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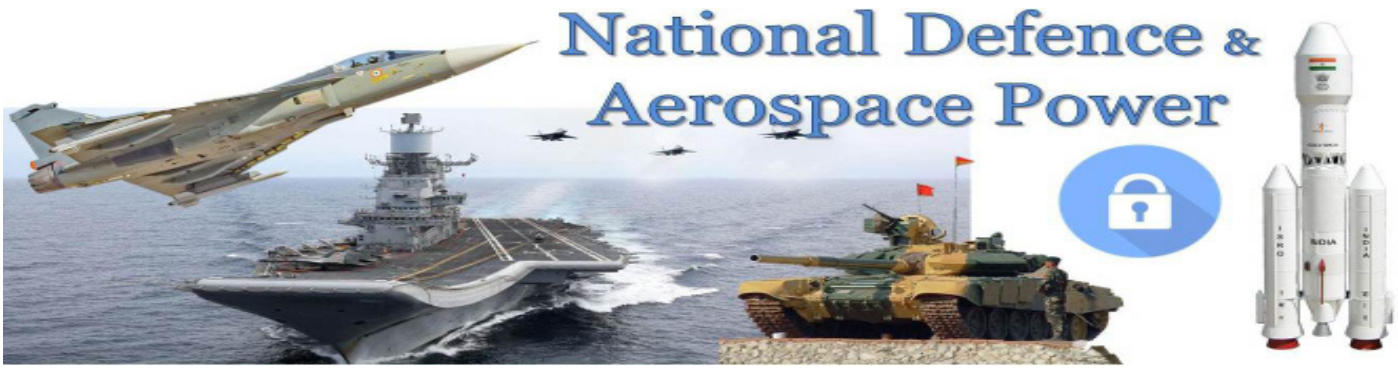

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REVITALISING JAPAN'S DEFENCE INDUSTRY AND INDIA-JAPAN DEFENCE COOPERATION

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The Japanese parliament approved a bill on June 7 to amend Article 25 of Foreign Exchange and Foreign Trade Act of 1949, which deals with technologies and export of arms. This bill created a defence manufacturing ecosystem in Japan by reinforcing the country's production base and extending subsidies for exports.[1] The subsidies under this bill are aimed at helping them meet requests for specification changes on their products when selling defence equipment to other countries. The new law will pave the way for not only strengthening the defence industry through innovation and collaboration with foreign manufacturers but also enhancing defence cooperation among Indo-Pacific countries through defence trade. It will also strengthen Japan's security calculations against China's assertiveness and North Korea's sabre-rattling. The law is in pursuance of the defence strategy approved by the Japanese government in December 2022, which indicated 'appropriate policy measures' for the advancement of defence production and technology bases and also 'transfer of defence equipment and technology overseas.'[2] The parliament has also approved the Kishida government's plan to create a pool of 43 trillion yen (US $318 billion) to be spent on defence, including the revitalisation of defence technology and manufacturing, from fiscal 2023 to fiscal 2027.[3]

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Japan's Struggling Defence Industry

In November 2022 Prime Minister Fumio Kishida announced that the defence share of gross domestic product (GDP) would be increased to around 2 per cent from the fiscal

year of 2027 from the current level of 1 per cent, set in 1976 under the cabinet of then-Prime Minister Takeo Miki.[4] This was done with the aim to boost Japan's overall national defence, including its domestic defence industrial base. Japan's defence industry has been struggling to survive for a long time due to high costs and a lack of market opportunities outside Japan because of the 'three export ban principles.'[5] About 100 companies have left the defence sector in the past 20 years due to a lack of profits and markets.[6] For instance, Komatsu Limited, a leading heavy machinery manufacturer, indicated in 2021 its cessation of machine-gun production due to a lack of competitiveness as the price of its machine guns is about five times more than that of foreign-made weapons.[7] Therefore, to compete with Western defence manufacturers and make economies of scale, finding overseas markets is key to sustenance for the Japanese defence equipment makers.

In view of the increased threat from China and North Korea, Tokyo has taken a series of measures to enhance its domestic defence industrial bases in the last decade.

Japan's defence industrial set-up has 'prime' contractors such as Mitsubishi Heavy Industries Ltd., and thousands of small and medium sub-contractors. According to the 2022 defence white paper, about 1,100 companies are involved in the manufacture of fighter aircraft, about 1,300 companies are in the production of tanks, and about 8,300 in building destroyers. These companies possess special and advanced skills and have production and technological bases.[8] However, of the subcontractors, on average, only 4 per cent are involved in defence equipment operations in their overall operations.[9] For innovation and technological advancements, income and profit should come steadily, while depending only on the pacifist-oriented Japanese self-defence forces would make it difficult.

In view of the increased threat from China and North Korea, Tokyo has taken a series of measures to enhance its domestic defence industrial bases in the last decade. In 2014, Japan's Ministry of Defence released a white paper, 'Strategy on Defense Production and Technological Bases,' to create a domestic defence production ecosystem, which was lost at the end of World War II, while Japan turned to US deliveries and licence production for the Japanese Self-Defence Forces (JSDF) during the post-war period.[10] Japan created the Acquisition, Technology & Logistics Agency (ATLA) in 2015 to define Japan's military strategic priorities in technological innovation and give directions for future research and development (R&D) in collaboration with various domestic as well as foreign firms.[11] Subsequently, in 2018, the Ministry of Defence issued a request for information to international aircraft makers, including BAE Systems, European Aeronautic Defence and Space Company (EADS), Lockheed Martin, Boeing, and Northrop Grumman, to manufacture about 100 6th generation fighter aircraft in Japan by 2030 at a cost of around US $20 billion.[12]

Japan, however, faced headwinds in its efforts to strengthen its air force, which included indigenous production of fighter aircraft, particularly from its defence partner, the US. In 2020, Japan proposed a homegrown, designed, and developed stealth aircraft on a hybrid model of the F-22 and F-35 between the US' Lockheed Martin and Japan's Mitsubishi Heavy Industries at the cost of US $40 billion.[13] However, this proposal was shot down by the US, citing the reason that sharing the F-35's technologies with states outside the NATO and Five Eyes alliance systems is prohibited.[14] Then Japan, in December 2022, formed a consortium with the United Kingdom and Italy for the Global Combat Air Programme (GCAP) to develop a new 6th generation fighter jet to be delivered by 2035.[15] Tokyo's earlier effort to procure Lockheed Martin's F-22 Raptor, the world's first 5th generation stealth fighter jet, failed because the US Congress refused the sale of jets to foreign countries.[16]

To make the GCAP economies of scale, it has to find markets other than the consortium members. The UK and Italy are NATO members and have not delved into how many they might procure of the new fighter aircraft, named Tempest by the UK, for their national forces. The financial cost and number of units are yet to be finalised. Any system of this magnitude produced by not-so-large air forces, like the US or China, requires foreign markets, while Japanese law hinders selling the aircraft to non-treaty countries. Given the ensuing stalemate between China and others in the Indo-Pacific region, the regional countries are going to be the major market for the Tempest aircraft.

India–Japan Defence Cooperation

By the beginning of the century, the region witnessed close defence cooperation between India and Japan, which has since been on a path of ascendancy with the conduct of regular high-level visits and dialogues. It started with the rescue of the Japanese merchant ship MV Alondra in 1999 by the Indian Coast Guard in the Arabian Sea, which was hijacked by pirates off the Indonesian coast.[17] The first-ever visit of the Indian Defence Minister to Japan took place in 2001, which set the stage for defence cooperation and held the first Japan-India Security Dialogue and the Japan-India military-to-military consultations.[18] Enhancing security cooperation at the regional and global level, both countries signed the "Japan-India Global Partnership" in 2005 and the "Joint Declaration on Security Cooperation between Japan and India" in 2008, which institutionalised defence cooperation.[19] The Tokyo Declaration for India-Japan Special Strategic and Global Partnership of September 2014 and the Memorandum of Defence Cooperation and Exchanges provided significant impetus to the defence cooperation initiatives.

Both countries are involved in various levels of interactions, including bilateral annual meetings of Prime Ministers, 2+2 Ministerial Level, and Defence Ministerial meetings; trilateral-India-US-Japan, and India-Japan-Australia; quadrilateral–India, US, Japan,

and Australia (Quad); and multilateral-East Asia Summits. Besides, regular meetings of service chiefs, services staff talks, and bilateral exercises by the Coast Guard, Navy, Army, and Air Force are also taking place between the two countries. Joint staff talks between the armed forces of the two countries are expected to begin later this year. Japan also participates in India-initiated MILAN and MALABAR naval exercises; the former is held in the Bay of Bengal, while the latter take place in various locations in the Indo-Pacific.

The new law opens a wide market for the Japanese small and medium-sized defence contractors as India is going to spend billions of dollars on defence manufacturing under the 'Make in India' initiative.

To enhance technical cooperation, 'Defence Equipment and Technology Cooperation' was signed during the 2015 Annual Summit. Under this, a Joint Working Group on Defence Equipment and Technology Cooperation (JWG-DETC) was formed, and six meetings have been held until 2022. A delegation of Indian defence companies visited Tokyo in September 2017, and a reciprocal visit of Japanese companies to India took place in August 2018. A business forum meeting was held on the side-lines of Aero India 2019 in Bangalore.[20] The 'Reciprocal Provision of Supplies and Services between the Indian Armed Forces and the Self Defense Forces of Japan,' signed in September 2020, is a significant development in defence cooperation as the armed forces can use the ports facilities of each other during military operations.[21]

Arms Trade in Japan-India Cooperation

Defence industry collaboration is the one area that is still lacking in India-Japan defence cooperation. The Indian Navy's attempt to purchase 12 amphibious aircraft from the ShinMaywa company has been delayed for almost a decade. At the same time, the new law is expected to boost the transaction of aircraft to India. Attempts have been made in the Defence Secretary level dialogues to enhance investments in the defence industry by Japanese firms in India.[22] Nikkei Asia reported that, since fiscal 2020, Japan's Ministry of Defense has partnered with trading houses and defence companies to identify potential demand for defence equipment in countries like India and Vietnam.[23] The new law will help to steady cooperation in the defence industry and arms trade between India and Japan in the coming years.

Conclusion

The new law is expected to boost defence industry collaboration between India and Japan. It opens a wide market for the Japanese small and medium-sized defence contractors as India is going to spend billions of dollars on defence manufacturing under the 'Make in India' initiative. Japan has identified 12 'key technology fields' to strengthen national security, which include insect-sized robots, electromagnetic barriers, unmanned systems, cyber defence, etc.[24] It is expected that these technologies "will bring about

a transformation in defence and ensure technological superiority" for Japan within a period of 5 or 10 years. India is also enhancing deterrence against cyber threats and seeking advancements in 'non-kinetic warfare,' and technological cooperation with Japan in this field will help overcome constraints that India faces domestically.[25]

By joining the GCAP, India could benefit not only by strengthening its airpower capabilities but also by boosting the domestic arms industry as it will bring advanced aircraft technology to the nation.

India can also think of joining the 6th generation fighter aircraft program under the GCAP consortium for future requirements. The Indian Air Force's advanced inventories are Russian-made SU-30 MKIs and French-made Rafales. India is expected to get F-414 engines from the US company General Electric for the new generation of Tejas, indigenously developed by India.[26] However, all these aircraft are 4/4.5 generations, while the Asian sky is going to be dominated by 6th generations aircraft and bombers by the middle of the century. The US has already developed a 6th generation bomber, the B-21 Raider, and last month the Department of the Air Force announced that it is looking to award a contract for the Next Generation Air Dominance Platform —a 6th generation fighter— in 2024.[27] China's aircraft maker Aviation Industry Corporation of China, unveiled a 6th Generation Fighter Aircraft concept at the biennial Zhuhai Air Show held in Guangdong province in November last year.[28] By joining the GCAP, India could benefit not only by strengthening its airpower capabilities but also by boosting the domestic arms industry as it will bring advanced aircraft technology to the nation.

Notes:

[1] JIJI, "Japan enacts bill to nationalize defense equipment facilities", *The Japan Times*, June 7, 2023, https://www.japantimes.co.jp/news/2023/06/07/national/nationalize-defense-bill/. Accessed on June 17, 2023.

[2] "National Security Strategy of Japan," Ministry of Defense of Japan, December 2022, https://www.cas.go.jp/jp/siryou/221216anzenhoshou/nss-e.pdf. Accessed on June 10, 2023.

[3] "Diet enacts law to create defense funds pool", *Japan Today,* June 18, 2023, https://japantoday.com/category/politics/japan-parliament-enacts-law-to-create-defense-funds-pool. Accessed on June 19, 2023.

[4] "Japan set to increase defense budget to 2% of GDP in 2027", *Nikkei Asia*, November 28, 2022, https://asia.nikkei.com/Politics/Japan-set-to-increase-defense-budget-to-2-of-GDP-in-2027. Accessed on June 1, 2023.

[5] "The Three Principles on Transfer of Defense Equipment and Technology", Ministry of Foreign Affairs of Japan, April 5, 2023, https://www.mofa.go.jp/fp/nsp/page1we_000083.html. Accessed on June 16, 2023.

[6] Yusuke Takeuchi, "Japan passes defense subsidy bill to stop industry bleeding", *Nikkei Asia*, June 8, 2023, https://asia.nikkei.com/Business/Aerospace-Defense-Industries/Japan-passes-defense-subsidy-bill-to-stop-industry-bleeding. Accessed on June 15, 2023.

[7] Alexandre Brans, "Japan's defense industry in dire straits", *Asia Power Watch*, July 6, 2022, https://asiapowerwatch.com/japans-defense-industry-in-dire-straits/. Accessed on June 12, 2023.

[8] "Defence of Japan 2022", Ministry of Defence of Japan, p. 466, https://www.mod.go.jp/en/publ/w_paper/wp2022/DOJ2022_EN_Full_02.pdf. Accessed on June 1, 2023.

[9] Kojiro Tanikawa and Yujiro Okabe, "New law provides direct support to Japan's defence industry", Asia News Network, June 9, 2023, https://asianews.network/new-law-provides-direct-support-to-japans-defence-industry/. Accessed on June 17, 2023.

[10] "Strategy on Defense Production and Technological Base", Ministry of Defense of Japan, June 2014, https://www.mod.go.jp/atla/soubiseisaku/soubiseisakuseisan/2606honbuneigo.pdf. Accessed on June 1, 2023.

[11] "Mission of ATLA", Acquisition, Technology & Logistics Agency (ATLA), https://www.mod.go.jp/atla/en/soubichou_gaiyou.html. Accessed on June 14, 2023.

[12] Franz-Stefan Gady, "Japan to Pursue Locally Developed Next Generation 'Future Fighter' Project", The Diplomat, February 5, 2019, https://thediplomat.com/2019/02/japan-to-pursue-locally-developed-next-generation-future-fighter-project/. Accessed on June 1, 2023.

[13] "Japan will work with Lockheed Martin on new fighter jet, Defense Ministry says", *Japan Times,* December 18, 2020, https://www.japantimes.co.jp/news/2020/12/18/national/lockheed-martin-new-fighter-jet/. Accessed on June 11, 2023.

[14] "For Western Countries Only? Pentagon Set to Refuse Japanese Request for F-35 Partner Status Despite Massive Order", *Military Watch Magazine*, July 30, 2019, https://militarywatchmagazine.com/article/for-western-countries-only-pentagon-set-to-refuse-japanese-request-for-f-35-partner-status-despite-massive-order. Accessed on June 8, 2023.

[15] Akhil Kadidal, "GCAP sixth-generation jet to potentially fly by end of decade", *Janes*, December 19, 2022, https://www.janes.com/defence-news/news-detail/gcap-sixth-generation-jet-to-potentially-fly-by-end-of-decade. Accessed on June 1, 2023.

[16] Jim Wolf, "U.S. arms-sale chief discounts F-22 sale to Japan", Reuters, April 28, 2007, https://www.reuters.com/article/us-japan-usa-fighter-exclusive-idusn2727861320070427. Accessed on June 17, 2023.

[17] "14 hijackers of Japanese ship convicted", *Times of India*, February 26, 2003, http://timesofindia.indiatimes.com/articleshow/38606802.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst. Accessed on June 10, 2023.

[18] Joshy M. Paul, 'India–Japan maritime security cooperation: Secondary states' soft balancing in the Indo-Pacific', *Maritime Affairs,* Vol. 15, No. 2, 2019.

[19] "Defence Cooperation", Embassy of India in Tokyo, https://www.indembassy-tokyo.gov.in/eoityo_pages/NzE. Accessed on June 11, 2023.

[20] Ibid.

[21] "Reciprocal Provisions of Supplies and Services between the Indian Armed Forces and the Self Defense Forces of Japan", Ministry of Foreign Affairs of Japan, September 10, 2020, https://www.mofa.go.jp/press/release/press4e_002896.html. Accessed on June 10, 2023.

[22] "India, Japan agree to diversify cooperation in emerging domains like defence space, cyber", *Live Mint*, April 5, 2023, https://www.livemint.com/news/india/india-japan-agree-to-diversify-cooperation-in-emerging-domains-like-defence-space-cyber-11680700822985.html. Accessed on June 13, 2023.

[23] Ryo Nemoto, "Japan to help defense industry tailor exports, eyeing security ties", *Nikkei Asia*, February 11, 2023, https://asia.nikkei.com/Politics/Defense/Japan-to-help-defense-industry-tailor-exports-eyeing-security-ties. Accessed on June 15, 2023.

[24] Kyodo, "Japan to set out guidelines for future defense technology equipment", *The Japan Times,* June 17, 2023, https://www.japantimes.co.jp/news/2023/06/17/national/defense-tech-guidelines/. Accessed on June 18, 2023.

[25] "Non-kinetic warfare has highlighted need for advanced technology in defence sector: Rajnath", *The Indian Express*, May 16, 2023, https://indianexpress.com/article/india/defence-minister-rajnath-singh-warfare-advanced-technology-8610918/. Accessed on June 12, 2023.

[26] "Exclusive: US set to allow GE to make engines in India for New Delhi's military jets", Reuters, May 31, 2023, https://www.reuters.com/business/aerospace-defense/us-set-allow-ge-make-engines-india-new-delhis-military-jets-2023-05-31/. Accessed on June 10, 2023.

[27] Stephen Losey, "US Air Force plans to award Next Generation Air Dominance deal in 2024", *Defence News*, May 18, 2023, https://www.defensenews.com/air/2023/05/18/us-air-force-plans-to-award-next-generation-air-dominance-deal-in-2024/#:~:text=washington%20%e2%80%94%20the%20u.s.%20air%20force,and%20highly%20classified%20ngad%20program. Accessed on June 1, 2023.

[28] Joe Saballa, "China Unveils Rival Sixth-Gen Fighter Concept", *The Defense Post*, November 11, 2022, https://www.thedefensepost.com/2022/11/11/china-rival-sixth-gen-fighter-concept/. Accessed on June 18, 2023.

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