

RSIS Commentary is a platform to provide timely and, where appropriate, policy-relevant commentary and analysis of topical and contemporary issues. The authors' views are their own and do not represent the official position of the S. Rajaratnam School of International Studies (RSIS), NTU. These commentaries may be reproduced with prior permission from RSIS and due credit to the author(s) and RSIS. Please email to Editor RSIS Commentary at RSISPublications@ntu.edu.sg.

The Geopolitics of Outer-Space: Can Singapore Do More?

By Arvind Raj

SYNOPSIS

The increasingly multipolar international order is shaping cooperation and conflict in outer space. This fragmenting international space order has significant implications for outer space governance. It can affect satellite and other technological developments that Singapore and its ASEAN neighbours must rely on for their respective national progress and security.

COMMENTARY

Buttressed by a relatively benign American-led international order and enabled by advancements in space technologies, the end of the Cold War saw an increase in space-faring states and an influx of commercial actors, creating many social and economic benefits. However, this period was generally short-lived.

Today, the increasingly multipolar international order is shaping security, cooperation, and conflict in space. At the global level, earthly geopolitical rivalries have persuaded major space powers to incorporate space as a key military domain to protect their respective national interests. This is best reflected in policies such as space defence strategies and actions such as developing space-based assets and counterspace technologies for both defensive (deterrence) and offensive (to damage enemy space assets) purposes.

The United States and China are also competing over issues such as global space technology leadership and space exploration initiatives including the US-led Artemis Programme and the China-led International Lunar Research Station (ILRS). At the regional level, regional dyads, especially the China-India and China-Japan relationships, compete to secure their space-related national interests. In response to

China's 2007 Anti-Satellite (ASAT) Missile test, India and Japan both pressed ahead with defence and diplomatic measures to balance against China in space.

India accelerated the development of its military space sector, culminating in the launch of its own ASAT test in 2019. Japan broadened its security alliance with the United States to include space-related matters. All three states are also competing diplomatically for partnerships in the Indo-Pacific, through various initiatives like the Belt and Road Space Information Corridor, Asia-Pacific Space Cooperation Organization (APSCO), Asia-Pacific Space Agency Forum (APRSAF), and the Indian Space Research Organisation (ISRO).

Weak Global Space Governance

While competition is not inherently bad, it has infused a previously more benign space ecosystem focused on generating economic and social benefits with the dynamics of great power competition. Moreover, there is a lack of robust space governance to ensure that competition does not become conflict. Instead, space governance today is characterised by two distinct approaches.

The first approach, led by China and Russia and supported by the Non-Aligned Movement, prioritises creating a legally binding instrument to prohibit the placement of weapons in outer space. The United States and its allies reject this, favouring a second approach of non-legally binding mechanisms such as codes of conduct, guidelines, or political commitments to promote responsible behaviour in addressing space threats.

This has led to deadlocks on multiple diplomatic initiatives at UN forums, making consensus on space governance issues difficult.

Singapore's Progress

Singapore and its ASEAN neighbours must navigate the above challenges to ensure that its relatively nascent space ecosystems can continue to develop. There has already been greater recognition by Singapore of the need to enhance international space security. This is captured in various national statements delivered at international forums, with Singapore acknowledging that the deteriorating global security environment has reduced strategic trust amongst major space powers at a time when there are emerging threats in space.

These statements espouse the need for an open, inclusive, rules-based multilateral system governing outer space activities, with all discussions on space underpinned by existing international law, including the UN Charter, the UN treaties on outer space, and customary international law.

Singapore also favours a practical approach that focuses on developing and adopting norms of responsible behaviour to facilitate consensus-building without precluding the possibility of a legally binding instrument in the future. Some specific suggestions include limiting the intentional creation of space debris and greater transparency and communication about space activities to avoid miscalculation and escalation of competitive dynamics in outer space.

Singapore has done its part in terms of international obligations by signing four and ratifying three of the five international space treaties. This puts it ahead of all the ASEAN states except Indonesia. Domestically, the Office for Space Technology and Industry (OSTIn), Singapore's de facto space agency, has published the "Guidelines for Singapore-Related Space Activities".

Despite these efforts, Singapore can contribute more.

ASEAN as a Convening Vehicle

The sobering international environment and increasing dependence of individual ASEAN states on space technologies make ASEAN a crucial element of any policy recommendation. Thus far, ASEAN has articulated its regional position on space-related security matters at UN forums. While there is naturally no full convergence on policy positions amongst the respective ASEAN member states, this is still a good first step. However, moving forward, ASEAN solutions must account for two interrelated points.

First, if it accepts the fundamental reality that discussions about space technologies and capabilities have a national security angle, then any ASEAN solution would have to factor in the historical baggage, inherent security concerns, and mutual suspicions that ASEAN states have about one another.

Second, partly to mitigate the effects of these internal dimensions, ASEAN must recognise that success will depend on the participation and acquiescence (at least partially) of advanced space powers.

It should be clear that these powers caused many of the space security issues in the first place. Without their involvement, any ASEAN space security proposal will lack weight and credibility. This could also create the potential for mistrust within ASEAN itself.

Can Singapore Do More?

First, Singapore should propose using ASEAN as a convening vehicle to discuss space-related security matters. A practical solution could be establishing an Expert Working Group on Emerging Space Threats at the ASEAN Defence Ministers' Meeting Plus (ADMM-Plus). This will align with ASEAN's approach to enmeshing regional and global powers within ASEAN's security architecture to discuss security issues. It could serve as a platform for greater information sharing between space powers and ASEAN member states and serve as a multilateral forum to establish positions on space security issues. This may allow ASEAN to serve as a bridging body for space powers to discuss space security issues and develop certain norms to abide by.

Second, Singapore should consider following the lead of several of its ASEAN neighbours by introducing a National Space Act. While dedicated space legislation is not a prerequisite for a space ecosystem, a comprehensive legal and regulatory framework will guide Singapore's space activities. Enacting a national space law clarifies the basis for Singapore to fulfil its international obligations under the relevant

international laws and treaties governing space activities. It also provides legal visibility for Singapore's space activities.

Third, introducing a National Space Act could also set the provisions for establishing an overarching National Space Strategy. This will allow Singapore to develop its legal policy framework and technological capabilities simultaneously. This strategy would serve as a road map for Singapore's short-, medium-, and long-term national priorities regarding space. This would also encompass technological and economic imperatives, some of which are already included in OSTIn's Space Technology Development Programme, as well as policies to better address national security concerns, such as reducing the emerging and complex threats facing the space environment.

Conclusion

Despite the sobering international environment, Singapore still has the agency to act. The actions suggested could boost Singapore's standing as a rules-based and forward-looking member of the multilateral rules-based system, which Singapore depends on to secure its space-related national interests.

Arvind Raj is an Associate Research Fellow with the National Security Studies Programme at the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University (NTU), Singapore. His research interests include Singapore foreign policy, Singapore national security, great power competition in Southeast Asia, and foreign interference in domestic politics.

S. Rajaratnam School of International Studies, NTU Singapore
Block S4, Level B3, 50 Nanyang Avenue, Singapore 639798
T: +65 6790 6982 | E: rsispublications@ntu.edu.sg | W: www.rsis.edu.sg