

Dual Use and the Future of Yokota Air Base



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A Hudson Institute report

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Table of Contents

Foreword/Acknowledgements.....	vii
1. Background Information.....	1
2. Trends in Air Traffic and Tourism.....	7
3. Civilian Advantages of Dual Use.....	13
4. Civilian Disadvantages of Dual Use.....	17
5. Military Advantages and Disadvantages of Dual Use.....	25
6. Airspace	31
7. Alternative Outcomes and Conversion Requirements.....	37
8. Conclusion.....	43
Notes.....	45

Foreword/Acknowledgements

In the spring of 2003 the Nippon Foundation, one of Japan's leading philanthropic organizations, asked Hudson Institute to conduct a survey of Yokota Air Base to assess whether the base could be used for commercial flights as well as military ones. In light of President George W. Bush and Prime Minister Junichiro Koizumi's agreement at around the same time to undertake a feasibility study of such dual use of Yokota, Hudson Institute agreed to conduct its own study to add the perspective of a nongovernmental organization to the public debate. Senior Fellow Charles Horner and Chief Operating Officer Kenneth Weinstein managed the project, while Research Associate Maria Farkas conducted much of the research and drafted the report. Visiting Senior Fellow Yoshiki Hidaka served as an invaluable advisor. Denise Braye assisted our efforts.

This report is structured into eight main chapters: The first, "Background Information," contains a history of, and basic facts on, Yokota; the second, "Trends in Air Traffic and Tourism," provides the context in the aviation industry behind calls for introducing commercial flights at Yokota; the third, "Civilian Advantages of Dual Use," lays out the basic arguments for opening Yokota to dual use; the fourth, "Civilian Disadvantages of Dual Use," discusses some of the problems involved in converting Yokota to a dual-use facility; the fifth, "Military Advantages and Disadvantages of Dual Use," explains Yokota's strategic value, especially in the context of the review of global deployments that the U.S. Department of Defense is currently conducting; the sixth, "Airspace," describes the debate over the appropriate way to manage Yokota's airspace as well as alternative solutions to gaining the maximum utility out of Yokota; the seventh, "Alternative Outcomes and Conversion Requirements," provides past cases of conversion to dual use and describes some of the requirements and processes involved therein; and the eighth, "Conclusion," sums up the report's findings. Throughout the report citations are present for open-source material only.

Hudson Institute would like to thank the following people for sharing their views on dual use for Yokota Air Base with us: Teiji Iwasaki, director general of the Air Traffic Services Division, and Toshiya Morishige and Shigeru Yoneyama, director and deputy director, respectively, of the International Air Transport Division, all of the Civil Aviation Bureau in the Ministry of Land, Infrastructure, and Transport; Hiroshi (Harry) Takahashi, director and board counselor of Yusen Air & Sea Service Co., Ltd.; Satoshi Nakamura, executive advisor of Nippon Steel Corporation; Takashi Masuko, executive vice president of Japan Airlines Co., Ltd.; Shigeyuki Takemura and Norihiko Matsuda, vice president and manager, respectively, of Government & Industrial Affairs, and Tadashi Matsushita, manager of Corporate Planning, all of All Nippon Airways Co., Ltd.; Toshio Kojima, Yukihiko Akutsu, and Akihisa Nagashima, all members of Japan's House of Representatives; Tamotsu Takase, Hitoshi Kawashima, and Daisaku Niimi, counselor to the governor, senior director in charge of promoting dual use of Yokota Air

viii Foreword/Acknowledgements

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Herbert I. London
President
June 2004

Background Information

History

Yokota Air Base, lying approximately twenty-three miles, or thirty-eight kilometers, west of the center of modern-day metropolitan Tokyo, is one of three active U.S. Air Force bases in Japan (the other two being Kadena Air Base in Okinawa and Misawa Air Base in the northern part of Japan's main island, Honshu, on which Yokota is also located).¹ Yokota's origin dates back to March 1940 when the Japanese Imperial Army built Tama Army Airfield (named after the prefecture in which it was located) on a vast expanse of land connected to Mizuho town and Fussa city. Two years later, the army established an aviation maintenance school and flight test center at the airfield. Within a few weeks of Japan's surrender on August 15, 1945, the United States had requisitioned a functional (having received only minor damage during the war) Tama Airfield as part of its seizure of all Imperial Army and Navy facilities, and began to use the airfield for its own operations starting September 4. Nearly a year later, on August 15, 1946, Tama Army Airfield became an official U.S. base designated Yokota, named after a small village (part of today's Musashimurayama) located in the airfield's northeast corner.



Outline of Yokota Air Base within Encompassing Municipalities²

2 Background Information

The San Francisco Peace Treaty and U.S.-Japan Security Treaty, both signed in 1951 and enacted in 1952, conferred the use of Yokota Air Base, among other facilities, to the U.S. military. The Security Treaty states, “Japan grants, and the United States of America accepts the right, upon the coming into force of the Treaty of Peace and of this Treaty, to dispose United States land air and sea forces in and about Japan.”³

At the time of the peace and security treaties’ enactment, Yokota Air Base covered approximately 1,102 acres, with one runway of 4,265 feet, or 1,300 meters.⁴ During the Korean War (1950–53) the base assumed a major role as a primary staging point for B-29 bombers, reconnaissance squadrons, and fighter planes. At around that same time, the increased size of aircraft and the needs of jet engines forced the near tripling of the runway at Yokota in 1962 to a length of 11,000 feet, or 3,350 meters.⁵ The area of the base also expanded to equal 1,750 acres, or about seven square kilometers.⁶ In the course of this expansion, a train line and National Highway No. 16 were relocated to detour around the base. The Japanese central government owns 99 percent of Yokota’s land, which falls within the limits of five cities—Akishima, Fussa, Hamura, Musashimurayama, and Tachikawa—and one town—Mizuho. The combined population of these six municipalities is around half a million.⁷

Municipality	Area of Yokota (km ²)	Percent of Yokota within Municipality	Total Area of Municipality (km ²)	Percent of Municipality within Yokota
Akishima	0.021	0.3	17.33	0.1
Fussa	3.317	46.5	10.24	32.4
Hamura	0.417	5.8	9.91	4.2
Mizuho	2.101	29.4	16.83	12.5
Musashimurayama	0.990	13.9	15.37	6.4
Tachikawa	0.290	4.1	24.38	1.2
Total	<u>7.136</u>	<u>100</u>	<u>94.06</u>	<u>7.6</u>

Area of Yokota Air Base in Relation to Encompassing Municipalities⁸

In 1964, upon the closure of Itazuke Air Base in Kyushu, a tactical fighter wing, with its accompanying F-105D and KC-135 aircraft, transferred to Yokota. In 1965, Yokota, along with Kadena Air Base, became a dispersal base for U.S. Strategic Air Command’s nuclear command and control aircraft, which exercised command and control of nuclear war plans, including strike coordination with U.S. nuclear-armed aircraft carriers and nuclear submarines operating near Japan. During the Vietnam War (1965–73), Yokota strengthened its role as a fighter base, which included hosting F-4 Phantom fighter units starting in 1967. From 1968 to 1971, these units flew on a rotating basis to Osan Air Base in Korea, providing nuclear strike–alert posture against targets in North Korea, China, and the Soviet Union, and maintained several aircraft on around-

the-clock fifteen-minute nuclear alert. In 1971, Yokota's role as a fighter base waned as the fighter units transferred to Okinawa as part of a general reduction and realignment of U.S. forces in Japan and South Korea. At the same time, Yokota assumed an important role as a transport hub amid the increasing hostilities of the Vietnam War.

In January 1973, the U.S.-Japan Security Consultative Committee decided on a so-called Kanto Plan—a plan to consolidate and integrate U.S. Air Force facilities in the Kanto Plain into Yokota. The plan's implications of permanent use and a strengthened function for Yokota stirred protests in the cities and towns in Yokota's vicinity—not least of all in Akishima. The consolidation and integration of U.S. forces stationed in the Kanto region into Yokota, however, enabled the reversion of such bases and facilities as Yamato Base, Tachikawa Base, Fussa Base, Green Park, and Grand Heights.

In November 1974, Yokota came to occupy a position of new strategic importance in the Far East with the establishment there of the headquarters of both U.S. Forces Japan and the Fifth Air Force. Headquarters U.S. Forces Japan is the command center for U.S. and Japanese forces, responsible for coordinating between the two countries' governments on defense issues, developing plans for the defense of Japan, and preparing for the execution of such plans should action become necessary. In fulfilling these missions, it also manages the distribution of responsibilities among land, air, and sea forces in Japan. The Fifth Air Force controls U.S. air forces in South Korea and Japan and has three main missions. First, it plans, conducts, coordinates, and controls air operations under the direction of the Pacific Air Force commander. Second, it stands ready to provide tactical fighter and military airlift support to offensive air operations, should deterrence fail. Third, it helps defend Japan and foster regional stability by planning, exercising, and conducting joint air operations with Japan. The Fifth Air Force also provides aid in the event of natural disasters in the Pacific region—such as the Kobe earthquake in 1995 and Super Typhoon Paka in Guam in 1997.

The Fifth Air Force includes the following units: 18th Wing, 35th Fighter Wing, and 374th Airlift Wing; 605th Air Operations Group, 605th Air Operations Squadron, 605th Air Intelligence Squadron, 605th Air Support Squadron, 605th Air Communications Flight, and 20th Operational Weather Squadron. The 374th Airlift Wing is Yokota's host unit and the only airlift wing in the Pacific. It has four main functions: operations, support, logistics, and medical. As the only airlift wing in East Asia, it is responsible for providing airlift support to all defense agencies in the Pacific. The 374th Airlift Wing comprises the 36th Airlift Squadron flying thirteen C-130E "Hercules" aircraft, the 459th Airlift Squadron flying four UH-1N "Huey" helicopters and four C-21A Learjets, and the 30th Airlift Squadron flying four C-9A "Nightingales." These squadrons maintain a constant state of readiness by taking part in Pacific Air Force joint training exercises in Japan, Alaska, Malaysia, the Republic of

4 Background Information

Korea, and Thailand. They also transport people, equipment, and mail throughout a charge of 100 million square miles in the Pacific, running regular missions within the Tokyo metropolitan area and Japan at large, as well as to Korea, Micronesia, Guam, and Thailand. The 730th Air Mobility Squadron and 315th Intelligence Squadron also operate out of Yokota.

With the establishment of U.S. Forces Japan and Fifth Air Force's headquarters at Yokota in 1974, the base's facilities, such as schools and hospitals, improved and the population and density of the base's facilities approximately doubled. At the end of 2002, 4,390 military personnel were stationed at Yokota, with 5,576 of their family members accompanying, for a total base population of 9,966.⁹ The number of Japanese civilians employed on the base equaled 1,927.¹⁰ Since 1974, Yokota has functioned mainly as a logistics and transport hub. The deployment of C-130 "Hercules" aircraft to Yokota in September 1975 solidified the latter role.

At present, aircraft movements (arrival and departure flights) at Yokota are estimated to be in the range of 13,000–19,600 per year, or 37–54 per day.¹¹ According to Fussa city, movements in 2003 equaled exactly 13,000.¹² After years of heavy wear and tear, on November 16, 2000, the U.S.-Japan Joint Committee agreed to a major overhaul of Yokota's runway. The Japanese government paid approximately ¥4.9 billion, or \$40 million, for the construction, which took place from March 2001 to July 2002. Today Yokota stands as one of the most modern bases of the U.S. Air Force.¹³ Of the three U.S. Air Force bases in Japan, Yokota measures in as the second largest. Kadena, the largest, has two 3,689-meter runways and covers 12,547 acres, while Misawa has one 3,048-meter runway and covers 3,865 acres.¹⁴

On September 11, 2001, Yokota went on high-alert status. In response to the terrorist attacks on the United States, Japan's Diet passed an Anti-Terrorism Special Measures Law on October 29, 2001. One part of the law has enabled C-130 cargo planes from Japan's Self-Defense Forces (SDF) to fly into Yokota to aid the U.S. military in transporting goods.

Movement for Dual Use

Shintaro Ishihara, the governor of Tokyo and a former minister of transportation, has been among the most outspoken proponents of dual use of Yokota since running for his first term as governor in 1999. In that campaign, Ishihara called for either the base's reversion to Japan or the base's conversion into a dual-use facility. After his election, he formed a twenty-two-member council to consider Yokota's conversion, and since his reelection in 2003 has continued to push for dual use by civilian as well as military aircraft. As the member of a municipal government, however, Ishihara does not have the power to effect foreign policy. Rather, the Japanese central government, which owns almost all of Yokota's land, is responsible for conducting Japan's foreign policy, including management of the U.S.-Japan Security Treaty that governs the U.S. military's use of Yokota. The U.S. and Japanese central governments, for their

part, had never indicated any interest in considering Yokota's conversion into a dual-use facility. On May 23, 2003, however, a historic event occurred and a new chapter unfolded in the effort to secure dual use for Yokota as U.S. president George W. Bush and Japanese prime minister Junichiro Koizumi agreed to have their governments undertake a joint feasibility study of the possibility of dual use for Yokota Air Base.

6 *Background Information*

Trends in Air Traffic and Tourism

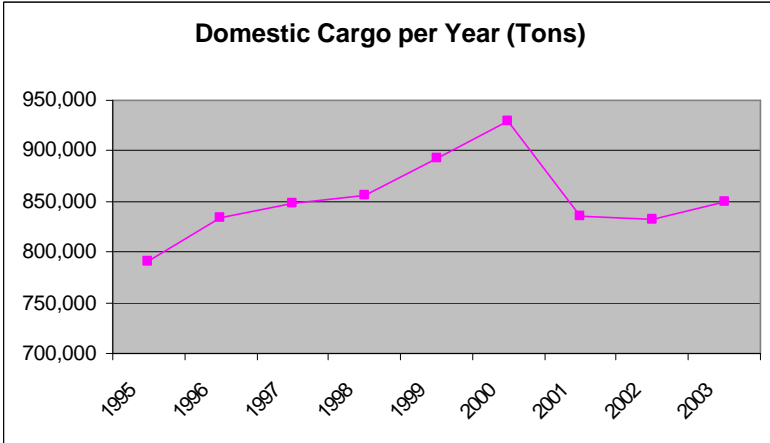
Flight Capacity in Tokyo

With a population of more than 8 million in the central districts of Tokyo, 12 million in the prefecture of Tokyo, and 34 million in the Tokyo metropolitan region (including Tokyo and Kanagawa, Saitama, Chiba, and southern Ibaraki Prefectures), Tokyo is the largest metropolitan area in the world.¹⁵ Handling its demand for air travel are two major airports: Narita (New Tokyo International Airport), which mainly offers international flights, and Haneda (Tokyo International Airport), which mainly offers domestic flights. A crude comparison with the airports available to New York City, whose population is about 60 percent of Tokyo's but whose economy is similarly well developed, reveals some interesting differences. Three major airports serve New York City: John F. Kennedy International Airport, La Guardia Airport, and Newark Liberty International Airport. In 2003, these three airports, with a combined total of nine runways, together handled 1,061,062 movements.¹⁶ In the same time period, Narita and Haneda, with their combined total of five runways, handled approximately 420,000 movements.¹⁷

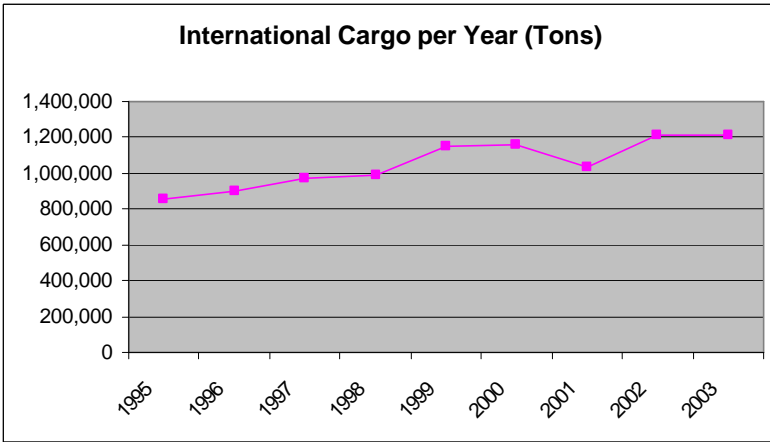
Most airline executives, industry analysts, and government bureaucrats have little trouble agreeing that the airports serving the Tokyo metropolitan area have reached full capacity, and the state of Japan's air transportation is drawing increasing attention. In 2002, the government drew up plans to add a fourth runway at Haneda by 2009 and to lengthen the shorter of Narita's two runways by 2007. The extra runway at Haneda will nearly double that airport's capacity from a combined 285,000 landings and takeoffs to approximately a combined 407,000 landings and takeoffs.¹⁸ Narita's extended runway should give it an extra 20,000 flights, increasing from 200,000 takeoffs and landings per year to 220,000.¹⁹ Neither of the two airports is likely to expand in the future beyond these changes. Haneda's newest runway, planned for construction in Tokyo Bay, will cut into sea lanes with little chance for any further intrusion. Meanwhile, the half-runway expansion planned for Narita has encountered such vehement opposition that even though it may proceed, people have likely forgotten any thoughts they might have had of further expansion at Narita.

Trends in the Aviation Industry

Statistics about future growth in the aviation industry are impressive. For example, Boeing expects that world air traffic will more than triple from 2001 to 2021, from 140.4 billion revenue tonne-kilometers to 483.5.²⁰ Another study by a nonprofit organization predicts a doubling of the entire global fleet of aircraft by 2020.²¹ The greatest increases in air traffic are expected to occur in Asia, where growth in intraregional traffic, at an average annual rate of 10 percent, has far exceeded that of the rest of the regions of the world.²²

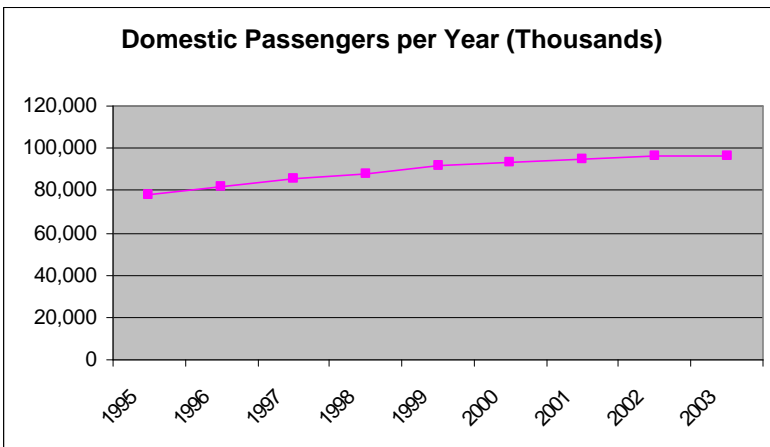


From 1970 to 2000, the amount of world air cargo alone increased on average by 7 percent annually.²⁴ This figure had been closer to 8 percent before the effects of the Japanese recession began to take their toll in 1994, and has been closer to 5–6 percent since then.²⁵ Boeing predicts that world air cargo and intra-Asian air cargo will continue to increase at an average rate of 6.4 and 8.4 percent, respectively, until at least 2020—a full eleven years after the completion of the Japanese government’s current runway expansion projects.²⁶ Airbus predicts a somewhat more cautious, but still impressive 5.7 percent increase in world air cargo, more than tripling current freight tonne-kilometers by 2022.²⁷ It also anticipates a more than doubling of the global freighter fleet, from 1,499 aircraft to 3,283.²⁸



29

Japan is one of the biggest players in the world air cargo business. Its share of world air cargo increased twenty-five times over from 1970 to 1999, an annual average growth rate of 11.8 percent, and it handled close to 20 percent of the business in 1999.³⁰ It can only maintain this position, however, if it has the runway capacity to do so. Narita, which handles 60 percent of air cargo in Japan,³¹ has seen the amount of air cargo that passes through its premises increase seven times over since its opening in 1978.³² In fact, in 2000 Narita handled the second-largest amount of cargo in the world after Hong Kong International Airport.³³ The ability of Chubu International Airport, opening in 2005 just outside of Nagoya, to relieve Narita of some of its burden in cargo remains to be seen.



34

10 Trends in Air Traffic and Tourism

Domestic and international air passenger travel is also on the rise in Japan. From 1970 to 2000, the two increased at an average annual rate of 6.3 and 9.2 percent, respectively.³⁵ At Narita alone, the number of passengers using the airport has increased 4.7 times since its opening.³⁶ By 2010, total international air passenger demand for Narita is expected to be around 38 million; unfortunately, even with Narita's latest runway extension, its capacity is only estimated to be 34 million.³⁷ Airbus predicts a near doubling of the global fleet of passenger aircraft and the doubling, or even tripling, of revenue passenger-kilometers by 2022, with airlines of the Asia-Pacific region operating 60 percent of the world's very large passenger aircraft fleet at that time.³⁸ Should Japan's economy begin to heat up again, the shortage of airport facilities may rapidly become critical.



39

These figures for high demand are reflected in the exorbitant landing fees at Japan's airports. The landing fees for Narita and Haneda are ¥950,000 and ¥870,000, respectively.⁴⁰ Those numbers are the highest in the world, about three times higher than those of New York and Seoul, eight times higher than Frankfurt, eight times higher than Los Angeles, and a whopping ten times higher than London.⁴¹ The implication for Japan's air passenger and cargo industries is clear. As large, new international airports open elsewhere in Asia and offer lower landing fees, many airlines may shift flights away from Japan. For example, Seoul Kimpo International Airport and Hong Kong International Airport, with landing fees of ¥350,000 and ¥410,000, respectively—one-third to one-half of those at Japan's major airports—are well positioned to become new regional hubs.⁴²

Tourism and Japan

For most of its history, Japan never promoted its tourism industry, reflected in part in its thirty-third ranking among all nations for international visitors in 2001—behind even the Czech Republic and Ukraine.⁴³ In 2003, 5,211,725 foreigners visited Japan (of which 3,055,340 were tourists).⁴⁴ Prime Minister Koizumi is trying to turn this situation around, however. In February 2004, he pledged roughly to double the number of annual foreign visitors to Japan to 10 million by 2010. As part of Prime Minister Koizumi's initiative, the government's tourism budget will increase from \$25 million to \$42 million.⁴⁵ If the government is able to deliver on Prime Minister Koizumi's pledge and the number of annual foreign visitors to Japan doubles, air traffic in Japan—with only about 15–20 million passengers traveling to and from Japan internationally per year at present—would increase significantly.

Of course, a decline in Japan's own population could negate any gains to be had through increased tourism. According to Japan's Ministry of Health, Labour, and Welfare, Japan's population will hold steady at 127 million until around the year 2010, at which time the population will begin to enter a slow spiral downward to 100 million by around 2050.⁴⁶ Thus, unless Japan can bring in 30 million more tourists (or immigrants), or reverse its demographic trend, the impact from an increase of 10 million tourists on Japan's aviation industry would be only temporary, lasting about twenty years until 2030.

A Commercial Role for Yokota?

The dual employment of Yokota Air Base for commercial and military aircraft has gained attention as one possible response to Tokyo's shortage of airport facilities. Although forecasts suggest that in a few decades the Tokyo metropolitan region will be ready to fill more flights than Narita, Haneda, and a dually used single runway at Yokota could provide, some suggest that the opening of Yokota to commercial flights could at least ease demand until a new airport was brought into service—a project that could take a very long time. If Yokota assumed the burden of some domestic flights, for example, Haneda could better manage its own domestic flights and perhaps increase its international flights. Such domestic commercial flights—cargo and passenger—could be the first to use Yokota until more money could be raised and the necessary customs, inspection, and quarantine facilities for international flights built.

To get an idea of the potential use the airline industry could make of Yokota, some comparisons are useful. Yokota would undeniably be more appealing to commercial airlines if it had two runways for any number of safety and timing issues, especially when a military presence would accompany its use. Nevertheless, many single-runway airlines play extremely effective roles in domestic and international airport networks. Gatwick Airport in London, for example, has only one runway but is the second-busiest airport in the United

12 *Trends in Air Traffic and Tourism*

Kingdom after Heathrow and the sixth-busiest international airport worldwide.⁴⁷ On a busy day, Gatwick can handle about 800 combined takeoffs and departures.⁴⁸ Approximately 30 million passengers pass through Gatwick's gates every year, with the airport striving to raise that number to 40 million in the next seven years.⁴⁹ At the outside, Yokota is at present handling 15 percent of that amount of daily movements. By listening for takeoffs from Yokota, the Tokyo Metropolitan Government concludes that fifty-four takeoffs are occurring per day on average, with anywhere from eighteen to eighty-two at the extremes.⁵⁰ As one official with the Tokyo Metropolitan Government put it, "The report shows there is plenty of time on the runway to accommodate joint use."⁵¹

Civilian Advantages of Dual Use

Economic Opportunity

Officials from Musashi Murayama and Fussa have explicitly expressed the hope that “economic impact from [dual use of] the base” could boost the development of their cities, and all chambers of commerce of the six localities directly bordering Yokota support dual use.⁵² The Tokyo Metropolitan Government under Ishihara conducted a study of conversion for Yokota in 1999 that found positive economic benefit from a dual-use arrangement. The report estimated that a joint military-civilian airport at Yokota would see the transit of about 4.9 million passengers (2.6 domestic and 2.3 international) by 2015, a source of huge potential revenue.⁵³ The report’s authors based that number on the 8.7 percent of travelers using Haneda Airport and 11.7 percent using Narita Airport annually who begin or end their trips at addresses near Yokota.⁵⁴ The report did factor in the inconvenience to passengers of irregular flight schedules due to military activities at the base. At that level of demand, Yokota Airport would earn an estimated ¥140 billion in revenue for the surrounding region. It could also generate approximately 8,300 jobs.⁵⁵

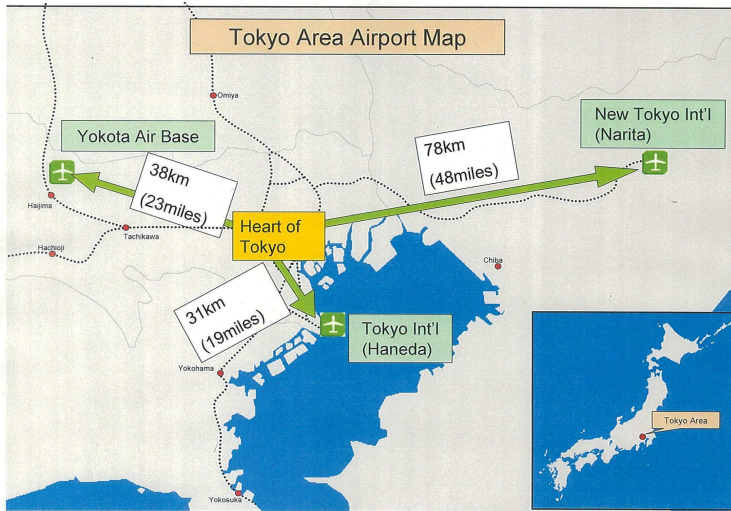
Geographic Convenience

Compared to Haneda and Narita, Yokota is much more conveniently located to central Tokyo. Where Haneda and Narita are forty-five- and eighty-minute rides, respectively, from Shinjuku Station in the heart of Tokyo, Haijima Station near Yokota is a twenty-eight-minute ride from Shinjuku.⁵⁶ Transportation to Yokota should also improve in the future with the construction of a planned Central Link Road and other direct transportation links that would run from the air base to other cities in the greater metropolitan region.

Were Yokota to open to commercial flights, it would find a ready market of passengers in the large populations of economically vibrant cities in the western part of the Tokyo metropolitan area (in the center of which Yokota lies), such as Hachioji and Tachikawa, whose residents must currently take as long as a one-and-a-half-hour train ride to get from western Tokyo to Haneda Airport south of Tokyo. Western Tokyo, home to a number of universities, research and development facilities, and various factories, is developing as a “Silicon Valley” of Japan. When construction currently underway of a road beltway around Tokyo is complete, the area will become even more appealing to

14 Civilian Advantages of Dual Use

high-tech business and research centers; these in turn are likely to spawn increased customer demand for commercial flights at Yokota.



Satisfying Unmet Air Traffic Demand

Haneda and Narita are already unable to satisfy demand for main domestic commuter routes such as Tokyo-Sapporo, Tokyo-Osaka, Tokyo-Fukuoka, and Tokyo-Naha. Neither is currently able to accommodate new international flights. More passengers are flying in and out per aircraft, but the two airports have long reached their limits in departure and arrival slots. Yokota could help ease the demand for international flights either by handling domestic flights that would otherwise prevent Haneda or Narita from receiving more international flights, or by eventually assuming its own international flights. Some thirty-six foreign nations' airlines would like access to Tokyo's airports, access that a dually used Yokota could help provide.⁵⁸ Increased contact with Southeast Asia and China, particularly in the business, tourism, and educational spheres, is likely to be the largest source of demand for more international flights in Japan. In 2004 alone, All Nippon Airways (ANA) plans to up its number of flights between China and Japan by 30 percent.⁵⁹ The increase is partially so large because of a massive decline in flights in 2003 due to the outbreak of severe acute respiratory syndrome, but it is also part of an overall upward trend. As Japan Airlines (JAL) president Isao Kaneko said, "In terms of population and economic growth China is the obvious growth market. . . . We can expect that demand between China and Japan is going to grow more and more."⁶⁰

Yokota might be especially well suited to meet the needs of small aircraft, such as corporate, charter, and private jets, which the already-

overcrowded Narita and Haneda currently refuse to accommodate. If the requisite customs, inspections, and quarantine facilities could be built, foreign businessmen in particular might find Yokota a convenient access point to Japan.

Low Cost

If demand for commercial airline flights continues to rise past 2007 and 2009, the projected completion dates for Narita's extended runway and Haneda's additional runway, sheer geographical constriction at those two airports will compel the Tokyo metropolitan region to look elsewhere for more flights. At the moment, two major proposals exist for handling such a contingency: (1) convert Yokota into a dual-use facility; and (2) build an airport above the water in Tokyo Bay. The latter option has many appealing points, including the elimination of noise pollution as a major problem, since the island airport would have no immediate neighbors and a short commuting time—as little as ten minutes via an underwater monorail to Shin-Kiba Station on the JR Keiyo Line, which heads straight into Tokyo Station. An airport in Tokyo Bay could also offer twice as many flights as Yokota (and more than twice as many commercial ones, presuming Yokota retained its military function) because it could have two runways. If the generous increase in the number of available flight slots that such a plan came with were excessive, however, then the high cost of building an entirely new airport out in the middle of a body of water would be prohibitive, and the alternative plan of simply opening the existing facilities at Yokota to commercial flights would be much more practical. In fact, the economic advantages of using the runway and airport structure that already exist at Yokota are probably the most appealing aspects of the dual-use proposal.

The ANA Group, Japan's second-largest airline group after JAL, ranks Yokota as its opportunity for expansion of greatest interest if excess demand persists beyond the completion of the current construction at Narita and Haneda. Yet it has said that it would only be interested in using Yokota in the future if the airport meets three conditions: (1) that the number of flights available at Yokota be competitive when compared to Haneda; (2) that the government purchase land at the base for terminal buildings and other airport facilities; and (3) that Yokota charge lower airport fees than Haneda in order to ensure the airport's competitive advantage.⁶¹ The first condition, with the cooperation of the U.S. Air Force, should not be too difficult to achieve, while the second condition is not without precedent. The third condition may be the most difficult to ensure of the three. Government aid with regard to the first condition, however, should help enable meeting the third condition.

Civilian Disadvantages of Dual Use

Greater Electronic Interference

When aircraft fly at high altitudes in the vicinity of Yokota, they disturb electromagnetic waves, distorting the image on residents' television sets. Tall buildings constructed at Yokota in 1973 and 1989 likewise spread the problem of poor transmission, although the state compensated by constructing a new television antenna and then running communication cables into houses that still had a reception problem. The state also pays about half the NHK (Japan Broadcasting Corporation) license fees for people living within a designated area near the base—including about 71 percent of Fussa city.⁶² The problem of electronic disturbance would only become more frequent, however, if commercial flights were introduced at Yokota.

Inadequate Ground Transportation

Transport currently available to and from Yokota is inadequate for a passenger airport. The time required for the average resident of Tokyo to reach Yokota from his or her home is an estimated fifty to sixty minutes, but from Tokyo Station, allowing time for transfers, the trip to Yokota can take two hours or more. If given the choice of which metropolitan airport to fly out of, only 9 percent of Tokyo's residents would likely prefer Yokota. Furthermore, the main road leading to Yokota from central Tokyo is only a single-lane road, lined with many houses. Expansion of this road would be difficult and costly.

Lack of Facilities

Commercial flights at Yokota would require the construction of costly new facilities, such as passenger and cargo terminals. International flights would also raise the need for customs, inspection, and quarantine (CIQ) procedures and their attendant facilities.

Inefficiencies in Airlines' Capital and Personnel Allocation

Commercial airlines have some level of concern about whether the business opportunities at Yokota would justify the diversion of their capital and personnel resources to establishing operations there. Commercial airlines would have to make major investments in terms of personnel and offices to have a presence at

18 *Civilian Disadvantages of Dual Use*

Yokota. Such an expansion of services would mean a diversion of capital away from their hubs. Only a substantial number of available flights would make such a move profitable, and at least until 2009, these airlines are much more likely to focus on the very sizeable opportunities unfolding at Haneda and Narita. As one executive of ANA said recently of the potential for his airline to set up operations at Yokota, “[There is] no scope for any consideration at this moment.”⁶³ A top executive from JAL has also said that his company has no interest in cargo operations at Yokota because JAL’s aircraft are belly loaded, and splitting its freighter cargo operations between airports is inefficient. This is not to say that other airlines would not be interested in cargo operations at Yokota (in fact, the U.S. carrier DHL has said that it might be interested in using Yokota⁶⁴), but only that Yokota may not be well suited to the aims of some of the larger airlines.

Possibility of Evictions

Whether to construct a new highway or a new hangar, the possibility of a new airport at Yokota displacing people from their homes looms large among some segments of the local population.

Higher Probability of Airplane Accidents

Residents living near Yokota have expressed concern about the increased risk of airplane accidents that would accompany the establishment of a busy airport in their midst. This concern encompasses fears of all types of aircraft accidents—from mechanical to human error. As it is, Akishima’s municipal government estimates that a piece of an aircraft falls on one of their resident’s roofs every two to three years.⁶⁵ With an air base already in their midst, the greatest danger to civilians near Yokota arising from dual use could be a higher risk of aircraft collision. The Ministry of Land, Infrastructure, and Transport reports that the Traffic Alert and Collision Avoidance System (TCAS) warns pilots of nearby aircraft about 500 times annually.⁶⁶ Of these warnings, about 10 percent—or fifty times—are warnings to civilian aircraft of military planes nearby.⁶⁷ A division between civilian and military air traffic control raises the risk of these warnings turning into collisions. Any implementation of dual use at Yokota would have to take security precautions to keep U.S. Air Force planes in training and on missions distant from civilian planes. As one Air Self-Defense Forces (ASDF) pilot put it, “SDF pilots are used to flying in formation during training, but civilian pilots are not used to having other aircraft nearby.”⁶⁸

With only one runway, a military aircraft accident or mechanical failure could halt civilian flights, while the converse also holds true, with a civilian aircraft accident or mechanical failure having the ability to halt military flights. Both scenarios have significant commercial and security ramifications. At Misawa Air Base, where the U.S. Air Force shares a single runway with Japan’s ASDF and commercial aircraft, crashes during military takeoffs and landings

have several times forced the temporary closure of the runway and cancellation of commercial flights.

Increased Noise Pollution

Noise pollution is a cause for concern around any airport or air base, and Yokota is no exception. Back in 1972, even with the implementation of noise abatement procedures, such as the establishment of the middle marker, the active transport movements of large transport aircraft such as the “Galaxy” C-5A intensified noise pollution at Yokota. Under these circumstances, from 1965 to 1973, the government relocated 570 households in a mass transfer from the Horimuki district, which was on the south side of the runway and directly under Yokota’s flight path.

In 1975, the 345th Tactical Airlift Squadron, equipped with C-130 “Hercules” transport aircraft, transferred to Yokota. The number of flight movements at Yokota, which up until that point had been gradually decreasing, began to increase, and on account of circling exercises and long wait times, the noise pollution spread to encompass a larger area. Under these circumstances, in April 1976 and November 1977, residents living near Yokota filed the first and second “Yokota Air Base Pollution Lawsuits,” requesting compensation for damages from noise pollution and a ban on U.S. military night flights. Residents complained that the noise from the aircraft’s jet engines disturbed them and in some cases awakened them from their sleep, while they had no say in when the flights could occur. In July 1982, while the first two lawsuits were still pending, family members of the second lawsuit group filed a third lawsuit at the Hachioji Branch of the Tokyo District Court.

In February 1993, upon appeal of the first and second lawsuits, Japan’s Supreme Court overruled the suspension of night flights, but approved retroactive compensation for damages. Then, in March 1994, the Tokyo High Court ruled on the third lawsuit, approving compensation for damages that occurred in the past, but denying residents’ requests for the suspension of night flights and for damages that might occur in the future. Meanwhile, in November 1993, the U.S.-Japan Joint Committee agreed to limit night flights at Yokota between 10 p.m. and 6 a.m.

The third lawsuit did not signal the end of all attempts to ban night flights, however. In 1996, residents filed the first lawsuit with the U.S. government as the defendant. The Tokyo District Court threw their case out, however, ruling in 2002 that the activities of foreign governments fell outside the jurisdiction of civil courts. Then, in 1999, about 600 residents of areas surrounding Yokota filed three lawsuits against the U.S. and Japanese governments, seeking approximately ¥6.2 billion from the U.S. and Japanese governments in compensation for noise pollution and an end to night flights at Yokota. In 2002, in Japan’s largest noise pollution lawsuit yet, the Hachioji court ordered the Japanese government to pay ¥2.4 billion in damages to 4,763

20 *Civilian Disadvantages of Dual Use*

residents of areas near Yokota, saying, “The noise has badly affected the living conditions and health of the residents, and the government’s sound insulation efforts have barely contributed to mitigating the problem.”⁶⁹ The 5,917 plaintiffs in that case had sought ¥12 billion—¥600,000–800,000 per person—in compensation for anguish and insomnia caused by noise pollution between 1996 and 1998. Then in 2003, a judge ruling in the Tokyo District Court ordered the Japanese government to pay about ¥160 million in noise pollution damages to 242 people, stating that the noise from the air base was above a tolerable level. The court defined that tolerable level as anything below 75 Weighted Equivalent Continuous Perceived Noise Level (WECPNL), which is the international environmental index for noise pollution from airplanes. The lesson that all these cases demonstrate is clear—those who cause noise pollution will pay. Accordingly, if dual use made operations at Yokota even noisier, the airport, or whoever the defendant ended up being, would likely have to compensate those for whom it caused suffering. It might choose to, or have to, relocate nearby residents as well.

The court, however, rejected other demands for compensation for future aircraft noise and for a moratorium on night and training flights over residential and business districts. It stated that compensating for future damages in the present would be unjust because it could not predict an appropriate amount of compensation or whether a complaint would even be valid; the court could also not order a stop to night flights because such a move would fall outside its jurisdiction. It also refused compensation to about one hundred people who commuted to the area for work, saying that they worked in solid buildings for the most part and only had to deal with the noise for brief periods of time. The plaintiffs announced their intention to appeal.

A liaison council formed by the five cities and one town in whose jurisdiction Yokota lies has petitioned its central government and the U.S. military more than 120 times to cancel flight training and other exercises, primarily because of noise pollution. The two most severely affected municipalities, Akishima city on the southern end of Yokota’s runway and Mizuho town on the northern end, estimate that about 40 percent and 90 percent of their populations, respectively (out of a total population of 110,816 and 34,599, respectively), suffer from acute noise pollution.⁷⁰ One local anti-noise pollution group with a membership of about 6,000 has called Ishihara’s plan for dual use “unrealistic and reckless” and said that were it to go into effect, more than 200,000 residents would need soundproof glass installed in their homes.⁷¹



Yokota Air Base and Surrounding Communities⁷²

In January 1983, the U.S. Navy's aircraft carrier *Midway*, homeported at Yokosuka Naval Base, began conducting night-landing practices (NLP) at Yokota. Each subsequent U.S. aircraft carrier homeported at Yokosuka—the U.S.S. *Independence* starting in September 1991 and the U.S.S. *Kittyhawk* starting in August 1998—has likewise conducted NLPs at Yokota, although only infrequently due to public complaints.

On the one hand, if dual use for Yokota meant adhering to the restrictions on noise pollution that currently apply to commercial airports, Yokota could witness a decline in nighttime flights and a decline in noise pollution overall. On the other hand, if busy commercial traffic during the day made military flights at night—which remained under exemption from noise pollution regulations—more desirable, Yokota could see an upswing in not only daytime flights but also nighttime flights, with a commensurate increase in noise pollution. The aforementioned 6,000-member strong anti-noise pollution groups believe a dually used Yokota would see its number of flights multiply by a factor of ten to 120,000 flights per year—300 per day—or even as high as 135,000.⁷³

Mizuho and Akishima, which fall at either end of Yokota's runway and thus directly beneath flight paths, are most strident in their opposition to dual use for Yokota. In May 1999, Mizuho's town assembly voted unanimously for a resolution to support reversion of Yokota to Japan but "to absolutely oppose a joint-use airport plan."⁷⁴ Mizuho's then-mayor, Hisashi Sekiya, spoke out that November in objection to dual use for Yokota, saying, "We can't accept it. If U.S. military aircraft flies at a low altitude 8 to 16 times a day, the local residents will be troubled by their low-level flights and noise at all times. . . . The townspeople have long been afflicted since the military's requisitioning of the airfield in 1939."⁷⁵ Similarly, Joichi Kitagawa, the mayor of Akishima City, stated, "I asked for consideration for people living right under the flight course. There will be an increase in the frequency of flights. So, I can't believe that the effects of noise would not go beyond the current level."⁷⁶ A few months earlier,

22 *Civilian Disadvantages of Dual Use*

in June, he had said, “On the part of a local government that has been suffering from base noises for many years, we cannot accept a joint-use plan.”⁷⁷

In 1999, around the time that Ishihara was first raising the issue of dual use, Kotaro Shishida, the mayor of Musashi Murayama, a city whose officials have shown interest in potential economic gain from a dual-use arrangement at Yokota, stated, “[A joint-use plan] is worth considering if noise levels stay the same.”⁷⁸ This requirement might in fact be attainable because commercial aircraft are generally quieter than military aircraft. The only problem is that the volume of aircraft would be much higher, possibly canceling out any gains from quieter aircraft with losses from frequency of aircraft.

One comparison worth making to Yokota on noise pollution is the jointly used Japanese Self-Defense Forces’ and U.S. Navy’s Air Base/Facility, located southwest of Tokyo in the suburbs of a second city, Yokohama. Aircraft originating from Atsugi fly over a densely packed population of more than one and a half million, three times Yokota’s local population, and created the greatest amount of noise pollution of any airfield in Japan in 1999 and 2000.⁷⁹

On noise pollution in the long term, one question to ask when considering a dual-use plan for Yokota is whether any improvements in noise-control technology could eliminate this major source of disquiet with a dual-use plan. In fact, noise-control technology has come a long way since the 1950s, when airplanes used turbojet engines. A switch to the first-generation turbofan in the 1960s and then to the second-generation turbofan in the 1970s, coupled with steady refinements along the way, have reduced noise pollution by about twenty decibels (an amount that translates into a reduction in noise of 75 percent for the human ear).⁸⁰ A number of governmental and nongovernmental research programs worldwide are endeavoring to reduce the noise pollution of airplanes still further. It is, of course, not a simple science, since improvements in noise control tend to occur in a tradeoff with increased weight, emissions, and maintenance; lower performance; and higher acquisition and operating costs. Even though the trend for noise pollution is one of a steady decline, no technological breakthroughs are imminent, and even if they were, adaptation to different aircraft, production, and outfitting takes time as well. Thus noise-control technology is a factor for long-term consideration regarding dual use for Yokota.

Military Advantages and Disadvantages of Dual Use

Effects of a Changing U.S. Global Defense Posture

The Department of Defense is currently conducting a major review of the U.S. global defense posture, in conjunction with allies, of all U.S. deployments abroad. It is attempting to move U.S. forces away from a structure that they maintained fairly consistently throughout the Cold War and reorganize them into a defense fit for security demands of the twenty-first century. As outlined in the September 2002 National Security Strategy, the U.S. military's goals are to: "assure our allies and friends; dissuade future military competition; deter threats against U.S. interests, allies, and friends; and decisively defeat any adversary if deterrence fails."⁸¹ In order to meet these goals, the Defense Department's global posture review emphasizes five policies: "develop flexibility to contend with uncertainty; expand allied roles, build new partnerships; focus within and across regions; develop rapidly deployable capabilities; focus on capabilities, not numbers."⁸² The increased need since September 11 for U.S. troops in other parts of the world, such as Afghanistan and Iraq, coupled with the improved technological and logistical capability of the United States to move larger numbers of troops quickly over vast distances, have heightened expectations for a major reorganization of U.S. troop deployments abroad. As U.S. Undersecretary of Defense for Policy Douglas Feith famously said in June 2003, "Everything is going to move everywhere."⁸³

The U.S. government has not yet issued any official proposal for its defense transformation in Japan, but media reports have suggested some probable changes. Among the more notable, *The Washington Post* indicates that 15,000 U.S. troops will relocate out of Japan and South Korea.⁸⁴ Guam will assume a more prominent role in U.S. military strategy with a buildup of personnel and aircraft.⁸⁵ Guam or Hawaii could also see the acquisition of an additional aircraft carrier group.⁸⁶ Sources from both the U.S. and Japanese governments have also acknowledged discussion at a U.S.-Japan working-level meeting in November 2003 on transferring the headquarters of U.S. Forces Japan away from Yokota. Unless this proposal indicates a general desire on the U.S. government's side to depart from Yokota, one would not expect such a mostly administrative move to have a major impact on the debate about dual use

24 *Military Advantages and Disadvantages of Dual Use*

for Yokota. Some emptying out of the base by military personnel would, however, create more space for commercial enterprises to move in.

Strategic Need for Yokota

Yokota is one of four facilities on Honshu where aircraft from U.S. carriers practice 80.4 percent of their night-landing practice (NLP) drills (the other three being Atsugi Naval Air Facility, Iwakuni Marine Corps Air Station, and Misawa Air Base). The first NLP drill at Yokota took place in 1983; since then, they have occurred several times a year there. Residents living near the bases where NLP drills are conducted have reacted angrily to the conduct of these drills. In fact, the Japanese government gave the U.S. Navy a \$15.3 million facility on Iwo Jima in 1993 to try to move the drills off of the main island. A spokesman for the commander of naval forces in Japan says conducting all NLP drills on Iwo Jima is impossible, however, because of the difficulty of transporting personnel and equipment to the distant island. This issue, and this need for Yokota, thus remains unresolved. Yokota is also conveniently placed as a transportation hub for medical supplies, equipment, personnel, and wounded in the case of a natural disaster, such as an earthquake.



Runway at Yokota⁸⁷

Yokota is one of seven U.S. bases in Japan that are also UN Command installations. The bases are legacies of the Korean War, and the UN Command in Korea can order their use to support UN forces in Korea in the event of renewed hostilities, without consulting the Japanese government. A

number of countries of the original UN Command also have open access to these facilities, a right that they occasionally exercise. This arrangement is significant, on the one hand, as it has the potential to complicate, if not obstruct, any changes in Yokota's status as a purely military facility. On the other hand, reports in the last few years have also indicated the possible dismantling of UN Command for South Korea altogether.

The U.S. military may also find retention of the sole use of Yokota for as long as possible appealing as a safety measure, in case political pressure builds in volatile Okinawa for the removal of U.S. facilities. In that case, if the United States still held Yokota, it might be able to transfer some roles and responsibilities to Yokota from Okinawa. In the last decade or so, the major issues that have incited support for the U.S. military's departure from Okinawa have been accidents and incidents, such as the rape of a schoolgirl by three U.S. servicemen in 1995. Now, however, a major push for U.S. departure may be emerging from the United States' increased military activity in the new world order. Kadena Air Base in Okinawa, for example, saw the level of noise pollution and the number of nighttime flights increase fourfold after the start of Operation Enduring Freedom in Afghanistan in 2001.⁸⁸ One resident commented on the situation: "We can't even open our windows at night."⁸⁹

The main security concerns in Japan and at Yokota, however, remain North Korea and the Taiwan Straits. Illustrating this, in February 2003, the U.S. Air Force conducted a large drill using a C-130 aircraft to evacuate twenty soldiers from South Korea, acting as injured civilians, to Yokota. In February 2004, 2,400 U.S. troops and Japanese SDF took part in a computerized war game in which North Korean ballistic missiles hit Japan. As long as major threats to stability persist in the northeast Asian region, the U.S. military may find relinquishing some of its control over Yokota unappealing; it may even wish to hold out on any further transfer of airspace to Japan as well—perhaps as long as the current North Korean nuclear crisis remains unresolved. Also, in the long term, should the two Koreas unify and the Koreans ask the United States to close down some, if not all, of its military installations on the Korean peninsula, all U.S. bases in Japan would become that much more valuable.

In the final analysis, Yokota is in an extremely convenient location for the U.S. military—close to Tokyo for easy consultation, and centrally located relative to all of Japan and regional trouble spots, allowing for easy transportation of materiel and personnel to different bases in Japan and elsewhere in Asia. It is also only an hour away from U.S. Army headquarters in Camp Zama, and two to four hours away from U.S. Navy headquarters at Yokosuka Naval Base, depending on density of traffic and mode of transportation. As a victor, the U.S. military acquired Yokota at the end of a world war. It knows that it probably cannot find another air base that would suit its needs as Yokota does, and opening a new air base elsewhere in Japan or in

26 *Military Advantages and Disadvantages of Dual Use*

many other countries is a virtual impossibility. Once the U.S. military leaves Yokota, it will likely have left Yokota for good; this fact does not escape it.

When members of Congress and other high-ranking government officials fly to Japan on government planes, they currently fly into Yokota. Not infrequently, a top government official's airplane may land at Yokota en route to a different final destination in Asia and be greeted by the U.S. ambassador to Japan or other U.S. or Japanese government officials. The convenience of having this air base inside Tokyo, where U.S. government officials can almost casually stop by for a face-to-face conversation with others in Japan, is not of inconsequential value to U.S.-Japanese relations; if possible, the two governments should try to retain this arrangement.

Advantages of Dual Use

The U.S. military strives to do all it can to mitigate the Japanese public's dissatisfaction with its bases and operations in their country. Thus, if dual use offers a possibility of increasing public support for the U.S.-Japan Alliance, the U.S. government will likely consider it. In the case of dual use for Yokota, the U.S. Air Force stands to gain in the public's eyes in two ways: (1) Residents in and around Tokyo may find the opening of a new, potentially more convenient airport in their midst fairly appealing; and (2) people will no longer automatically be able to blame the U.S. Air Force for any loud aircraft that flies by near Yokota—their own airlines or SDF may be the culprit. The United States' poor track record of holding onto bases in foreign capitals suggests that a lower profile at Yokota could be useful. Nations typically dislike having foreign military bases near their capitals. The land is usually valuable and in a congested area; airspace tends to be congested too. Considering the closures of a number of U.S. bases in close proximity to foreign capitals, including Hellenikon Air Base in Greece, Torrejon Air Base in Spain, Clark Air Base in the Philippines, and most recently, Yongsan Air Base in South Korea, the U.S. military might be wise to compromise on Yokota's use now in order to preserve its use—in at least some form—in the future.

Disadvantages of Dual Use

In 1999, U.S. ambassador to Japan Thomas Foley declared Yokota to be of "critical importance" to the U.S. military's efforts to fulfill its "obligations under the U.S.-Japan Mutual Security Treaty."⁹⁰ The most serious obstacle to any plan for converting Yokota to a dual-use facility is a strategic one—could Yokota host commercial flights while still maintaining its readiness edge and its capacity to operate at maximum effectiveness and efficiency in an emergency situation? Should an emergency or war break out in an area closer to Japan, would Yokota be able to handle the increased military load? Would a switch to wartime footing and the halting of commercial flights to and from Yokota be easily attainable? The second-greatest difficulty in implementing dual use at Yokota may be an operational one. Commercial flights operating out of Yokota

would have to conform to military security regulations that were rigorous prior to September 11, 2001, and have only become more rigorous since.

Yokota is the U.S. military's only transportation base on Japan's main islands and one of two total transportation bases in Japan, the other being Kadena Air Base on Okinawa. Where any agreement on dual use for Yokota would be concerned, the U.S. military's primary concern would be maintaining maximum flexibility and surplus capacity to handle extra demand in time of an emergency. During the Vietnam War, Yokota's runway use did reach maximum capacity. During the most recent Gulf War, even though the United States was participating in a war halfway around the world, its use of Yokota increased. When considering dual use for Yokota, U.S. military planners must necessarily consider how crises—for example, in the Taiwan Straits or between the two Koreas—could increase demand for military flights at Yokota, and how the Air Force could meet that demand. One way to resolve this issue would be for the U.S. military to set up a precondition for access to Yokota requiring commercial users to agree to diminish or cease operations at the U.S. military's request in the event of an emergency. The U.S. and Japanese governments might also agree that only their nations' airlines could fly into and out of Yokota; such a move could allay some of the more serious security concerns.

In addition to the land the U.S. Air Force holds at Yokota, it also controls airspace surrounding the base up to an altitude of 7,000 meters.⁹¹ This constitutes the largest military-controlled airspace in Japan. Planes must have the permission of U.S. military aviation officers to fly in this area. In 1992, the United States returned control of the airspace above 7,000 meters to Japan, but commercial flights still avoid flying in the area, rendering the 1992 agreement in practice moot. Yokota's radar approach control (RAPCON), under the 374th Operations Support Squadron, is responsible for the safe transit of more than 100,000 military, commercial, and private flights annually from seven different airports and air bases in the Tokyo area, through 8,575 miles of airspace in western Tokyo and across eight prefectures: Gunma, Kanagawa, Nagano, Niigata, Saitama, Shizuoka, Tochigi, and Yamanashi.⁹² The seven airfields are the U.S. Air Force's Yokota Air Base; the United States' and Japan's Atsugi Naval Air Station; the Japanese Self-Defense Forces' Iruma Air Base, Tachikawa Army Airfield, and Kastner Army Airfield; and the Chofu and Honda commercial airports.

“America’s airspace rests in the middle of Japan. It would be much easier for us to fly if the Yokota Air Base were not located there.”⁹³ This statement by a pilot of a major Japanese airline company reflects the increasingly popular sentiment in Japan that the U.S. Air Force at Yokota controls too much of a critical section of Japan’s airspace. Although the U.S. government at present is not discussing total retrocession of Yokota to Japan, dual use and, in particular, the opening of Yokota’s airspace to commercial flights—which would have to accompany any such a change—is an attractive prospect for many airline companies. Yokota’s RAPCON area is the largest piece of airspace in Japan controlled by a U.S. or Japanese defense organization. Airline companies are interested in Yokota’s airspace for one main reason—to open up new flight paths in order to cut down on flight time and decrease the risk of collisions. ANA, for example, refers to access to Yokota’s airspace as “critical.”⁹⁴

In 2001, Captain William Smith, chief of airspace management for the 605th Air Operations Squadron, said about Yokota’s RAPCON, “In those areas defined as U.S. Forces radar approach control, we provide a public service. We do not prevent access into our area by commercial flights.”⁹⁵ Indeed, Japanese

commercial aircraft enter Yokota's RAPCON every day. In the last quarter of 2000 alone, for example, the U.S. Air Force provided air traffic control service to more than 7,000 general aviation, civilian, and commercial aircraft.⁹⁶ Yet the fact remains that most civilian aircraft detour around the 8,575 square miles of airspace in Yokota's RAPCON. Most fly over Tokyo Bay in order to avoid the hassle of passing through the base's airspace, adding to their flight times in the process. This increased flight time not only inconveniences passengers, but also costs both the airlines, in terms of extra fuel needed, and the environment, in terms of greater carbon dioxide emissions from that fuel's consumption.

The restrictions that the avoidance of Yokota's airspace places on airlines also bring with them a greater risk of collision on already-crowded flight paths. The Yokota RAPCON is one of the most complicated in the Pacific region. Air controllers at Yokota must coordinate with other airfields, controlling sequences for arrivals, departures, and overflights. To meet this task and maintain radar separation between aircraft within their RAPCON, they must use vectoring procedures and assign aircraft to different altitudes, all while following Federal Aviation Administration as well as international aviation regulations. RAPCON controllers at Yokota must also deal with language difficulties. As Tech Sergeant Regina Jefferson of the 374th Operations Support Squadron described it, "Sometimes language can be a problem too. Although English is the universal language for pilots, there are times when the controllers have to repeat what they're saying to them more than a couple times to be understood. This can add to the problem when there's a 'sky full of planes' waiting for instructions."⁹⁷

Investigators from Japan's Ministry of Land, Infrastructure, and Transportation have expressed concern in the past that flight sectors with high volumes of traffic may have put excessive pressure on air traffic controllers and led to accidents. According to a survey conducted by the Ministry of Land, Infrastructure, and Transportation's Labor Union, 350 of 1,527 air traffic controllers reported experiencing "near misses" or something similar in 1998.⁹⁸ When asked to give a cause, thirty-four controllers cited "military airspace."⁹⁹ In January 2001, two Japan Airlines airplanes nearly hit each other in an accident that some have attributed to the restricted ability of airlines to establish new air routes and overcrowding on routes that already exist, in order to avoid the Yokota Approach Control Area. The problem of overcrowded airspace can be expected to increase in line with the projected increase in demand on airlines, especially with regard to flights toward the Asian mainland and Southeast Asia. New Traffic Alert and Collision Avoidance Systems (TCASs) will be implemented from November 2003 to February 2004 and are expected to reduce the risk of collision in the future, but they address the symptoms of overcrowded flight paths rather than the density of the flight path itself.

The motion for opening up some of the airspace under Yokota's RAPCON to commercial aircraft has a large constituency in Japan, encompassing airline companies, pilots, and flight controllers. In contrast to the opposition of vocal Japanese citizen groups and neighborhood groups to opening

Yokota Air Base to commercial flights, the only group that appears opposed to opening Yokota airspace to commercial flights is the U.S. military. Japan may be the only country in the world to surrender part of the airspace over its capital city to a foreign power. Many citizens and politicians alike would like to change this. Whether U.S. Forces Japan could enact such a change without altering or impairing its regular flights and training is another question. Yokota's RAPCON extends to Camp Zama, headquarters of the U.S. Army in Japan, and to other U.S. facilities, as well as to Atsugi Naval Air Station. At Atsugi, approximately 30,000 flights take off per year, adding to the traffic in Yokota's RAPCON.¹⁰⁰ The two other installations in Japan where the U.S. military controls the airspace are Iwakuni Marine Air Corps Station in Honshu and Kadena Air Base in Okinawa, where the RAPCON is the busiest in the U.S. Pacific Air Force and the fourth busiest in all of Japan. Kadena's controllers handle traffic numbering more than 170,000 flights per year, coming and going from Kadena Air Base, Futenma Marine Corps Air Station, Naha International Airport, and two smaller airports.¹⁰¹ At Misawa Air Base in northern Honshu, Japan's Air Self-Defense Forces manage air traffic control.

Freeing up the use of the airspace under Yokota's RAPCON to commercial flights holds several concrete advantages for the airline industries. First, flights departing westward from Japan and coming eastward into Japan would see their flight times reduced by about eight minutes.¹⁰² The airline industry would save more than \$40 million annually in fuel cost alone.¹⁰³ Annual carbon dioxide emissions would also decrease by more than 10 percent, or 200,000 tons.¹⁰⁴ Second, commercial airlines could increase and better diversify their flight paths considerably if more airspace became available to them. Haneda, for example, currently handles about 250,000 flights per year. With the opening of its new runway in 2009, that number is likely to increase to about 410,000.¹⁰⁵ If more airspace became available to Haneda, the creation of many new arrival and departure routes could increase that number yet further and turn Haneda into a major hub airport. Third, more airspace could help airlines greatly to keep better on schedule. At Haneda, which is particularly congested, with one departure every two minutes on average, planes frequently spend ten to fifteen minutes circling the airport before landing. Finally, greater room for maneuver would diminish the risk of collisions on overcrowded flight paths.

For the United States, relinquishing part or all of Yokota's RAPCON would help its own domestic carriers at Narita by easing some of the flight-path congestion above Tokyo and improving timeliness, productivity, and customer satisfaction. The United States might also be able to put on a more environmentally friendly face by highlighting the savings in carbon dioxide emissions, and thus regain some of the good will of the Japanese people that it lost by rejecting the Kyoto Protocol. Any reorganization of Tokyo-area control zones seems unlikely to occur without the return of at least part of Yokota's

32 *Airspace*

airspace to Japan. The United States has already expressed a willingness to relinquish part of Yokota's RAPCON upon completion of the fourth runway at Haneda, in order to make that runway practicable.

Alternative Outcomes and Conversion Requirements

Joint Use with Japan's Air Self-Defense Forces Instead

The current arrangement of SDF within Japan dates back to the end of World War II and fifty years of the Cold War, when the greatest perceived threat to Japan's security came from the Soviet Union to its north. According to Japan's Defense Agency, 42 percent of land occupied by SDF bases and facilities lies in Hokkaido.¹⁰⁶ As late as 1995, at the time of the issuing of Japan's most recent National Defense Program Outline (NDPO), the main focus of Japan's Defense Agency was Russia. Japan's next NDPO, due out this summer, however, is expected to shift the focus to threats to Japan from the west and south. The logical next step would be to move some SDF southward from Hokkaido to Japan's other islands. Given the limited land mass on Japan's other islands available to such movements, if serious discussion over dual use for Yokota continues, Japan's Air Self-Defense Forces (ASDF) may well put in a bid for becoming the "dual" part of Yokota's equation, pushing commercial aircraft out of the running. Japan's Defense Agency is also interested in acquiring more transport aircraft in the future, and Yokota's position as a transport hub for the U.S. Air Force would make it a logical base for Japanese transport aircraft as well. Adding to the ASDF's chances for success, the U.S. military would probably favor sharing a runway with ASDF over sharing with commercial aircraft, for at least two simple reasons. First, U.S. military and Japanese SDF planes have experience jointly using several other air bases in Japan. Security procedures for the two are pretty similar, so coordination would be easier than with commercial aircraft. Second, joint use between the U.S. Air Force and Japan's ASDF could only enhance the two organization's interoperability.

Larger Aircrafts Instead of More Runways

Greater use of large aircraft could satisfy some of the excess demand in the Tokyo metropolitan region without requiring an increase in the number of the region's runways. In fact, Boeing predicted a decrease in the percentage of freighters in the total airplane fleet worldwide from 12 to 10 percent by 2021, because of an increase in the size of the average freighter.¹⁰⁷ Airbus is currently building the A380 super jumbo jet, a double-decker plane that will be the

world's largest airliner, with room for 555 passengers and the most tonnage capacity of any aircraft. It has already received orders for 129 A380s from eleven airlines, with the first plane scheduled for delivery in 2006.¹⁰⁸ Nevertheless, Boeing's cancellation of its plans for a new, larger version of its 416 to 524-seat 747 in 2001, as well as All Nippon Airway's recent order for fifty of Boeing's new 7E7 midsize planes (and the lack of orders for the A380 thus far by Japan's two major carriers), challenge the likelihood in the short term of an increased size of aircraft balancing out the need for more runways.¹⁰⁹

Outright Retrocession

With all the changes in U.S. deployment occurring in the world today, one cannot easily rule out the possibility of the United States ceding full control of Yokota back to the Japanese government. In that event, Yokota could become an all-civilian airport, or it could transform into something altogether non-aviation related as many of its neighbors would like. One suggested plan calls for turning Yokota into the "Central Park" of Tokyo. Other ideas include business or housing development. The latter is of course of questionable value, however, given Japan's declining population, even with Yokota's proximity to Tokyo. Regardless, those who favor outright retrocession of Yokota are confident that the base's land can find an alternate purpose. As evidence, they point to the closure of a nearby Nissan factory in whose wake a religious sect and hospital took their places. They also point out that no other country in the world has a military base in its capital; Tokyo has eight.

Some local municipalities may not want to see outright retrocession of the base, however, because of local residents employed on the base (1,927 of them as of the end of 2002¹¹⁰), revenue from purchases by service personnel and their families near the base, and perhaps most of all, subsidies from the central government for the base's presence. Of the six municipalities that host Yokota, only Musashimurayama and Tachikawa have officially expressed a desire for the base's retrocession. Akishima, Fussa, Hamura, and Mizuho have not.

The United States is also unlikely to look with favor on outright retrocession, as relocating the airport elsewhere in Japan seems a near-impossible task. Its military has been at Yokota for fifty years now, and it is not so easy just to pick up and leave. Having a military-only base in Tokyo is useful for a variety of strategic and security reasons. Outright retrocession only begins to take on an aura of possibility when one imagines a world that has seen resolution of the tensions on the Korean peninsula and in the Taiwan Straits. In that case, Yokota could go straight from being a purely U.S. military facility to a purely Japanese commercial facility, or to some other purpose altogether.

Examples of Dual Use

Conversion of a U.S. air base to a dual-use civilian-military facility is not without precedent. Indeed, examples of domestic conversions abound (Hickam Air Base in Honolulu being the most prominent), while three have occurred

abroad, at Kunsan Air Base in Korea, Misawa Air Base in Japan, and Rhein-Main Air Base in Germany.

Kunsan Air Base and Kunsan Airport in Korea share a runway, but little else in terms of buildings and facilities. Misawa Air Base in Aomori Prefecture has been a dual-use facility for about eighteen years. In fact, one could say that Misawa Air Base is a triple-use facility, since it is host not only to U.S. military forces—including an Air Force fighter squadron and the Navy's Patrol Wing One—and commercial flights, but also to the northern regional headquarters for the Japanese Air Self-Defense Force. About a dozen commercial flights take off or land daily at Misawa, and more than 1,000 flights take off and land on its runway annually. Security precautions are in place for all organizations using the runway. The U.S. Air Force, Japan Air System, Japan Air Self-Defense Force, and Naval Air share the use of the runway. Japan's Air Self-Defense Forces control the airspace. The air base and the local community have worked together to maintain safety and security, and make this arrangement possible. When Misawa Air Base turned into a dual-use facility, the Japanese government bought land near the base on which the airlines could build terminals. A similar arrangement would make operations at Yokota more appealing to commercial airlines.

The U.S. military is scheduled to return Rhein-Main Air Base in Frankfurt to Germany in 2005 after a partial return of land in 1993, all as part of the military's downsizing since the end of the Cold War. Nevertheless, its experience in conversion to a dual-use facility is still instructive. Rhein-Main Air Base sits on 380 acres of land to the south of Frankfurt Airport. The airport and the air base share runways and taxiways. Frankfurt Airport hopes to turn part of the air base into a new terminal and use the rest of the land for handling cargo, parking aircraft, and other facilities. Rhein-Main played a big role in recent conflicts involving the United States, with troops using it during the first Gulf War, in aid flights to Bosnia, and during NATO's bombing campaign over Yugoslavia.

Conversion Requirements

Converting Yokota to a dual-use facility could take years, depending on the scale of commercial activity envisioned. The process involved would require planning and environmental studies, as well as consultations with local communities. Litigation is a distinct possibility. Civilian airplanes and airlines flying into Yokota would have to learn and adapt to the U.S. military's security regulations. Any airlines with regularly scheduled flights transiting Yokota would need to accept and be prepared to handle sudden disruptions to their service, should unforeseen military contingencies arise. This would include creating a set of rules or guidelines for emergency situations in cooperation with the U.S. Air Force.

36 *Alternative Outcomes and Conversion Requirements*

The construction and maintenance of passenger and cargo terminals, as well as other facilities, at Yokota would require huge sums of money. The government or the airport may also need to purchase extra land for new buildings. Use of Yokota for international flights would necessitate the construction of customs, inspection, and quarantine (CIQ) facilities. When considering the salaries of government and other personnel such a move would require paying for, any transition to hosting international flights at an airport with one runway that is already hosting military flights might be uneconomical and unnecessary. A better solution might be to increase the number of international flights at Haneda Airport and transfer some of Haneda's domestic routes to Yokota.

Gatwick Airport outside of London, the single-runway and sixth-busiest international airport in the world (cited earlier in this report), is separated by twenty-eight miles from its country's capital city—five miles further than Yokota—but an extensive array of rail, bus services, and other public transportation links makes it convenient to the 87 percent of its passengers who come from London and southeast England.¹¹¹ Any addition of commercial flights to Yokota's flight schedule would necessitate substantial improvements and additions to the existing transportation infrastructure around Yokota, including new roads and railway lines. Some proposals have called for extending a monorail around the air base; others suggest running a subway line into the base. Any visit to Yokota will make readily apparent the huge hurdles Yokota's commercial development faces in the ground transportation arena—the roads around Yokota are congested, and the train system servicing the base is inadequate and inconvenient. Enabling Yokota, as a commercial airport, to accommodate anything greater than charter flights will demand substantial investment by the Japanese central and local governments.

If the U.S. and Japanese governments pursue dual use for Yokota, they may well wish to consider transferring some military operations, where possible, from Yokota to elsewhere inside or outside Japan. The ability of today's aircraft to refuel midair and fly great distances makes this a much more viable possibility today than it was just a few years ago. Such a move could ease the flow of commercial and military flights into and out of Yokota. As part of this, or in addition, if the U.S. and Japanese governments work together to introduce commercial flights into Yokota, they may find that one of the best ways of ameliorating the local public's concern about noise pollution is to move some of the louder military aircraft to a different base inside or outside Japan. The thirteen C-130Es stationed at Yokota would be the obvious target for such a move. Any plan to increase the number of incoming and outgoing flights at Yokota should also consider apportioning some amount of money to the cost of relocating those residents most directly affected by aircraft noise pollution, who express a willingness to move.

The U.S. government should strongly consider the reversion of some greater portion of Yokota's RAPCON to Japanese hands. Airline industry voices in Japan are near unanimous on the detrimental effect that U.S. control of such critically located airspace has on their businesses—from lost time due to detouring around Yokota's airspace, to lost money spent on fuel, to safety issues due to overcrowded flight paths. Relinquishing part of Yokota's airspace would quiet some of the sentiment against a U.S. air base being in Tokyo at all.

Beyond the issue of airspace control, discussion of what, if any, change might be best at Yokota becomes more complicated. Almost anybody will admit that Yokota is underutilized. Yet, as a senior official in the U.S. government puts it, "Military facilities are useless unless they have excess capacity for use in wartime."¹¹² Considering lingering significant threats to security in northeast Asia, plus new sources of instability in southeast Asia, the most practical arrangement at Yokota may be joint use between the U.S. Air Force and Japan's SDF. A secondary option may be a gradual ramping up of commercial operations as a dual-use facility. The Ministry of Land, Transportation, and Infrastructure should closely watch trends in cargo and passenger flight demands and plan accordingly. If the trend is a skyrocketing one, a new, wholly civilian airport in Tokyo Bay with two runways may be the most favorable option for expanding flight capacity. If the trend is a steady, but not meteoric, rise in flight demand, opening Yokota to commercial flights may be a much more economic and appealing option. In this latter and perhaps more-likely case, the first step could be opening Yokota to charter planes or private jets flying domestically, the second to domestic cargo flights, the third to domestic passenger flights, and the last to international passenger and cargo flights. In this way, the airport could methodically ramp up its operations and only build terminal buildings and CIQ facilities as they became necessary. The best commercial course for Yokota might be to become the type of airport to Tokyo that the suburban Westchester County Airport is to New York City—a smaller domestic airport catering to private jets and charter and commuter flights. An alternative, much busier vision, in the case of continued excessive demand for flights, would be to become the Gatwick Airport of Tokyo.

Of course, a dual-use outcome can only be achieved if it does not come at the expense of Japan's security or stability in northeast Asia. In his meeting

38 *Conclusion*

with President Bush on May 23, 2003, Prime Minister Koizumi said that a study was worth conducting to see if greater use could be made of Yokota, given its proximity to Tokyo. At the same time, he acknowledged the key role that Yokota plays for U.S. forces in Japan. He said that great care should accompany any changes that might occur at Yokota to avoid impairing the response readiness and capability of the U.S. military. Given serious, unresolved security issues in northeast Asia, coupled with the extension of one runway and the introduction of another at Tokyo's regional airports in 2007 and 2009, respectively, any conversion to military-civilian dual use at Yokota should proceed slowly until at least the earlier of those two dates.

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