

INDO-ISRAELI DEFENSE COOPERATION IN THE TWENTY-FIRST CENTURY

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INTRODUCTION

Since India and Israel first established diplomatic relations in 1992, defense cooperation has played a major role in bilateral ties, with India emerging as one of Israel's largest arms clients. Furthermore, this relationship has strengthened since the Hindu-oriented Bharatiya Janata Party (BJP) of India came into power in 1998. The BJP emphasized the threat of Islamist terrorism, thus making Israel a natural ally. Just as Israel faces tremendous security threats from Iran, due to its nuclear program and support for terrorist groups like Hamas and Hizballah, India remains concerned with the Pakistani nuclear arsenal and Pakistan-based terrorist activities. The U.S. decision to relax sanctions against India—which were imposed after the 1998 Pokhran nuclear test—also eased the way for closer ties between India and Israel. In addition, its subsequent international war on terror after September 11 created a political environment suitable for further bilateral cooperation.^[1]

This paper focuses on the current Indo-Israeli defense cooperation and its constraints. The article begins with a brief historical account of this relationship, followed by a discussion of its progression into the defense arena in the late 1990s under the BJP-led National Democratic Alliance (NDA) government. Subsequently, it examines the magnitude of the more recent defense cooperation under a new Congress-led United Progressive Alliance (UPA) government. Finally, this paper attempts to examine the importance of factors constraining defense cooperation.

A BRIEF REVIEW OF INDO-ISRAELI RELATIONS

After cool relations for almost four decades, India and Israel established full ambassadorial level diplomatic relations in 1992. It was a late coming together of two ancient peoples who had both emerged from colonial rule in the same era. Several historical factors hindered early normalization of the relationship, the most prominent of which were the policies adopted by Indian leaders like Mahatma Gandhi and the first prime minister, Jawaharlal Nehru.^[2] Their traditional support for the Arabs in the

conflict in Palestine and Nehru's Non-Alignment foreign policy hardly favored close relations with the Jewish state.[3] This was partly due to the fact that India had the largest Muslim minority population in the world.

The animosity toward Israel was reflected in India's vote in the UN General Assembly on November 29, 1947, against the partition resolution that led to the establishment of Israel. Only in September 1950 did India grant *de jure* recognition to Israel, followed by the opening of a consulate in Bombay in 1953. Yet these steps did not lead to any improvement in relations. India's closeness with the Egyptian leader Gamal Abdel Nasser and its commitment to the Non-Alignment movement, as well as the significant influence of its sizeable Muslim population on India's domestic politics, reinforced the coolness toward Israel.

Moreover, India's stance toward Israel throughout the Cold War was based upon an anti-Western and anti-imperialist worldview, which was shared by the Arabs and the Muslim world.[4] In addition, Israel's intimacy with the United States in the 1960s was loathed by the Indian government, which was at the time suspicious of American foreign policy.[5]

So strong was India's opposition that even Israel's covert military assistance to supply arms and ammunition to India during the 1962 and 1965 wars with China and Pakistan bore no fruit. Other instances, such as Israel's supply of 160 mm mortar and ammunition to India during the 1971 Indo-Pakistani War, as well as the 1979 Egypt-Israel Peace Treaty, did little to change India's standpoint. Relations between the two states remained unsurprisingly icy into the 1980s.

However, the end of the Cold War in 1991 brought a wind of change. After the collapse of the Soviet Union, India's main diplomatic and strategic ally during the Cold War, India was "forced to reorient its foreign policy to accommodate the changing international milieu." [6] At this time, the crisis of the Soviet military industry forced India to look elsewhere for arms supply, and Israel was an appealing source. Threats emanating from across the border favored India's reassessment of its relationship with Israel. In addition, the shifting tide in Middle East politics, vis-à-vis the Arab-Israeli conflict, made India rethink its policies toward Israel as it became clear that it would have to upgrade diplomatic relations with Israel in order to participate in the Middle East peace process. Another event that had a major impact on Indian decisionmakers was the normalization of Sino-Israeli relations in January 1992. Simultaneously, Israel began to forge diplomatic ties with other Asian countries like Vietnam, Laos, and Cambodia.

At the end of the Cold War, many nations wanted to upgrade and normalize their relations with Israel, a country known for its advanced technologies and excellent relations with the United States.[7] India, at this time, also found an ally in Israel who could partly fill the void in military needs left by the demise of the Soviet Union.

INDO-ISRAELI DEFENSE COOPERATION IN THE 1990s

Indian Prime Minister P.V. Narashimha Rao's decision in January 1992 to establish full diplomatic relations with Israel was driven by the potential for security cooperation.[8] Similar goals and rationales

behind arms modernization, buildup, and export brought the two nations closer. Moreover, Israel could potentially assist India in remedying problems with its program for developing indigenous weapons systems.

In March 1994, Israel's Air force commander visited India. His Indian counterpart—then Chief of the Indian Defense Research and Development Organization (DRDO) A.P.J Abdul Kalam—visited Israel two years later. The warmth of the newly formed ties was evidenced by high level official visits starting with Israeli President Ezer Weizman's trip to India in December 1996, accompanied by a 24-member business delegation.[9] Subsequently, Israel offered India both investment and technical cooperation in matters related to military aircraft, reverse engineering, and the upgrading of weapons systems.[10] In addition, India began to obtain a large number of small arms and weapons systems from Israel, eventually including airborne early warning systems. New Delhi sent its first military attaché to Israel in 1997, indicating a growing military dimension in bilateral relations.

In 1996, India purchased a sophisticated Air Combat Maneuvering Instrumentation from Israel, which was installed at the Jamnagar air base.[11] The same year, a \$10 million deal was made to provide two Dvora MK-2 patrol boats for the Indian Navy. In the electronics and communication arena, Israeli firms like Tadiran played an important role in providing pertinent systems to India. Soltam, another Israeli defense firm, agreed to supply the Indian Army with 155 mm self-propelled guns. During the 1990s, the Israeli firm Elta also won a multi-million dollar contract to upgrade the avionics on India's MiG-21 fighters.[12] The negotiations for the purchase of Barak-1 vertically-launched surface-to-air missiles from Israel in the late-1990s were a significant technological and financial breakthrough in defense cooperation, which provided India with cutting edge technologies and eventually led to co-production.

However, the definitive motivation for greater Indo-Israeli military cooperation emerged from the BJP's 1998 success in forming a ruling coalition. While Israel's weapon production capabilities and combat successes had caught the attention of the Indian defense establishment, it was not until the BJP rose to power that the advantages of bilateral cooperation began to outweigh the objections of India's large, yet decreasingly relevant, Muslim minority. Thus, despite India's support for the Palestinians in various international forums, including the UN, New Delhi gradually began strengthening relations with Israel. Increasing Islamist terrorism in the divided states of Jammu and Kashmir and elsewhere in the country further strengthened this relationship. Meanwhile, Pakistan's expanding nuclear arsenal and alleged funding of militant groups has presented India with additional justification for cooperative ties with Israel.

Growing defense relations were further solidified by Israel's willingness to supply arms—including ordnance, laser-guided bombs, and unmanned aerial vehicles (UAVs)—during the 1999 Kargil War between India and Pakistan.[13] The quick response to India's request for military assistance increased Israel's credibility as a reliable arms supplier even during a crisis and helped to bolster the relationship. [14] Thereafter, the defense cooperation grew considerably as Israel stepped up its arms sales to India while most major countries restricted their technological exports to India following the 1998 Pokhran nuclear test. Shortly thereafter in 2000, Indian Home Minister Lal Krishna Advani's visit to Israel further reinforced the bilateral bond.

New Delhi also appreciated Israel's proficiency in upgrading outdated Soviet weapons systems, which constituted most of India's defense stockpile. Israel had an advantage, as many of its immigrants had already worked as engineers and technicians in the Soviet military industry.[15] Unsurprisingly, India turned to Israeli companies for retrofitting these aging Soviet weapons. For example, Israel Aircraft

Industries (IAI) signed large contracts with the Indian Air Force (IAF), including the upgrading of Russian-made MiG-21 aircraft. In addition, Israel provided state of the art fire control systems and thermal imagery for the Indian Army's Russian-made T-72 tank fleet.[16]

Counterterrorism measures comprise another important factor in Indo-Israeli defense cooperation. The relationship between the states' security agencies actually predates the establishment of official diplomatic relations. However, engagement between the two countries in this field remained limited during the early period of normalization of relations. Moreover, this relationship was never a military alliance, as both the countries adhered to their own set of national priorities and made no commitment to fight for each other. This remains true today.

THE MAGNITUDE OF INDO-ISRAELI DEFENSE COOPERATION IN THE TWENTY-FIRST CENTURY

Despite opposition from various Indian political parties and civilian organizations, defense cooperation with Israel continues to strengthen, particularly after the historic visit of Israeli Prime Minister Ariel Sharon in September 2003. Since 2000, India has acquired several high-tech systems from Israel, ranging from Barak-I anti-missile defense systems and early-warning radars to Searcher and Heron UAVs.[17] Following the 2004 election of the pro-Palestinian Congress-led UPA government, observers questioned whether relations forged during the BJP-led NDA government would continue.

Certainly the presence of leftist parties in the coalition government, particularly the Communist Party of India (Marxist), has complicated defense cooperation. Nevertheless, some of the most important military deals between Israel and India have been signed by this government. Defense Minister Pranab Mukherjee made it very clear that there would be no shift in policy toward Israel, including the existing defense ties. Signifying an intention to continue the relationship, albeit under a lower publicity profile, he said:

We have developed defense cooperation with several countries and we are not making any distinction between country A and country B. We have defense cooperation with Israel like with many other countries and if any deals for import of high-tech have been finalized, those will carry on ... But in general terms, I can say that [it is] a country with which we have defense cooperation that will continue.[18]

Indeed, then Indian Army Chief of Staff Gen. J.J. Singh made an unpublicized visit to Israel in March 2007.[19] In June of the same year, India accepted a visit by then Israeli Deputy Chief of General Staff Maj. Gen. Moshe Kaplinsky.

Arms Purchases

Today, defense cooperation between Israel and India remains solid, with the arms trade soaring. The approximate total value of the weapons trade over the past decade is estimated at around \$10 billion. With the delivery of the Phalcon Airborne Warning and Control Systems (AWACS), equipped on Russian-built Ilyushin Il-76s, in May 2009 and March 2010, Israel has emerged as one of the largest arms exporters to India.[20] An agreement for these weapons systems was signed in March 2004 at an impressive cost of \$1.1 billion.

Interestingly, a similar deal with China was cancelled by Israel in 2000 under the intense pressure from the United States, due to American fears the Chinese would use these weapons in the event of a military confrontation in the Taiwan Straits. The deal with India was nearly terminated due to similar American fears of Indo-Pakistani tensions. The eventual U.S. approval of the Israeli Phalcon sale bore great significance, as it happened just before a visit by Prime Minister Sharon in September 2003 that truly marked the height of strong Indo-Israeli ties.

By the end of 2006, Israel rose to become the second largest arms supplier to India, after Russia, with annual arms sales totaling approximately \$1.5 billion. This figure is all the more significant considering that worldwide in 2006, Israel was reported to have sold a total of \$4.2 billion worth of arms.[21] In addition, from 2002-2007, India's defense procurement from Israel was estimated at \$5 billion. During a visit to Israel in 2007, Singh reviewed several of the ongoing projects, including the mounting of Israeli TISAS (Thermal Imaging Stand Alone Systems) on 500 BMP-2 infantry combat vehicles, the large scale upgrading of 300 T-72M1 tanks, as well as the production of hand-held thermal imagers and LORROS (Long-Range Reconnaissance and Observation Systems).[22]

In order to encourage greater domestic involvement in arms supply, India insisted on forming offset arrangements with the foreign original equipment manufacturer (OEM), which would require the OEM to spend 30 percent of the contract on Indian parts, equipment, and services. India's current offset guidelines are structured to meet national objectives for sustaining and creating jobs in the defense sector so as to accelerate the maturity of its defense technology base and boost its capability to build indigenous weapons systems. Under a 2008 arrangement, Rafael was awarded a \$325 million contract to supply the Indian Air Force with Spyder Low-Level Quick Reaction Missile systems (LLQRM) armed with Python and Derby missiles; this in turn would provide offsets of more than \$90 million to Indian industry.[23]

Other arrangements included India's purchase of EL/M-2083 radars, manufactured by IAI at a cost of \$600 million, for identifying low-altitude aerial penetration.[24] In September 2009, Israel signed a [\\$1.1 billion contract](#) to supply an upgraded tactical air defense system to India, with delivery expected by 2017. [25]

Israeli defense firms showed a strong presence at the 2009 Aero India Exhibition. Several Israeli-manufactured weapons systems were on display, with many catching the attention of Indian defense planners.[26] At the show, Lova Drori, Rafael's executive VP for marketing, attributed the strong cooperation between the two nations to the shared challenges of domestic and border terrorism, coalesced with Israel's efforts to provide India with state-of-the-art weapons systems. He added that most Israeli-developed systems tended to fit India's requirements as well.[27]

In March 2010, the two countries signed a huge \$1.4 billion contract for the development and procurement of Barak 8 medium-range surface-to-air missiles.[28] The acquisition of such sophisticated weaponry will

give India a significant edge over its adversaries. In 2011, the Indian Army finalized a deal with Rafael worth \$1 billion that will provide 8,356 Spike anti-tank guided missiles, 321 launchers, and 15 training simulators.[29]

In mid-2010, India showed particular interest in Israel's state-of-the-art anti-missile defense systems—David's Sling and Iron Dome. The acquisition of sophisticated defensive equipment would give India a significant advantage in the case of any missile attacks from neighboring countries like Pakistan or China. Israel has deployed Iron Dome in order to defend against the rockets fired by Gaza terrorists and has successfully intercepted over 90 percent of rockets fired at its southern cities, such as Be'er Sheva and Ashkelon.[30] India's desire to acquire David's Sling is most likely due to its own difficulties in developing the indigenous Prithvi Air Defense system.[31] While Israeli authorities showed a willingness to discuss sales, any deal would be complicated due to the need for U.S. permission.

Israel Military Industries (IMI) and Rafael displayed new air defense and missile systems at the 2011 Aero India Exhibition as well. Weapons systems such as the Delilah-GL (ground launched), a loitering guided missile, the MPR500 – Multi-Purpose Rigid Bomb, the IFB500 – Improved Fragmentation Bomb, and the new spectral IR flares were believed to have been displayed by IMI.[32] As mentioned earlier, a joint partnership between India's Hindustan Aeronautics Ltd. (HAL) and Israel's Elbit was established to manufacture simulators and avionics for the latter's Skylark mini UAVs. This will also help HAL in developing its own UAVs.

In light of the ongoing military modernization drive by its neighbors and the rising threat of terrorism, New Delhi has increased its annual defense budget to \$32 billion. India's military expenditure totaled \$36.3 billion in 2009, an increase of 13 percent from 2008, and a 67 percent increase since 2000.[33] Israeli defense firms are therefore very hopeful for multi-million dollar contracts in India. IAI also hopes to win contracts to supply the Indian Air Force with another three Phalcon AWACS. According to media reports, the IAF is likely to introduce Israeli Harop killer UAVs from 2011 onwards.[34] With this growth in the defense budget, Rafael is said to be competing for major defense bids including a multi-million dollar contract to supply the Indian Army with anti-tank missiles and protection systems.

That the Israeli pavilion occupied the largest exhibit space during the 2010 biennial Defense Expo held in New Delhi is itself an indication of the strength of this defense cooperation.[35] With India becoming a large weapons importer—an estimated 70 percent of arms and defense equipment arrive from overseas—large defense firms from major countries sought to make their presence known at the expo.

Technology Transfer and Co-Production

Defense cooperation between India and Israel has also involved technology transfers to the Indian military industries alongside the sale of Israeli components. An early step in this direction involved the September 2002 agreement between IAI and India's HAL for joint production of an attack helicopter (Dhruv). As part of the agreement, HAL would manufacture the fuselage, while IAI would develop the avionics.[36] However, no significant breakthrough has been witnessed in this field.

In 2006, India sought Israeli expertise in the production of key surveillance systems. India's Defence Research and Development Organisation (DRDO) faced technical difficulties with the Divya Drishti surveillance project. Israeli firm Elbit Systems, in collaboration with the DRDO's Hyderabad-based Defense Electronics Research Laboratory (DLRL), the Electronic Corporation of India, and Tata Power Company Limited managed to resolve these issues.[37] In the same year, IAI and India's Defense and Research Development Laboratory (DRDL) signed a deal worth \$350 million for the joint development and production of the long-range Barak missile system, followed by a similar agreement to build anti-aircraft missiles together for the Indian Navy and the IAF.[38]

An important breakthrough in the Indo-Israeli co-production of weapons occurred in 2007, when India's Cabinet Committee on Security, chaired by Prime Minister Manmohan Singh, cleared a joint venture of \$2.5 billion for the co-production of medium-range surface-to-air missiles (MRSAM), capable of hitting targets up to 70 kilometers away.[39] In August 2009, India signed a \$2.5 billion deal with IAI and Rafael for the joint development of a new, advanced version of the Spyder surface-to-air missile. The cooperation has also focused on joint R&D projects in the fields of high-endurance and rotary UAVs, submarine-launched cruise missiles, anti-ballistic missile systems, network-centric operation, micro-satellite surveillance systems, advanced precision-guided munitions (PGMs), and third-generation night-vision devices.[40]

In November 2010, India's giant private sector Tata Group acquired a 74 percent stake in HBL Elta Avionics Systems Ltd. (HELA), a Hyderabad-based company partially owned by Israel's Elta Group, an IAI subsidiary.[41] This joint venture intends to manufacture aerial vehicles, electronic warfare systems, missiles, radars, and homeland security systems.[42] Elevating their joint venture program to new heights, India's Tata Group and TAMAM, a division of IAI, announced a pact to explore favorable opportunities for the manufacturing, integration, and maintenance of the MiniPOP electro-optic system.[43] A joint venture between Rafael and India's Bharat Electronics Ltd (BEL) is also expected in the near future.

These developments signal a clear transition away from supplier-recipient cooperation and toward a joint venture relationship. Indeed, Indian defense minister A. K. Antony promised to encourage the development of homegrown products, with major participation from private companies working with state-owned Indian defense companies.

It now remains to be seen how much India can absorb the opportunities provided by Israeli defense firms. Considering the developments and successes over the last few years, future defense cooperation between India and Israel looks promising. Moreover, the increase in the Indian defense budget for the fiscal year 2011-2012 to \$36 billion promises a rapid modernization of the army, navy, and air force.

Naval Cooperation

Considering Israel's reliance on the Indian Ocean as a major transit route to Far East ports, due to hostilities along neighboring Arab land routes, naval cooperation represents another important arena for convergent Indo-Israeli interests.[44] Israel has been increasingly concerned by Iran along the shores of the Indian Ocean and has sought to enhance its strategic reach in this area. In 2002, Israel was reported

to have developed a second strike naval capability far from its territorial borders, owing to its strengthening cooperation with India.[45] The same source also said that Israel had carried out a long-range cruise missile test from one of three Israeli submarines in the India Ocean, a claim which Israeli defense officials denied.

In 2003, the capabilities of the Indian Navy's coastal defense were likewise strengthened by the commissioning of the Indian Naval Fast Attack Craft (INFACT T-82), a ship built by IAI.[46] Indian Navy warships, including the INS Viraat and three Delhi-class destroyers, have already been equipped with Barak-I systems that were purchased in 2003. In July 2004, despite concerns from the newly elected left-leaning UPA government over India's close relations with Israel, India's Navy Chief Admiral Arun Prakash visited the Jewish state. As an additional mark of growing naval relations, the INS Godavari and Mysore visited the port of Haifa in May 2004.

In a 2007 visit to India by Israeli Navy Chief Vice Admiral Maj. Gen. David Ben Bashat, a decision was made to increase naval cooperation.[47] Both countries agreed to boost the development of Indian Sea Harrier Jump Jets as well as to the joint development of anti-missile defense systems. Furthermore, collaboration with Israel to develop unmanned combat helicopters for the countries' navies was proposed by India's Naval Chief Vice Admiral Suresh Mehta who visited Israel in early 2008.[48] It should be noted that while the Indian political leadership often declines to visit Israel due to domestic and other sensitivities, frequent discreet visits by top Indian military leaders continues.

The year 2010 marked a significant growth in India-Israel naval cooperation, as naval chiefs from both countries made reciprocal visits. In January, Israeli Navy Chief Vice-Admiral Eliezer Marom paid a three day visit to India. The main emphasis of this visit was on the \$2.5 billion project signed by DRDO and IAI for the development of a supersonic 70-km range Barak-NG (next generation) missile defense system for the Indian Navy.[49] In a goodwill gesture, Indian Navy Chief Admiral Neermal Virmal visited Israel on a four-day trip in October 2010 and discussed ways to expand defense ties.[50] In 2011, the Indian Navy's marine commandoes finally began to use the Israeli made TAR-21 (Tavor Assault Rifle 21st Century) assault rifles and Galil sniper rifles (ordered in 2008).[51]

Counterterrorism Cooperation and Military Training

The intelligence and counterterrorism fields represent another significant area of India-Israel military cooperation. On September 11, 2001, when the United States awoke to one of the most horrifying attacks in its history, Israeli defense and intelligence officials under the leadership of then National Security Advisor Uzi Dayan were meeting with their Indian counterparts to discuss the countries' common threats. [52] For example, repetitive cross-border attacks on Indian territorial sovereignty encouraged New Delhi to seek defense assistance from Israel, which had long suffered similar threats. In a June 2004 visit to Israel, India's Vice Chief of Army Staff, Lt. Gen. Shantano Choudhary, was shown the counter-infiltration devices used along the borders in the Golan Heights and Negev desert. During Maj. Gen. Kaplinsky's 2007 visit, the Israeli delegation, along with its Indian hosts, reviewed the performance of the Israeli equipment used along the Line of Control (LOC) in Jammu and Kashmir.[53]

The 2008 Mumbai terror attack stirred a growing interest in Israeli counterterrorism techniques and led to the formation of a joint working group. In September 2008, *Defense News* reported that India and Israel were planning joint counterterrorism exercises between Israeli commando forces and Indian troops. Plans were expected to be finalized during the visit of Israeli Army Ground Forces Chief Maj. Gen. Avi Mizrahi to India. As part of the agreement, Israeli commandos would provide training to Indian troops at various locations in India, including jungles, mountains, and highly populated urban zones, as well as close-quarter operational training for defeating terror targets with reduced civilian casualties.[54]

Following the Mumbai attack and other attacks since, India's security forces were criticized for their slow response to such brazen hostilities. Consequently, a consensus emerged calling for a more organized national security framework. To this end, Israel's shared expertise in fighting cross-border terrorism has been highly appreciated by the Indian defense establishment. When Israel offered India homeland security assistance and counter-terror know-how in 2009, the Maharashtra government responded by sending an Indian delegation to Israel for hands-on experience.[55] Subsequently, an Israeli government proposal for hosting common training programs along with the supply of an array of arms, ammunition, and technology, including equipment for bomb disposal squads, was recommended to the Home Ministry of India. In the past, Israeli counterterrorism training was limited to technology and equipment transfer.[56]

As part of this information-sharing process, India's Chief of Staff, Gen. Deepak Kapoor visited Israel in November 2009. His Israeli counterpart, Lt. Gen. Gabi Ashkenazi, reciprocated with a visit to India in December of the same year.[57] A joint working group (JWC) meeting in December 2009, co-chaired by Indian Defense Secretary Pradeep Kumar and Israeli Defense Ministry Director General Brig. Gen. (ret) Pinchas Buchris, was held to discuss concerns and agreements on various defense issues.[58] Then, in January 2010, Indian National Security Advisor M. K. Narayan held a meeting with his Israeli counterpart Uzi Arad,[59] which focused on counterterrorism cooperation and intelligence sharing.

Space Cooperation

Beyond standard weapon transfers, equipment upgrades, and co-production, Indo-Israeli defense cooperation also extends to space. India started its space program in the early 1960s and has since designed, built, and launched its own satellites into space. As a result of India's rising excellence in science and technology, Israeli President Ezer Weizman traveled to India in 1996 to discuss forging ties between the nations' space programs.[60] This endeavor was delayed due to Israeli internal political considerations, particularly the determination of who would be the one to sign these agreements. In January 2002, Shimon Peres, then Israeli Deputy Prime Minister and Minister of Foreign Affairs, visited the Indian Space Research Organization (ISRO). Following this visit, Israeli Space Research Program Head Col. (res.) Aby Har-Even and Head of ISRO Dr. K. Kasturirangan signed the agreement on space cooperation in early November 2002.[61] Then, in 2003, the ISRO agreed to launch a Tel Aviv University satellite.[62]

In January 2008, India launched TechSAR, an Israeli surveillance satellite also known as Polaris, believed to be capable of providing information on strategic installations in Iran. Various players in the Indian political arena criticized such strategic cooperation, especially at a time when Indo-Iranian relations were

deteriorating due to New Delhi's vote in the IAEA against the Islamic Republic and the resulting energy stalemate. For India and Israel, however, this launch marked a new stage in their ties and showcased India's growing advancement in the field of space technology.

The successful launch of Polaris testified to the growing international confidence in ISRO'S ability to place satellites into orbit.[63] This was followed by India's launch of the Israeli-made imaging satellite, RISAT 2, on board its domestically built Polar Satellite Launch Vehicle (PSLV), which was dispatched from the Satish Dhawan Space Center in Sriharikota.[64] Indian defense experts are now interested in developing satellites with Synthetic Aperture Radar (SAR) platforms, which are capable of tracking large ground targets and ballistic missiles during day or night and through vegetation and cloud cover. Significantly, Israel already possesses this technology.

Constraints on Defense Cooperation

Despite the robustness of the Indo-Israeli defense cooperation, some constraints on closer relations do exist, including domestic political sensitivities, entry of foreign arms suppliers, Iran, and also the United States. Finally, the allegations of corruption in Indo-Israeli arms trade and the complex Indian bureaucratic system are also highlighted below.

Indian Domestic Political Sensitivities

Since the normalization of relations with Israel in 1992, a large segment of India's political establishment has voiced resentment, primarily due to India's prominent population of 160 million Muslims. As a result, India has displayed a deeply entrenched ideological commitment to the Palestinian cause. An overt expression of closeness with Israel would lose the votes of these Muslim citizens, whose support parties like Congress still bank on. There are fears that close ties with the Jewish state could also lead to the radicalization of Islam in India. Even though a large part of the Muslim population is well integrated into Indian society, instances exist of Muslim youths conducting terror activities within the country. These sensitivities toward the Muslim minority have constrained India in openly furthering ties with Israel, especially on security related matters.

Political parties like the Communist Party of India (Marxist) are openly hostile toward Israel. Leftist parties have demanded that the government refuse any deals with IAI, which is currently under investigation for the alleged Barak missile corruption scandal. They also claim that Israeli missiles would undermine DRDO's indigenous missile system developed and that Indian-developed missiles are superior to those co-produced with IAI.[65]

Tellingly, after the 2008 Indian launch of the Israeli TechSAR satellite, media coverage greatly differed between the two countries. While Indian media portrayed TechSAR as a commercial satellite, the Israeli

press claimed it was for anti-Iranian surveillance. Israel's critics picked up the Israeli reports and questioned Delhi's wisdom in having such close relations with Jerusalem. In the words of one critic, "The political implications of India's increased strategic ties and dealings with Israel are, however, doubtless serious and undesirable, notwithstanding the fatal attraction of mutually advantageous geo-strategic locations of the two countries from a space-based surveillance perspective."^[66] Thus far, however, the effects of such internal Indian pressure have been limited and have not had a major impact on the defense cooperation between India and Israel. On the contrary, India's rising security needs have bolstered the ties between the two states.

The American Factor

U.S. interests have sometimes constrained Indo-Israeli defense cooperation with regard to weapons and technology transfer. In 2003, the United States blocked negotiations between India and Israel on the sale of Israel's Arrow anti-missile defense system.^[67] Such actions not only strain bilateral ties but also undermine Israel's credibility as a reliable arms supplier. Apart from the fear of destabilizing the South Asian military balance, the United States was mainly concerned that the procurement of such technologies would accelerate India's efforts toward developing an indigenous ballistic missile defense system.^[68] This might interfere with the U.S.-Pakistan alliance, which Washington has a considerable interest in maintaining in the context of its war on terror.

More recently, in January 2011, Israel barred the export sale of its EL/M-2052 radar to several countries, including India. This restriction was the result of U.S. pressure under the assumption that the export of such an advanced radar would likely undermine the sale of U.S.-made systems.^[69] India had planned to equip its Tejas Light Combat Aircraft (LCA) with this radar. Taking advantage of its own burgeoning relationship with India in the last few years, the United States hopes to offer India similar technology.^[70]

While the United States has in some ways hampered technology cooperation between India and Israel, it has made an effort in recent years to enhance its own high-tech trade with India and to forge closer strategic ties. For instance, the United States removed from its Entity List in 2011 all Indian government defense-related companies, including subsidiaries of DRDO and ISRO.^[71] This move, meant to facilitate U.S.-India trade and cooperation, may prove detrimental to Indo-Israeli military cooperation as India can now import from the United States some of the latest technologies, like advanced warning capability, radar, reconnaissance, electronics equipments, and warfare intelligence. In India were to do so, Israel would lose out on these deals.

Defense cooperation between India and the United States is expected to continue moving forward, as indicated by the November 2010 visit of President Obama to India. However, while the United States has agreed to provide high-tech weaponry and equipment to India, the issue of technology transfer remains contentious. For instance, India has thus far refused to agree to several American pacts, namely CISMOA (Communications, Interoperability, and Security Memorandum of Agreement) and BECA (Basic Exchange and Cooperation Agreement for Geospatial Cooperation), as India considers them "restrictive and

intrusive.”^[72] Furthermore, Indian defense planners are wary of U.S. political reliability and willingness to transfer technology, particularly when it comes to future technological upgrades and the supply of spares.^[73] Hence, dependence on American arms remains uncertain.

With these tensions between India and the United States hanging in the air, Israel should not be concerned over its own defense relations with India. Furthermore, there is actually a lack of competition between the United States and Israel in selling large platforms. For example, unlike the United States, Israel does not sell tanks and aircraft to India, which limits competition between the two. Thus, even though American involvement in India’s arms supply could come at the cost of Israeli products and technology, there remains a wide enough spectrum of common interest to sustain the cooperation.

Additional Arms Suppliers

The entry of foreign companies into the Indian arms market has, without doubt, increased competition for Israel. Currently the main competitors are the United States and European nations like France and Russia—all bidding to supply a variety of items on the Indian defense shopping list. In recent years, these countries have displayed increasing flexibility concerning technological transfer.

One particular example of an ongoing rivalry is that between Israel’s Rafael and the European MBDA over two major guided weapons systems for the IAF. Both companies have seemingly offered their Advanced Short Range Air-to-Air Missile (ARSAAM) and Python 5 designs for the HAL-built SEPECAT Jaguar. Despite the European firm’s confidence in winning the tender, Rafael boasts significant experience in the integration of Python-series missiles and is bolstered by its recent success in adding the Derby missile onto Indian Navy fighters.^[74]

It is worth noting that the entrance into the Indian market of U.S. and European aircraft military producers does not pose a challenge to Israel, as it is not competing in this field. Rather, it is a greater problem for Russia, the traditional supplier of India’s fighter jets. Indeed, Israel sells a number of sub-components for the equipment and has been competing successfully in the modernization and upgrade market for India’s inventory of Russian helicopters and fighter aircraft.^[75]

Overall then, the Jewish State’s cutting-edge excellence in the field of missiles, avionics, air defense systems, UAVs, reengineering of outdated Soviet weapons systems, electronic warfare systems, and so forth will likely continue to drive forward Israel’s defense cooperation with India. Nevertheless, Israel must still work hard to protect its market share.

Last, the growth of the Indian defense industry is another potential challenge to Indo-Israeli defense ties. Initiatives like “Make-India,” which seek to reduce defense imports, have led the Indian government to shortlist four domestic companies for the development and manufacturing of next-generation infantry combat vehicles for the Indian Armed Forces.^[76] Furthermore, through technological transfers, Indian research organizations are developing their own defense technologies. With such rapid development, the burgeoning demands of India’s armed forces are likely to be met partially through domestic production. That said, as Israel’s technological edge remains a significant attraction, its military assistance to India is

not going to dwindle anytime soon. Also, considering the several long-term joint projects that the countries have recently signed on to, it is clear that India still maintains a desire to procure more Israeli-made defense equipment.

Iran: A Diminishing Constraint

While Israel perceives Iran as a major threat, due to its ongoing nuclear program and aid to Hizballah and Hamas, India endeavors to maintain good relations with Iran, a major oil supplier. The Indo-Iranian Joint Commission, established in 1983, was instrumental in forging India's close defense and military ties with Iran.[77] Also, after the end of the Cold War, India's desire to counter the Pakistani influence, along with the burgeoning geopolitical importance of Central Asia and the need to strengthen economic and commercial ties, further bolstered ties between India and Iran.[78]

The defense cooperation that existed between India and Iran in the early part of the first decade of the twenty-first century was viewed as a constraint upon Indo-Israeli ties. India's alleged discussions over arms sales to Iran during a meeting between Indian Defense Secretary Yogendra Narain and his Iranian counterpart Ali Shamkani in 2001 raised eyebrows in Israel.[79] India-Iran defense cooperation was strengthened with the signing of a strategic partnership accord in January 2003, during then-Iranian President Mohammad Khatami's visit to New Delhi.[80] This agreement promoted mutual defense ties, granting New Delhi access to Iranian bases in exchange for various Indian defense products, training, and technologies. Subsequently, hundreds of Indian naval and logistics specialists visited Iran, offering assistance on submarine maintenance and overhaul and tanks upgrades, and proposing the sale of Indian air defense equipment and airborne platforms.

Iran sought Indian technicians to refit and maintain its T-72 tanks as well as its BMP infantry fighting vehicles. In addition, India was reportedly planning to sell Iran Konkur anti-tank missiles. While these plans were clearly disconcerting for Israel, no such activities actually took place, and they seem unlikely in the near future.[81] In another potential deal in 2004, Iran negotiated the purchase of advanced Indian radar systems designed for fire control and surveillance of anti-aircraft batteries. The contract for the Upgraded Support Fledermaus radar system, to be supplied by the Indian state-owned firm BHEL, was estimated at around \$70 million.[82] However, this deal remains suspended due to intense U.S. pressure, as the Americans fear these systems would enhance Iranian protection of its nuclear facilities.

One of Israel's major concerns was the possible Indian transfer of Israeli-based technology or training to Iran. Israel, for obvious reasons, feared that its own technologies could be passed on to various terrorist organizations in the region, particularly Iranian-supported Hamas and Hizballah. These concerns were voiced by Israeli PM Ariel Sharon during his 2003 trip to India.

Israel also objects to Indo-Iranian joint military and naval maneuvers and reciprocal military visits. One such exercise took place in June 2006, when Iranian naval vessels visited the port of Kochi; another was held in March 2003, in the Arabian Sea. Naval cooperation dates back to the mid-1990s, when the Indian

Navy assisted the Iranian Navy in adapting four Russian-built Kilo-class submarines for the Persian Gulf's warm water.[83] Iran even joined the Indian Ocean Naval Symposium (IONS), an agreement which allows Indian Ocean navies to collaborate with one another, with greater maritime cooperation planned for the future.[84] During the peak of their relationship, India also developed intelligence outposts in Iran along with a consulate in the port city of Bandar Abbas in 2001, to monitor ship movements in the Persian Gulf and the Strait of Hormuz.[85]

However, following the 2005 nuclear deal between New Delhi and Washington, Israeli concerns over the relationship between India and Iran began to dissipate. U.S. pressure on India to end all military relations with Iran appeared to have been a condition for the nuclear deal. Indeed, since this time, defense cooperation between India and Iran has been minimal or dormant. Except for five Iranian sailors who reportedly participated in a training course with the Indian Navy in 2007, there has been no visible military exchange between the two nations.[86] Moreover, though India and Iran established a joint working group on defense in 2003, no meetings have occurred for many years.

Furthermore, India's rejection of an Iranian request for a satellite launch in November 2009 shattered Tehran's hopes of cooperation in space technology. An Indian Ministry of External Affairs (MEA) official explained, "India does not want to get entangled in Iran's problems over its nuclear and missile programs; hence its reluctance to launch satellites that could assist its missile capability." [87] Iran's proposal for a joint patrolling exercise in the Gulf was also rejected by India.[88]

Moreover, diplomatic relations between New Delhi and Tehran were downgraded substantially following India's vote in September 2005, as well as in February 2006 and November 2009, against Iran at the International Atomic Energy Agency (IAEA) for its noncompliance to disclose intentions of its nuclear program. In November 2010, India abstained from voting on a UN resolution charging Iran with human rights violations—India had thus far always voted against the resolution, taking a pro-Tehran stance. Iranian Supreme Leader Ayatollah Ali Khamene'i responded by referring to Kashmir as a "nation," a remark which further brewed mistrust between the two countries.[89]

In general, Iran has become a diminished constraint on all Indo-Israeli bilateral relationships, specifically in the area of defense cooperation. Furthermore, a revival of Indian-Iranian defense ties is very unlikely in the near future considering the risk the relationship poses to India's blossoming ties with the United States and Israel.

Bureaucracy and Corruption Charges

Further difficulties that plague Indo-Israeli defense cooperation are bureaucracy and various corruption allegations involving major Israeli defense firms and Indian officials. First, the prevalence of a complex bureaucratic system in India remains a considerable hurdle to its arms procurement policies. Negotiations with Israel, the signing of bilateral agreements, and defense cooperation between the countries have often been hindered due to such bureaucratic sluggishness.

Furthermore, stringent regulations placed on foreign companies investing in Indian industry greatly limit

domestic production due to the resulting delays in financial and technological transfer. In addition, the slow pace of weapons procurement by the government limits the arms production industry since it causes market stagnation. Due to the traditionally slow pace of the Indian Defense Ministry, observers doubt its arms purchase program will be capable of meeting the 2022 goal of acquiring \$100 billion worth of equipment to replace India's increasingly obsolete weaponry, a necessary move in the face of rising threats.

In order to meet its growing demands, India's Defense Acquisition Council (DAC) announced in December 2010 the much-awaited new Defense Procurement Policy (DPP). Defense Minister A. K. Antony hoped that such a drastic step would help India achieve its goal of defense industry indigenization and also offer greater transparency.[90] The intention of this updated policy is to ensure an effective synergy between the public and private sectors in defense production programs. At the same time, it dictates that the government will continue relying on foreign arms suppliers should the indigenous industries have any difficulty supplying critical technologies or delivering products according to set timelines.[91] In addition to this new DPP, as India today still imports 70 percent of its defense items, defense planners are currently determining the feasibility of government-to-government foreign military sales (FMS)—a route that could be both quicker and cheaper.[92]

Indo-Israeli cooperation has also been occasionally undermined by allegations of bribery and corruption in certain arms deals. Such issues surfaced when India's Central Bureau of Investigation (CBI) conducted an investigation of IAI and Rafael regarding the supply of Barak-1 missiles, a deal conducted by the BJP-led NDA government in 2000. India's Defense Minister at the time, George Fernandes, and retired Naval Chief Admiral Sushil Kumar were involved in this alleged bribery scandal. It was discovered that the deal was signed by Fernandes despite objections from the government's scientific advisor and former President of India A.P.J Abdul Kalam as well as from the DRDO. Several questions were also raised over the need for purchasing Israeli missile systems when India's indigenously-built Trishul was nearly functional. In 2009, a similar bribery allegation surfaced regarding an agreement signed between India's UPA government and IAI for the supply of MRSAM. The Indian government went ahead with this controversial deal while the investigation remains underway.

In the past, India usually blacklisted any defense firms involved in such scams. For example, due to corruption charges, India has in the past cancelled contracts for guns with the Swedish firm Bofors and the South African Denel, and submarine deals have been quashed with the German company Howaldtswerke. Consequently, the Indian military acquisition program was badly affected.[93] Similarly, the cancellation of a \$250 million deal India's Ministry of Defense (MOD) signed with IMI for the establishment of an ammunition factory in Nalanda also hindered "India's quest for self-reliance in the critical area of artillery ammunition." [94] However, despite many more corruption charges against Israel, Israeli duplicity has been treated somewhat differently than that of other countries, as breaking ties with Israeli firms would have much more serious repercussions on India's military modernization and defense and security interests.

An important dimension of the aforementioned bribery allegations was the involvement of private entrepreneurs or middlemen in such arms transactions. Their influence in India derives from their ability to ease the decisionmaking process and from their connections with elite political leaders and bureaucrats. Apart from this, their willingness to pay heavy commissions to various politicians, military officials, and bureaucrats involved in the arms procurement process makes them ubiquitous in such dealings. This has

not only raised question marks over the credibility and transparency of Israel as a reliable arms supplier but also tarnished the image of the Indian political and bureaucratic systems. In both alleged scams, middlemen played a role. Names such as Suresh Nanda (son of India's retired Admiral S. M. Nanda), Sudhir Choudhary, and Vipin Khanna were the main focus of the investigative raids.^[95] New Delhi has since attempted to regulate the role of the middlemen in defense deals, yet has achieved little success.

While the bribery issue is a little-discussed topic in Israel, in India it is recalled by various political parties to help promote their particular agendas. Generally such allegations garner criticism from left-leaning politicians who are not supportive of Indo-Israeli defense ties. Nonetheless, allegations of bribery in Israel-India arms deals and the related probes have had no visible effect on the arms trade so far. In fact, IAI and Rafael, while both under CBI investigation, continue to play pivotal roles in the Indian arms market.

CONCLUSION

Indo-Israeli defense cooperation is unlikely to decline in the near future. Israel's credibility as a reliable arms supplier with limited political implications furthers these ties. In today's complex international political arena, India desires the trust and confidence of a consistent partner who can deliver at any time. In addition, India's quest for its own technological advancement in the defense industry provides incentive to expand ties with the Jewish state. The bilateral relationship between the two will continue to be driven by these close defense ties and shared national security challenges.

At a time when India's neighbors, Pakistan and China, are enhancing their defense ties, India seeks greater engagement with Israel. The Jewish state has previously proven its credentials in times of crisis faced by India. For Israel too, further expansion of defense trades with this South Asian country is an economic and political imperative. Both countries should also aim to step up their cooperation on counterterrorism measures and on the joint development of defense systems.

Israel and India must enhance their political engagement as well, as defense ties alone cannot bind a bilateral relationship. Even though domestic political sensitivities in India still constitute a constraint on its policies toward Israel, there are considerable indications that New Delhi is trying to overcome these factors. This has been marked by the ongoing successful arms trade between the present Congress-led UPA government and Israel. Not only does this show the intensity of Indo-Israeli ties per se but the increasing flexibility of India in carving its own independent foreign policy objectives. It also represents the diminishing legacy of Cold War thinking and its limits upon an Indian-Israeli relationship.

Though arms sales have been the primary focus of the bilateral relationship, the expansion of activities in the commercial sector would be advantageous for both countries. Frequent cultural exchange could also improve the bilateral relationship. If Israel's current attempt to open a consulate in the high-tech city of Bangalore is successful, cooperation in science and technology will be greatly enhanced too.

The entry of additional players in the Indian arms market should not be viewed as a hindrance either, as it is a matter of diversification of New Delhi's priorities according to the defense needs and capabilities of

any respective supplier. There are still a wide range of mutual benefits both countries gain especially with India's gradual disengagement from its staunch traditional and ideological foreign policy approach in the Middle East. Finally, India's interest in the Gulf is ever increasing. Preserving the current momentum should be the focus of all the actors involved in this complex game of international relations.

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