



CISS MONTHLY PERSPECTIVE



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Op-ed | The Threat of Bio-Inspired Autonomous Drones in the Strategic Environment of South Asia

Muhammad Ali Baig

A team of Chinese scientists at the National University of Defense Technology in the Hunan province revealed in June 2025 a prototype of a tiny Unmanned Aerial Vehicle (UAV) to be used in stealth missions, capable of measuring just 70cm in length and weighing 900g. It looks like a mosquito, but it is actually quite small. It has a very thin body, two delicate, leaf-like wings and three hair-thin legs, replicating the anatomy and flight dynamics of insects. Its wings flap, imitating the motion of insects, a bionic design which reduces its acoustic and visual signatures and thus makes it very hard to detect. The developments illustrate a basic paradigm shift especially in stealth technology. The global trend in Intelligence, Surveillance and Reconnaissance (ISR) operations is moving towards stealthy, discrete and agile platforms. As India – the largest importer of major arms globally for its military modernization – disrupts and threatens the fragile stability of regional security architecture of South Asia.

At the moment, insect-sized bionic drone design is based on the integration of aerospace engineering, nano technology, biology, artificial intelligence (AI) and robotics. These tiny machines are spreading around the world due to research and development. Aside from Harvard's RoboBee, which weighs less than a tenth of a gram, and Germany's SWARM Biotactics, which is turning to paying NATO customers for cyborg insect swarms, the race to turn tiny machine robotics into weaponry is warming up. The Bumblebee drone, which uses AI to identify targets, has already been fielded by Ukraine in combat and the Norwegian Black Hornet nano drone was used by British forces on the battlefield in Afghanistan for intelligence.

Importantly, there are numerous challenges during the evolution of these bio-mechanic creations. Some of the main hurdles for models like dragon flies and beetles are replicating the dynamics of flapping wing flight using micro-actuators, building a lightweight chassis using carbon fiber or polymer composites and adding sensors like micro-cameras, (Light Detection and Ranging) LiDAR, and Inertial Measurement Units (IMUs) for real-time reconnaissance. Power efficiency is also a key limitation which is solved with high density batteries, solar powered wings and adjustable power management algorithms. Yet, scientists are successful enough to make them operational.

Amazingly, the AI enabled small bio-machines are autonomous and semi-autonomous. AI provides it navigation systems to travel on its own towards the extraction point. Its learning algorithms adapt in real time. The sensor fusion helps in precise situational awareness. All crucial features of machine decision making autonomy are available in this new marvelous technology. Inspired by the swarm behavior of insects, collaborative tasks like area mapping, target tracking, and distributed sensing are also possible among these little robots. Early successful prototypes showed flapping-wing mechanisms. It helped avoid obstacles. This became effective and possible with autonomous navigation, and real-time imaging. Despite this, there are several challenges present with this robot technology along with its threat to security implementation in the regional environment.

In the meanwhile, the development of bio-inspired drone technology has significant implications for the South Asian region where the strategic rivalry, nuclear deterrence and disputed border issues are part of the package. Here, Indian military modernization plays an important role to destabilize the security architecture of the region with these technologies. The rapid adoption of AI, advanced drone capabilities, and biomimetic systems for example, the Indian E-Raptor inspired by the falcon and built in collaboration with French companies, could lead to a major surveillance imbalance between India and Pakistan. Also, on 29 June 2026, outgoing Indian Army Chief General Upendra Dwivedi announced the raising of specialized Baaz battalions under the Army Aviation Corps. As pointed out in regional security analyses, the May 2025 crisis between New Delhi and Islamabad also demonstrates how quickly tensions can flare up without effective dialogue. This trajectory that India is institutionalizing drone-centric ISR and strike as a standing part of its force structure, across the Army, Air Force, Navy, and paramilitary forces at the same time.

Pakistan's induction as a member state of the World Artificial Intelligence Cooperation Organization (WAICO) is a testament to its support for international frameworks for AI governance. On the other hand, India's non-participation in this exercise indicates a difference in methodology which makes it difficult to put in place bilateral as well as such regional Confidence Building Measures (CBMs) for emerging technologies. Lack of a common framework for controlling AI-powered surveillance and autonomous systems leaves uncertain emerging risks. While the Cold War era nuclear near-miss scenarios entailed human judgment ultimately triumphing over the automated system, the role of AI and autonomous systems in surveillance and, potentially, in targeting introduces new elements such as lethal autonomous weapon systems

that current institutional safeguards may not be able to resolve. Overall, the design and development of insect-sized bio inspired drones for autonomous reconnaissance have the potential to revolutionize various fields, including military modernization. Continued advancements in biomimicry, materials science, and AI are paving the way for more efficient and autonomous insect-inspired UAVs. But, with the increasing spread of this technology, South Asia is at a crossroads. The region's security analysts have no choice but to acknowledge that the distinction between known and unknown risks has become increasingly indistinct with conventional as well as non-conventional forces particularly in the development of stealth bio-inspired monitoring systems. Going forward, future development work will need to not just enhance flight endurance and swarm capabilities, but also consider governance, ethical and strategic issues raised by these technologies to regional stability. The technological prowess of nano drones can inadvertently draw South Asia towards an unpredictable and unstable security path if there are not cooperation and risk-reduction in place.

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Link: <https://strategicforecast.cissajk.org.pk/?p=23613>

Op-ed | Pakistan's first lunar rover, Jinnah-1, and Growing Sino-Pak Cooperation

Abdul Moiz Khan

The lunar South Pole has emerged as a major focus of international space exploration due to its scientific potential. In view of this, Pakistan has also decided to send its own scientific mission there. The country's first indigenous lunar rover, "Jinnah-1," will head to the Moon's South Pole in 2029 aboard China's Chang'e-8 mission. The article argues that Pakistan's decision reflects three key perspectives. Firstly, the gesture is symbolic as Islamabad also wants to be among the group of elite member countries conducting scientific research on the Moon, indicating its growing interest in the space sector. The decision signals the revival of an old rivalry on the Moon, as India reached the lunar South Pole with Chandrayaan-3 in 2023. Lastly, Jinnah-1 illustrates increasing cooperation between Pakistan and China in the space domain.

Jinnah-1 aims to explore and study the geological characteristics of the lunar surface and conduct key experiments for future lunar research. The rover is likely to weigh around 35 kg and have an expected price tag of approximately Rs400 million. It will have a panoramic camera, ground-penetrating radar, and a device to analyze minerals in lunar soil using infrared spectroscopy. It will also be equipped with a device for taking soil samples, analyzing and separating the noble gases contained therein, and storing them.

Before analyzing why Pakistan decided to send its own lunar mission, it is equally important to understand why states are sending their own expeditions to the Moon's South Pole. The region is believed to be suitable for long-term human habitation due to its vast, untapped ice reserves. If the surface contains large quantities of ice, it can be used not only to produce hydrogen fuel for deep-space propulsion but also to provide drinking water for humans residing there. This will exponentially reduce costs for future lunar and interplanetary explorations. Moreover, it is also an area with elevated ridges, making it an ideal site for generating solar power and for constructing permanent structures that support human presence on the Moon.

Jinnah-1 reveals Pakistan's renewed interest in the space sector and the country's desire to become part of the leading states carrying out activities on the Moon for peaceful purposes. The country is taking this seriously as Pakistan seeks to broaden its space cooperation, using science, research and technology partnerships to build a knowledge-based economy and develop a new generation of engineers, scientists and innovators. For instance, Pakistan's senior government minister, while meeting with aerospace companies during a visit to Houston in July 2026, aimed to deepen the

country's collaboration with the US space agency, NASA. He also said that Pakistan aims to launch its first national mission to the Moon by 2035 as part of a broader drive to advance the country's space program.

India's Chandrayaan-3 landing near the lunar South Pole in August 2023 was a moment when India became the fourth country to achieve a soft landing on the Moon and the first to land near the South Pole. The achievement generated domestic and international recognition. Jinnah-1's targeting of the same lunar South Pole is not coincidental. The rivalry between India and Pakistan, which has been fought on land, in the air, over water, and in the domain of nuclear deterrence, has now acquired a new frontier. The rover's name, invoking the founder of Pakistan, is deliberately juxtaposed with an Indian achievement named after Vikram Sarabhai (India's Vikram lander).

Historically, the all-weather friendship between Islamabad and Beijing has been viewed through a security lens. However, the announcement of Jinnah-1 confirms that cooperation between the two brotherly countries extends beyond the military domain, as evidenced by deepening bilateral ties in the space domain. This is not the maiden collaboration between the two allies, as China has launched various Pakistani satellites into space, including the country's inaugural lunar satellite, ICUBE-Q, indigenous electro-optical satellites E0-1, E0-2, E0-3, and PRSS-1, in the last two years only.

Besides, earlier this year, two Pakistani astronauts completed advanced assessments in China for a human spaceflight mission, with one expected to travel to a Chinese space station later this year. Pakistan is also the first country to deploy and benefit from the Chinese navigation system Beidou. Sino-Pak space cooperation, in short, is a manifestation of the peaceful use of space technologies, offering assistance and solutions to Islamabad's environmental challenges as the country faces severe impacts from climate change despite contributing less than 1%. Jinnah-1's journey to the lunar South Pole in 2029 reiterates Pakistan's official stance of exploring celestial bodies for peaceful purposes and refraining from any action that could lead to the militarization of space. The mission signals that Islamabad's ambitions in space are anchored in scientific contribution rather than in staking a geopolitical claim over the untapped resources present on the Moon. Finally, space cooperation is likely to be a domain of cooperation between Beijing and Islamabad, which would increase in an unprecedented manner given the trajectory of their current joint endeavors.

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Link:<https://thediplomat.com/2026/09/the-meaning-behind-pakistans-first-lunar-rover/>

Op-ed | Addressing the Dual-Use Missile Challenge: The need for New CBMs in South Asia

Murad Ali

The existing Confidence building Measures (CBMs) between India and Pakistan are no longer sufficient to control the future of arms control in South Asia, considering the threats posed by the emerging technologies. These CBMs were designed to maintain strategic stability in South Asia characterized by single role delivery systems. With the emergence of dual use missile systems, the old CBMs seem obsolete. The 1998 agreement on the prohibition of attack against nuclear installation and facilities as well as the 2005 agreement on the pre-notification of flight testing of ballistic missiles are still in place and have survived major conflicts since their inactions. However, they were adopted before the emergence of dual use missiles system. Hence, they fail to adequately address one of the most serious challenges to the strategic stability of South Asia; the regulation of dual use missiles system. Dual-use system could ruin crisis stability in South Asia in two ways. First, it creates uncertainty whether it is loaded with conventional weapons or nuclear warheads. Their use can present a perception of “use it or lose it” dilemma to enemies who might interpret the incoming missiles as a preemptive first strike rather than a conventional attack. Second, since dual-use systems present an ambiguity between conventional and strategic forces, the enemy’s conventional strikes on such system can be misunderstood as an attempt to attack nuclear forces. Consequently, this system presents a precarious condition of creating space for misperception, and inadvertent escalation.

Recent incidents between India and Pakistan demonstrate that the South Asian security dynamics have fraught with conventional conflict evolved from limited stand-off such as 2019 Balakot strike to a comparatively prolong conflict of four days in May 2025, exchanging missiles, drones and electronic warfare. The risk of the dual-use systems leading to escalation would only grow if the next confrontation between Pakistan and India continues for long period of time. There is a growing concern in Pakistan that India has shifted toward a counterforce posture which would probably make the dual-use system quite alarming and created escalation risks in future.

The entanglement between the conventional and non-conventional spheres has been worsen in South Asia by India’s evolving deployment of dual-use missile systems. Number of incidents in the past take us to the grim reminder that how significant it needs to establish a transparent division between conventional and strategic delivery systems. In March 2023, the launch of BrahMos missile in normal time, trespassed the Pakistani territory and hit near Mian Channu, followed by another incident in the May 2025 during crisis situation, the deployment of BrahMos missiles,

reflected how the use of dual missile system during particularly during crisis could provoke ambiguity and enhance the risk of misperception and inadvertent escalation. As a result of dual use missile system by India, Pakistan may mischaracterize the incoming missile and wrongly assess how it is armed or be unable to characterize it. Mischaracterization can aptly lead to a false positive (misunderstanding of a nonnuclear missile as a nuclear missile) or a false negative (mischaracterization of a strategic missile as a conventional missile). On other hand, Pakistan has a separated between its conventional and strategic missile capabilities. Pakistan established an Army Rocket Force Command (ARFC) in this direction. ARFC has separated the operational employment of land based conventional missiles from that of land based nuclear delivery systems of the National Command Authority (NCA). India should also replicate this model and reduce the risk of misperception from dual-use systems. Therefore, it urgently needed to formulate a new stream of confidence building measures on dual-use system between Pakistan and India. The major challenge is not stemming from the structural ambiguity presented by dual-use missile systems. To address this challenge, it is important to verification based on observable features rather than declared intentions. There are four recommendations to achieve the new CBMs on dual-use system between India and Pakistan.

First, the already existing protocol related to missile pre-notification agreement of 2005 should be expanded to incorporate cruise missiles, hypersonic weapons, and re-entry vehicles. Second, both Pakistan and India should start negotiation on reciprocal transparency pertaining to the separation of conventional and strategic missile system. This would not require disclosing any other sensitive information such as targeting plans, and warhead inventories. It would create adequate structural clarity to figure out by both sides whether the system is assigned for conventional purpose or for strategic role. Similarly, Pakistan and India should carve out a permanent missile risk-reduction mechanism, assigned exclusively to missile related activities such flight test notification, force movements, and mega-scale military exercises that involve dual-use systems. Last, this arrangement for missiles system should be extended to the maritime forces as well. India's growing sea-based deterrence created an asymmetrical maritime calculus in South Asia, with Pakistan lacking the SSBNs system. Both Pakistan and India need to establish bilateral Incidents at Sea (INCSEA) arrangement, to avert the strategic vulnerability. In a nutshell, the ambiguity of the dual-use system in South Asia is not symmetrical, but it is the corollary of India's doctrinal and force postures. This operational ambiguity has been created deliberately by India.

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Link:<https://stratheia.com/addressing-the-dual-use-missile-challenge-the-need-for-new-cbms-in-south-asia/>

Op-ed | Pakistan-Russia Cooperation in Peaceful Uses of Nuclear Technologies: Challenges and Prospects

Dr Muhammadi

Introduction

In an era marked by a changing geopolitical landscape, alliances, energy insecurity, as well as the persistent requirement for a global energy transition to cleaner forms of energy, nuclear energy is gaining great importance in national development strategies of various countries around the world. Pakistan—a country with decades of experience, a clean track record in nuclear operation, and a robust safety and security mechanism—has achieved significant milestones, including power generation, agriculture, nuclear diagnostics, and medicine. It has commenced its program on peaceful uses of nuclear technologies by getting inspiration from the “Atoms for Peace” project by the United States in 1954. In addition, with rapid population growth, Pakistan is facing an energy crisis, creating an urgent need for sustainable power generation. Today, nuclear energy is no longer an option—it is a strategic imperative. In this context, Pakistan is working indigenously, collaborating with countries for the development of peaceful uses of nuclear technologies. Currently, China has become a key country cooperating with Pakistan in this sector. However, expanding collaboration with other nations is becoming increasingly promising, especially with Russia, a key player in nuclear technologies. Bilateral cooperation could further advance Pakistan’s capabilities in nuclear energy and technologies. This feature article explores the potential for Pakistan-Russia cooperation in peaceful uses of nuclear technologies and identifies major challenges that may shape this evolving partnership.

Background of Pakistan-Russia Relations

Once characterized by Cold War enmities and competing alliances, Pakistan-Russia bilateral relations have gradually evolved in the post-Cold War era. This transformation has been driven by converging global and regional economic interests and an evolving global strategic environment. The two countries maintain positive diplomatic and economic relations in various sectors, but cooperation in peaceful use of nuclear technologies remains limited and thus requires further development.

In 1991, the disintegration of Soviet Union brought about new opportunities for bilateral Russia-Pakistan relations as the bipolar global order came to an end. Both countries commenced

cautiously, exploring their diplomatic and economic relations, but the development remained slow. The post-2000 era brought about a transformation in the diplomatic approaches of Russia and Pakistan, which began focusing on expanding practical cooperation. Pakistan and Russia strengthened their cooperation through counterterrorism efforts, energy collaboration, and began to participate in the various multilateral forums and organizations, such as the Shanghai Cooperation Organization (SCO). However, cooperation on peaceful nuclear technology remains very limited, which differs from Russia's extensive collaboration with other countries, such as Bangladesh, India, China, Turkey, Egypt, and Iran.

Nuclear Power Generation Research and Development

The foremost area in which the two countries have been expanding bilateral cooperation is nuclear power generation. Pakistan is currently facing a severe energy crisis, and its unstable energy mix relies heavily on imported fossil fuels, which also contributes to various environmental challenges. To address these issues, Pakistan is working toward the establishment of large nuclear power plants (NPPs) and has already initiated construction of the Chashma-5 (C-5) NPP. Here, Rosatom, the world's leading company in the construction and operation of large-scale NPPs and Small Modular Reactors (SMRs), can play an important role. The Build-Own-Operate (BOO) model, with its extended fuel supply agreements, serve as a viable solution that can meet Pakistan's power requirements while minimizing operational and financial challenges.

Cooperation between the Pakistan Atomic Energy Commission (PAEC) and Rosatom could also be possible in various areas, including research and development, training for engineers, scientists, and other relevant professionals, and the provision and development of SMR technology in Pakistan. Currently, Pakistan does not have operational SMRs; however, the Center for Studies on Emerging Reactor Technologies (CERT) at the Pakistan Institute of Engineering and Applied Sciences (PIEAS) is actively engaged in research on advanced reactor designs, particularly SMRs. These developments were acknowledged by Rafael Grossi, Director General of the IAEA, during his visit to Pakistan in February 2023. Grossi noted that Pakistan possesses the technical and engineering capacity to develop new NPPs, including SMRs. Hence, collaboration with Russia in this domain would further enhance Pakistan's capabilities in peaceful uses of nuclear technologies.

Moreover, during the World Atomic Week Forum in Moscow, Chairman of PAEC Dr. Raja Ali Raza Anwar stated that Pakistan is preparing to collaborate with Russia's Rosatom in various

advanced areas such as additive manufacturing, data processing, and quantum technologies. He further highlighted that talks on expanding nuclear power plants and ensuring the peaceful use of nuclear technology have become a global priority. In addition, Dr. Anwar pointed out that many countries are increasingly concentrating on how nuclear technologies can advance the performance of power plants and deliver long-term benefits for the coming generation. Russian Foreign Minister Sergei Larov, during a visit to Pakistan in April 2021, also stated that Rosatom and PAEC are “exploring cooperation in using nuclear energy for medicine and industry purposes.”

Nuclear Medicine

Nuclear medicine and radiopharmaceuticals provide an appropriate development path as it functions without requiring power generation systems. In this sector, PAEC is already contributing by offering diagnosis and cancer treatment in its nineteen Atomic Energy Cancer Hospitals (AECHs) throughout the country. However, the health sector in Pakistan could be further developed in collaboration with Russia by technology transfers, research training programs, as well as joint ventures, as it has already advanced nuclear oncology expertise, radioisotope manufacturing capabilities, and medical reactor development experience. The prospects of bilateral cooperation with Russian research institutions and state-owned enterprises include Rosatom’s TVEL Fuel Company, which manages isotope production logistics, and Pakistan’s Joint Institute for Nuclear Research (JINR), located in Dubna. Both are key institutions leading the way in medical isotope research.

Agricultural Development

Another potential area of cooperation between two countries is in agricultural development through nuclear technologies. PAEC has agriculture and biotechnology institutes, which include the National Institute for Food and Agriculture (NIFA), the National Institute for Biotechnology and Genetics Engineering (NIBGE), the Nuclear Institute for Agriculture and Biology (NIAB), and the Nuclear Institute of Agriculture (NIA), previously known as the Atomic Energy Agricultural Research Center (AEARC). Bilateral cooperation in this sector through joint research and development projects, academic and expert exchange programs, shared access to gamma irradiation facilities, and the transfer of seeds already adopted to arid and semi-arid conditions all could significantly improve Pakistan’s food security and strengthen Russia-Pakistan relations.

Russia's organizational experience and background in this sector is both comprehensive and well-structured. A key institute is the Russian Institute of Radiology and Agroecology (RIRAE), which has a long history of conducting research into the behavior of radionuclides in agricultural ecosystems and the application of radiation technologies to improve soil productivity and food safety. Other Russian institutions which have dedicated agronuclear research programs include the Federal Medical-Biological Agency (FMBA), the Russian Academy of Sciences (RAS), and the All-Russian Research Institute of Agricultural Radiology and Agro-ecology. The latter specially conducts research focused on isotopic tracer methods for observing nutrient cycles, groundwater contamination, and fertilizer efficacy tools appropriate for water-stressed agricultural regions in Pakistan, such as Sindh and Southern Punjab. In addition, Russia has the expertise in dealing with international organizations such as the Food and Agriculture Organization (FAO) and the IAEA Joint Division on Nuclear Techniques. These international organizations offer a multifaceted network through which both Pakistan and Russia could collaborate in conducting research, share experimental results, including crop varieties developed using mutation breeding—and coordinate food irradiation standards.

Challenges and Prospects

Currently, Pakistan is facing various global challenges, the greatest being the discriminatory role of the global nuclear order. Particularly, Pakistan's exclusion from the Nuclear Suppliers Group (NSG) hinders the prospects of cooperation in peaceful uses of nuclear technologies. The NSG maintains restrictions on civil nuclear trade, and given Pakistan's non-member status, it is prevented from obtaining much-needed access. India, on the other hand, received a unique, country-specific exemption from the India–United States Civil Nuclear Agreement and the Nuclear Suppliers Group (NSG) in 2008 that allows it to trade civilian nuclear technology, despite not signing the Nuclear Non-Proliferation Treaty (NPT). Such exceptions, in turn, are often considered by other states, including Pakistan, as an example of discriminatory practices in the non-proliferation and arms control regime.

Moreover, Pakistan-Russia cooperation in peaceful uses of nuclear technologies is further constrained by various institutional, legal and geopolitical barriers. Russia seeks to have a balanced relationship with its emerging ties with Pakistan, and its traditional strategic partnership with India. Apart from challenges linked to balancing these relationships, there are also considerable differences in technological standards, as well as regulatory requirements and financing terms

between Rosatom and the PAEC. These issues are further complicated by the new sanctions imposed on Russia following the start of the Ukraine conflict in 2022. Both countries need to work towards developing their institutional capacities so that they can sustain the increasing level of cooperation on peaceful uses of nuclear energy.

Conclusion:

Pakistan's cooperation with Russia in peaceful nuclear technology stands at the crossroads of both opportunities and challenges. Having significant potential and expertise at the bilateral level, the technical and developmental rationale for boosting cooperation in this area is strong. However, geopolitical obstacles seemingly restrict the ability to achieve the objectives laid out for further collaboration. Over the past five decades, Pakistan, even after gaining significant experience in the peaceful uses of nuclear technologies—and with a remarkable record of safe operations and compliance with the IAEA safety standards—still it faces discriminatory approaches from international regulatory bodies. The evolution of global nuclear governance needs to become more equitable and practical to accomplish an actual transformation in international cooperation. The international community should address the current nuclear trade mechanism, which consists of multiple contradictions. The political constraints which restrict responsible nations from obtaining peaceful nuclear technology prevent their progress and their ability to meet sustainable development goals.

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Link:<https://russiancouncil.ru/en/analytics-and-comments/columns/eurasian-policy/pakistan-russia-cooperation-in-peaceful-uses-of-nuclear-technologies-challenges-and-prospects/>

Op-ed | BRICS and India: Can New Delhi Hold the Bloc Together Amid Rising Global Divisions?

Shahwana Binte Sohail

The 18th BRICS Summit to be held in New Delhi on 12-13 September is a challenging time for the grouping. BRICS used to be mainly about economic cooperation but has now expanded to also include political coordination and global governance. Its expansion has increased its global weight while deepening geopolitical divisions. The Iran-Israel-US clash has brought the cleavages to the fore, challenging India's capacity to forge consensus among the growing diversity of its members. The summit is meant to give New Delhi the chance to assert itself as a key Global South voice and prove its capacity to run a diverse coalition. However, today, BRICS is not made up of countries with aligned strategic interests. The grouping is broadened by Egypt, Ethiopia, Indonesia, Iran and the UAE, making the consensus more challenging. These challenges were highlighted during the failure of the BRICS Foreign Ministers' Meeting in May 2026 to issue a joint statement, especially on the West Asia issue.

The West Asia conflict is therefore the immediate test of India's leadership. While Iran and the UAE are both members of BRICS, they have differing interests and security concerns in the region. India must therefore seek language that acknowledges the crisis without forcing members to endorse positions contrary to their national interests. BRICS is an attempt to voice a stronger Global South voice, but its members do not have a shared view of international politics. There are those who would prefer a greater pushback against Western dominance and others who would rather be more flexible in their relationship and interaction with Western and non-Western powers. India is primarily a part of this second group. Russia and China prefer more robust methods of mitigating reliance on Western-based systems, and India has been wary of the idea of making BRICS an anti-Western bloc. New Delhi instead follows strategic autonomy, maintaining ties with the United States and other Western partners while engaging Russia, China and the wider Global South. This flexibility, however, makes it difficult for India to steer the course of BRICS in one geopolitical direction.

China presents another fundamental challenge to India's leadership ambitions. India's growing engagement with the United States exists alongside its BRICS and SCO memberships, reflecting its balancing strategy. Beijing has greater economic weight across the developing world and favours a more ambitious role for BRICS. India can shape the direction of the grouping but is not easily

going to dominate the group. As BRICS expands, there is an increased diplomatic clout of developing countries, but strategic cohesion does not come automatically as a result of the expansion. Its future significance will not be determined by looking at it as an alternative ideological bloc; rather, the focus will be on where they might be able to cooperate in spite of their geopolitical differences.

Economic cooperation is a feasible path forward. BRICS can cooperate despite the differences in geopolitics in trade facilitation, local-currency settlements, development finance, energy and food security, digital connectivity and climate resilience. Other financial instruments like the New Development Bank might also gain more relevance if members are not so much interested in them being an attack on the current international system but rather in infrastructure and development.

For Pakistan, BRICS is not just about India's aspirations and ambitions. Islamabad should instead focus on the broader rise of the Global South and the growing role of multilateral platforms in global decision-making. Pakistan's relationships across the Muslim world offer opportunities to strengthen its diplomatic profile and build wider partnerships. Pakistan needs issue-based diplomacy to engage in Global South diplomacy. Islamabad can pave the way for partnerships with the BRICS countries on several issues such as economic connectivity, energy and food security, digital development, climate resilience, and reform of international financial institutions. This involvement should also be directed to domestic economic priorities, with tangible proposals in the field of infrastructure, renewable energies, agriculture, adaptation to climate change and digital services. The visibility of the diplomats has to go hand-in-hand with economic readiness and the ability to take up agreements.

India therefore faces a paradox: the more BRICS expands, the greater its global significance becomes, but the harder it becomes for any single member to control its political direction. India can influence the grouping, but its ability to shape consensus remains constrained by competing interests among members. The difficulties at the May 2026 Foreign Ministers' Meeting underscored these limitations. The results of the summit in September will help decide the fate of BRICS. India's success in reaching consensus on a substantive declaration will boost its clout in the diplomatic arena. If they arise and result only in a few generic words or don't lead to any substantive common text, then it will be a clear sign that the expansion of BRICS is outstripping their ability to coordinate politically. Either way, it is not likely that the bloc will come together as a cohesive geopolitical alliance in the short term.

The takeaway for Pakistan is to diversify its diplomatic engagement to engage with a new range of partners, build stronger relations with the Global South and actively seek effective and real cooperation and partnership at various multilateral forums. In the end, Islamabad needs to assess such engagement on its ability to translate it into real economic and strategic benefits. India may be hosting BRICS, but the grouping's internal divisions show that influence in a multipolar world cannot be measured simply by who hosts a summit. The real measure of diplomatic strength lies in the ability to build sustainable partnerships, manage differences and turn multilateral platforms into tangible national benefits.

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Link: <https://thediomaticinsight.com/brics-india-can-new-delhi-hold-bloc-together/>

Op-ed | India's Military Modernization: Moving Beyond Platform Acquisition Towards Networked Warfighting Capabilities

Shahwana Binte Sohail

In evolving warfare, quantitative numbers do not provide an effective measurement of a country's capabilities. The real metric is how well these capacities are linked and aligned across domains. India is slowly adapting to this reality, as its recent developments in defence are more focused on network-centric operations, such as surveillance, air defence, unmanned systems, electronic warfare and command-and-control architecture. Advanced platforms are essential, but they do not automatically translate into effective warfighting capabilities. They are effective only when they can operate interoperably, provide real-time situational awareness, and enable secure communication and coordinated action across domains.

Recent developments in India's defence capabilities capture this shift. Defence Research and Development Organisation (DRDO) has started the project Quick Reaction Surface-to-Air Missile (QRSAM) for enhancement of range and ceiling of its QRSAM system, which is part of the attempts to boost layered air defence. For mobile anti-drone systems, India has ordered them for border security, mobile VVIP security and mobile urban policing. These systems are intended to identify, track, detect, and respond to any unauthorised drone, and are intended to be part of a larger 'Sensor-to-Response' system. These developments, combined, could be regarded as steps towards a more connected defence environment, but the extent to which they can be integrated into surveillance, communications and command-and-control networks will be key to their effectiveness.

This represents a move towards greater strategic depth rather than defence alone. However, these capabilities remain part of an evolving, broader warfighting model. They will require secure communications and effective command and control links to operate at their full potential; they will require reliable surveillance. India's attempt to modernise its existing platforms is another example of this. The Super Sukhoi programme is an attempt to modernise the Su-30MKI fleet with the latest avionics and radar. The significance of that modernisation in the operation of the aircraft, however, goes beyond the aircraft itself. It is now becoming more effective as a component of Intelligence Surveillance and Reconnaissance (ISR), secure data links, air-defence networks and precision-guided weaponry, thereby emphasising the multi-networked over platform-based approach to warfare.

Operation Sindoor has also helped to put issues like operational learning, jointness and military adaptation on the agenda for discussion in India. The experience shows ongoing work to improve the coordination of service and operational areas. But no one operation should be viewed as proof that India has a fully integrated warfighting system. Instead, it is part of a continuous transition in technology, organisation and doctrine to networked operations. This is a structural issue facing India: how to integrate cutting-edge technology with an operational system that has to be reliable and resilient in the event of war.

The integration will need to be meaningful and will not only require investment in technology but effective training and coordination between the services and the development of appropriate command structures and digital and communications networks that will be resilient. Even very sophisticated systems may not operate as intended if exposed to cyber disruption, electronic interference or degraded communications, especially when relying on interconnected sensors and communication networks for operation. These are, therefore, key issues that India must tackle as it transitions to a more integrated and networked War-Fighting Model.

Pakistan's strategic concern should be India's broader military modernisation rather than individual platforms. This is because India's modernisation is gradually moving towards a more interconnected operational environment. For Pakistan, the challenge is not to replicate India's platform acquisitions, but to maintain operational connectivity and ensure resilient decision-making. A platform-centric response could therefore prove costly and strategically counterproductive. Instead, Pakistan should prioritise capabilities that enhance its ability to detect, assess, communicate and respond effectively in an increasingly complex and evolving battlespace.

ISR should be the top priority of Pakistan. Deterrence, stability and crisis management in a South Asian Contingency with short warning time and high tempo of operations is at the core of the real-time Generation and Fusion of Situational Awareness (RSA). Secondly, a reinforcement of Pakistan's counter-drone capacities is needed. Unmanned systems are becoming more and more a part of the regional security landscape in the form of surveillance, target indicators, and/or potential disruption weapons. There is hence a need for Pakistan to develop a multi-layered counter-drone strategy, which involves detection, tracking, identification, electronic deception and, as needed, kinetic counter-drone measures, specifically in the vicinity of the border areas and sensitive urban nodes. These capabilities need to be combined with ISR and command & control networks to enable rapid detection, assessment and response to a potential drone threat. The

counter-drone capability should not be a standalone system, but rather part of a larger sensor-to-decision-to-response architecture.

Thirdly, Pakistan needs to further pursue the electronic warfare (EW) path. The growing reliance of military systems on communications, navigation and interweaving sensor networks makes EW a potentially impactful capability that can interfere with or limit an opponent's ability to communicate, navigate and be situationally aware. In parallel, Pakistan should boost defensive EW and electronic resilience to ensure the capability of its communication, sensors and command network to operate during interference and disruption. The goal should, then, be to create the capacity to perform and to operate in an active EW environment, but also to ensure reliable connectivity and decision making in an environment where electronic systems are stressed.

Fourth, Pakistan needs to develop command and control (C2) systems that are resilient and can function in a cyber stressed and electronically disturbed and communication-degraded environment. Fast-moving crises dictate that stability of decision-making structures is as critical as platforms' speed. These developments could have second-order effects on crisis stability in South Asia. For Pakistan, India's growing sophistication and integration of conventional military capabilities may create new security challenges by reducing decision-making time, increasing the risk of miscalculation, and potentially undermining strategic stability during a crisis. The more that such systems are networked, the less time that is available for decision-making, and the more reliance is placed on automated or semi-automated functions and processes, the greater the risk of mistakes in interpretation. Even if not the intention, false positives in the sensor data or the misattribution of activity or disruption of electronic communication can create escalation pressure. Pakistan's counter should thus aim at making operations resilient and ensuring credible deterrence without taking steps that would unwarrantedly increase the instability of the crisis.

Modernisation of the Indian military should thus be seen as a gradual and dynamic process that is laying the groundwork for more networked warfighting, and not as a fully-fledged system in its own right. Platform-for-platform parity is not the right answer for Pakistan – it is to build the military architecture of Pakistan to be more connected, resilient and responsive. This means more integration of ISR, counter-drone, EW, and resilient command and control and maintaining crisis stability as the top priority in defence planning. There should be no attempt to match the numbers with India; the goal should be to have the capability to effectively deter and make decisions in an increasingly networked and contested battlespace.

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Link: <https://cscr.pk/explore/themes/defense-security/reassessing-indias-modernisation-in-an-era-of-networked-warfighting/>

Op-ed | India's Water Weapon: The Hague Exposes the Limits of Coercion

Mobeen Jafar Mir

The recent ruling of the Permanent Court of Arbitration (PCA) denouncing the Indian attempt at turning water into an instrument of political coercion is a moment of both diplomatic victory as well as alarm for Pakistan. On 31 August 2026, the PCA ruled that New Delhi's decision to place the Indus Waters Treaty (IWT) 'in abeyance' did not suspend its legal obligations, asking India to suspend work on a hydro project in Indian Illegal Occupied Jammu & Kashmir (IIOJ&K) and uphold the treaty with Pakistan.

Though the Hague ruling is a reaffirmation that international treaties cannot be suspended unilaterally for political convenience, New Delhi's rejection of the verdict and labelling the arbitration body as illegal set a dangerous precedent. This development, practically, is more serious than the traditional Pakistan-India rivalry. If a state suspends a water-sharing treaty, whenever political relations deteriorate, other states can follow suit, making transboundary river agreements around the world more vulnerable than ever. India's position, therefore, is alarming for Pakistan as well as for the international water governance. It is a legal setback for New Delhi's IWT-position, given India is officially a member of this intergovernmental court.

The ruling is crucial as it does not merely deal with a technical dispute over a hydroelectric project. Rather, it supports Pakistan's long-term position that water cannot be used as a weapon by directly challenging Indian efforts at using IWT as an instrument of political pressure against Islamabad. By ordering interim restrictions concerning the Kishenganga Hydro-Electric Plant (KHEP) and the Ratle Hydro-Electric Plant (RHEP), the ruling gives a clear message that India cannot unilaterally rewrite international agreements. In addition to terming the Indian move illegal, the ruling also dismissed Indian justifications for suspending the treaty.

It may be recalled that New Delhi had blamed Pakistan for sponsoring a terror attack in IIOJ&K's Pahalgam in April last year, following which it had suspended the treaty. Pakistan had offered India to conduct neutral investigation, an offer Delhi had flatly denied. Neither did India provide any 'solid' proof, nor did any independent international intelligence agency corroborate Indian claim that there was a direct link of the gunmen with personnel inside Pakistan. The PCA ruled that it "examined the potential grounds upon which India could suspend or terminate the treaty,

including the grounds cited by India in its public statements”. It further added that in ‘a unanimous decision, the court found that none of these grounds could justify suspension or termination of the treaty.’ It is, therefore, reassuring for Pakistan and for the international water governance in general that any unilateral justification cannot survive legal scrutiny.

The suspension of treaty is alarming for Pakistan as its dependence on the Indus river systems for agriculture, food security, and its wider economy is enormous. Water security is national security for Pakistan. Neither of the two states partying to it can unilaterally suspend the treaty. Therefore, Indian suspension of the commitment raises a fundamental question about its adherence to rule-based order. New Delhi often presents itself as a responsible rising power committed to democracy and international law, yet behind the façade, there lies a striking contradiction. By rejecting an international dispute-resolution mechanism when its ruling is unfavourable, India’s diplomatic rhetoric and practical conduct show a stark disparity.

The IWT has historically survived wars and crises between the two nuclear-armed rivals. Former United States (US) President Dwight Eisenhower termed it as ‘one bright spot ... in a very depressing world picture that we see so often.’ The treaty’s success was precisely what made it a shining example of functional cooperation between Pakistan and India. By placing it in abeyance, New Delhi has threatened one of the few remaining institutional mechanisms that successfully survived the bilateral discord. As India’s ongoing military modernisation and evolving force posture already undermine strategic stability of South Asia. Now New Delhi’s fresh refusal to recognize an adverse ruling risks weakening the very international legal architecture that safeguards and protects states from unilateral unprovoked aggression. Rather than responding to India’s ‘abeyance’ declaration through escalation, Pakistan sought the route to an internationally established legal mechanism under the IWT.

This is not a new position of Islamabad. When India suspended the IWT in April last year, Barrister Aqeel Malik, the minister of state for Law and Justice, underlined three legal international actions at Pakistan’s disposal to counter Indian illegal unilateral move. One of them was raising the issue at the World Bank, which is the bilateral treaty’s facilitator. The other legal options on the table were reaching out to the Permanent Court of Arbitration or at the International Court of Justice in The Hague, where Islamabad could claim that India has violated the 1969 Vienna Convention on the Law of Treaties. This position strengthens Pakistan’s official stance that it prefers law, arbitration, and diplomacy over unilateral coercion.

The latest PCA ruling provides an opportunity for Pakistan to internationalise the principle of not holding transboundary rivers hostage to bilateral tensions, not merely the IWT as a bilateral dispute. It should rather frame it in a broader context, like no upper or middle riparian state should be allowed to weaponise transboundary rivers against downstream states. This framing would give Pakistan a stronger diplomatic and normative argument. India may possess the geographical advantage of being the upper riparian over Pakistan, yet this precedent can be used against India by its upper riparian state as well. The message should be clear that geography does not confer a legal right to weaponise water and that there are various pitfalls that do not allow coercive actions.

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