence, financial limitations, and shortages of qualified specialists still need to be addressed.

Overall, space diplomacy has the potential to strengthen Uzbekistan's international position, increase its scientific and technological capacity, and enhance its geopolitical role in Central Asia.

REFERENCES

1. Uzbekcosmos Agency. (2023). International Cooperation. https://uzspace.uz/oz/page/international-partnership

2. Government of Uzbekistan. (2024). Results of Uzbekcosmos Agency Activities in 2024. https://gov.uz/oz/uzspace/news/view/70563

3. UzDaily. (2025). Uzbekistan expands international cooperation in the space sector at Dubai Airshow 2025. https://www.uzdaily.uz

4. Vast Space. (2024). Uzbekistan's Ministry of Digital Technologies and Vast establish agreement. https://www.vastspace.com

5. UzDaily. (2025). President of Uzbekistan signs law on space activities. https://www.uzdaily.uz

6. United Nations Office for Outer Space Affairs (UNOOSA). (2024). Status of treaties: Accession by Uzbekistan to the Outer Space Treaty. https://www.unoosa.org

7. Elefteriu, G. (2024). The Role of Space Power in Geopolitical Competition. Council on Geostrategy. https://www.geostrategy.org.uk

8. Gussarova, A. (2024). Emerging Space Power in Central Asia: Kazakhstan at the Crossroad. Near East Policy Forum. https://nepf.org.au

9. Euronews. (2025). Uzbekistan aims to open a 'Space City' for major industry event in 2028. https://www.euronews.com

10. Qazinform. (2025). Uzbekcosmos unveils ambitious space program roadmap through 2035. https://qazinform.com

11. Secure World Foundation. (2025). Global Counterspace Capabilities Report. https://swfound.org

12. Secure World Foundation. (2025). COPUOS Briefing Book. https://swfound.org

13. Uzbekistan–2030 Strategy. https://gov.uz/en/pages2030_strategy

14. Nye, J. (2004). Soft Power: The Means to Success in World Politics. Public Affairs.

15. Brzezinski, Z. (1997). The Grand Chessboard. Basic Books.