

JBIC ODA Loan Project Mid-Term Review 2006

Evaluator: Yasuhisa Kuroda (OPMAC)

Time of Mid-Term Review Field Survey: March 2007

Project Title: Vietnam “Tan Son Nhat International Airport Terminal Construction Project” (L/A No. VNIX-2)

[Loan Outline]

Loan Amount / Contract Approved Amount / Disbursed Amount: 22,768 million yen / 22,053 million yen / 15,303 million yen (as of the end of March 2007)

Loan Agreement: March 2002 (5 years after L/A signing)

Project Completion Date: June 2007

Loan Expiry Date: July 2008

Executing Agency: Civil Aviation Administration of Vietnam (CAAV)

Operation and Maintenance Agency: Southern Airport Authority (SAA)

Selection Criteria for Mid-Term Review: Special Yen Loan

[Project Objective]

The objective of this project is to meet the increased passenger demand at Tan Son Nhat International Airport, which has the largest passenger volume of all the airports in Vietnam, by building a new terminal for international passengers and related facilities, thereby improving the convenience and efficiency of airport services, which in turn will contribute to the sustainable socio-economic development of not only Ho Chi Minh City but also Vietnam as a whole.

Consultant: Japan Airport Consultants Inc.

Contractors: J/V comprised of KAJIMA CORPORATION, TAISEI CORPORATION, OBAYASHI CORPORATION, MAEDA CORPORATION

[Mid-Term Review Result]

Item	Ex-ante Evaluation (at the time of appraisal) (July 2001)	Result of mid-term review and ex-post evaluation results as estimated at the time of mid-term review
Relevance (1) National policy level	(1) National policy level In the “Socio-economic Development Strategy” the Communist Party adopted at its 2001 convention, the Government of Vietnam set its goal of doubling the GDP by 2010 and joining the ranks of industrializing countries by 2020. Since the expansion of exchanges with foreign countries and foreign trade is indispensable for reaching these goals, the	(1) National policy level On a national policy level, the transportation sector continued to be regarded as an important sector. During the five year period from 2000 to 2005, it was confirmed that 27% of the national budget went into transportation and communications sectors. In the Five-Year Socio-economic Development Plan (2006–2010), the government

<p>(2) Policy level</p>	<p>government regards building the country’s transportation infrastructure including its aviation and airport sector as an important policy.</p> <p>(2) Policy level</p> <p>In Vietnam, from 1994 to 2001, air transport volume increased by an annual average of 11.9% for passengers and 16.7% for freight against a background of economic growth and increases in exports and foreign investment that have accompanied the transition to a market economy. While demand for air transport volume is expected to increase further as a result of economic growth, most airports are aging, including the three major airports: Tan Son Nhat International Airport, Noi Bai International Airport, and Da Nang International Airport. The Basic Plan for the Creation of an Airport System approved in 1997 points out specifically that the said three major airports will be developed as hub airports. Ho Chi Minh City, the location of this project, boasts the largest population in Vietnam (5 million) and accounts for about 20 percent of its GDP. The city is the economic center of Vietnam, and about 30 percent of direct foreign investment is made in the neighboring suburbs. Tan Son Nhat International Airport plays a vital role by serving as the gateway that supports the economic growth of Vietnam. According to the city’s Five-Year Socio-economic Development Plan (2001–2005), the city expects on average an annual economic growth rate of 11% during the target period. Recognizing the importance of establishing close economic</p>	<p>continues to cite infrastructure building as an important national policy, and points out its policy of focusing on building the country’s transportation infrastructure. Specifically, in the field of aviation, the government has set a goal of putting in place a system capable of transporting 20 million passengers per year. It hopes to achieve this by upgrading one of the international airports and by improving the performance of aircraft. In the long-term development plan, important national projects are cited in the Appendix Table as “important projects,” and this project is listed in the section for ODA target projects. Thus, their importance as national projects is confirmed.</p> <p>(2) Policy level</p> <p>With regard to the transport sector, in response to the Five-Year Socio-economic Development Plan (2006–2010), in August 2005, the Ministry of Transportation adopted and continues to implement the Five-Year Transport Sector Development Plan (2006–2010). The Plan specifically points out the infrastructure improvement of Tan Son Nhat International Airport, together with that of Noi Bai International Airport and Da Nang International Airport, as an important project. From the perspective of regional development, the Five-Year Socio-economic Development Plan (2006–2010) designates the south-eastern region, which includes Ho Chi Minh City and the surrounding provinces, as a priority target area that will take the lead in industrialization and modernization, as well as in economic growth through developments in commerce, service and tourism. The continuous importance of the project is confirmed on two fronts: sector development and regional development.</p>
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<p>(3) Planning level</p>	<p>ties with neighboring countries if the said goal is to be reached, the Government of Vietnam cites the infrastructure improvement of Tan Son Nhat International Airport as a priority task.</p> <p>(3) Planning level In order to respond to the increasing demand for air travel, the Civil Aviation Authority of Vietnam has improved the terminal at Tan Son Nhat International Airport, and passenger capacity for domestic and international routes combined as of 2000 is five million passengers per annum. While in 2003 passenger numbers are forecast to reach current terminal capacity, it is difficult to further expand the existing terminal. It is therefore an urgent task to dedicate the existing terminal to domestic routes and to build a new international passenger terminal.</p>	<p>(3) Planning level Tan Son Nhat International Airport has been coping with the recent increase in number of passengers by, among other things, expanding some prefabrication facilities, but the airport already exceeds its terminal capacity (5 million per annum). Economic activities continue to be brisk in Ho Chi Minh City and neighboring provinces, with demand for passengers and productivity in manufacturing continuing to grow in double figures. It can be said that capacity expansion in passenger and freight transport, together with streamlining, holds the key to economic growth. Thus, the necessity of this project is high for regional economic development.</p> <p>Under this project, JBIC provided Special Yen Loans. It is a system that was established in December 1998 for the rapid economic recovery of Asian nations affected by the economic crisis. In addition to promoting projects that provide a strong economic stimulus to the market and have a strong impact on the creation of employment, the primary objectives of the Special Yen Loan are (i) the preparation of an attractive business environment for private investment, and (ii) the realization of structural economic reform through improvements in productivity. Under this system, even more discretionary loans are granted than in regular projects, thereby providing assistance to the relevant country. Tan Son Nhat International Airport aims to respond to rising passenger demand as well as to increase the convenience and efficiency of air services by constructing a new international passenger terminal and related facilities at Tan Son Nhat International Airport, which boasts Vietnam's largest passenger handling volume. The</p>
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Source: Ex-ante evaluation table	Note *1 Actual performance data is not available. Source: Southern Airport Authority	Based on the actual performance to date, the executing agency has revised its forecasts for operation and effect indicators. Calculating back from the revised number of international passengers per annum, the average annual growth in the number of international passengers from 2006–2012 is projected to be 8.5%, which is a more conservative																																																

estimate than the average annual growth rate of 13.6% recorded during the previous five years. The international terminal being constructed under this project will be able to handle around 8 million passengers per annum, and if the number of international passengers increases, as the forecast of the executing agency, the number of passengers using the new terminal will reach the planned capacity by 2012. Should the growth rate will be 13.6%, the total number of passengers will reach the planned capacity, 8.1 million by 2010.

2) Economic growth rate and rate of increase in production in manufacturing (fixed 1994 price)

	1995–2000 (Average per annum)	2000–2005 (Average per annum)	2006–2010 Planned target
Nationwide			
GDP growth rate	6.9%	7.5%	7.5–8.0%
Growth rate in manufacturing and construction	10.6%	10.2%	9.5–10.2%
Rate of increase in production value of manufacturing			
8 Provinces in southeastern Vietnam *1	14.3%	15.1%	
Ho Chi Minh City	11.3%	14.2%	

Note *1 The eight provinces are: Ninh Thuan, Binh Thuan, Binh Phuoc, Tay Ninh, Binh Duong, Don Nai, Ba Ria-Vung Tau, Ho Chi Minh City.

Source: Five Year Socio-economic Development Plan (2006–2010) and General Statistics Office of Vietnam

Demand for air transport has increased significantly in southeastern Vietnam. The reason is that since 2000, output in manufacturing has on annual average increased 15.1% for the entire region and 14.2% in Ho

	<p>(b) Qualitative effects</p> <ol style="list-style-type: none"> 1) Expansion of passenger capacity 2) Improvement of convenience and safety for users of airport facilities 3) Promotion of international exchange of people and goods and socio-economic development. 	<p>Chi Minh City. In the Five Year Socio-economic Development Plan (2006–2010), the government projects GDP in Vietnam as a whole to grow at an annual rate of 7.5–8.0% during the five-year period from 2006 to 2010 and the average annual rate of increase in manufacturing and construction to grow at a rate of 9.5–10.2%. These projected rates of increase are comparable to the rates of increase that were actually achieved during the five-year period from 2000 to 2005. Southeastern Vietnam accounts for most of the nation’s total production value in manufacturing, with the region as a whole accounting for 48% and Ho Chi Minh City alone for 23%. The government assumes that economic activities in the region will continue to be brisk, with the demand for air transport from 2006 to 2010 expected to increase by about the same amount as was actually achieved from 2001 to 2005. Just for the record, in the Study on the National Transport Development Strategy (VITRANSS) JICA conducted in 2000, the demand for air transport is projected to increase at a rate equivalent to 1.5 times the rate of increase in Vietnam’s GDP from 2000–2010 and by about the same rate as Vietnam’s GDP growth rate from 2011–2020.</p> <p>(b) Qualitative effects</p> <ol style="list-style-type: none"> 1) Expansion of passenger capacity <p>While it is said that Tan Son Nhat International Airport has the capacity to handle 5 million passengers per annum, it actually handled a total of 8.47 million passengers, domestic and international combined, in 2006. Based on the service standards established by the International Air Transport Association (IATA), the terminal being built under the present project is designed to handle 8 million passengers. (This is the planned capacity; in reality, the terminal is believed to be capable of handling 10 million passengers per annum.) With the implementation of this project, Tan Son Nhat International Airport will be able to handle 8 million international passengers per annum. In addition, by setting aside the</p>
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<p>(2) Factors which may influence the effectiveness and impact</p>	<p>(2) Factors which may influence the effectiveness and impact (a) Environmental consideration The completion of the new terminal is expected to increase the number of landings and takeoffs, which in turn is expected to intensify the impact of noise pollution on the area surrounding the airport. The noise level in and around the airport will begin to be monitored with the support of the consultants hired in the project. Based on the monitoring results, the executing agency and the municipal government of Ho Chi Minh City are scheduled to consider the adoption of a noise-abating method of flying, impact-mitigation measures through land-use regulations, etc.</p>	<p>existing terminal for exclusive use by domestic passengers, the airport will be able to handle additional 5 million, bringing Tan Son Nhat International Airport's total passenger capacity to 13 million.</p> <p>2) Improvement in convenience and safety for users of airport facilities.</p> <p>The new international terminal is designed, and is being built, in accordance with the service standards IATA requires of all international airports. As a result, customers are guaranteed the level of comfort and safety that conforms to international standards.</p> <p>3) Promotion of international exchange of people and goods and socio-economic development.</p> <p>The use of the new international terminal will promote the exchange of people and goods (international passenger traffic). With Vietnam's largest economic zone in the background, the government is promoting measures for expanding the country's transport capacity in conjunction with the building of related infrastructure. These efforts are expected to support the growth of Vietnam by expanding the economic activities in the relevant economic zones.</p> <p>(2) Factors which may influence the effectiveness and impact a) Environmental consideration The Environmental Impact Assessment (EIA) conducted a survey prior to the implementation of the project. An environmental monitoring unit was set up under the project implementation scheme/structure, and this unit is monitoring the noise, vibration, air pollution, water pollution, etc. during the project implementation stage. As a result, it was found that during the implementation period, the project would have only a minor impact on the environment, thus demonstrating that there were no particular environmental issues. However, it will be necessary to adopt measures to deal with the noise problem caused by the increase in the number of landing and takeoffs expected when the new terminal begins</p>
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		<p>its operation. The executing agency is receiving guidance from the Ministry of Natural Resources and Environment regarding measures to be taken in the future, including relocating those houses located directly under the approach path, and subsidizing noise reduction work. Such noise abatement measures should be carefully watched in the coming months and years.</p> <p>(b) Plan to build a new airport in Long Thanh Once the project is implemented, because of its location, it is deemed impossible to further expand Tan Son Nhat International Airport. As a measure to deal with the demand in air transport after the number of international passengers reaches its limit in 2012, the Government of Vietnam has decided to build a second airport in Long Thanh, a suburb of Ho Chi Minh City, and has begun research for drawing up a master plan. Various matters will have to be taken into consideration in constructing the second airport, including: the future demand trends, handling capacity of existing airports including terminal expansion, function sharing with the new airport, the time required for building the new airport, etc. Tan Son Nhat International Airport is expected to continue operating even after the construction of the new airport, so the functional sharing between the two airports will have an important impact. In the ex-ante evaluation of the project, the impact on the environment is evaluated under the assumption that the new terminal will be used exclusively for international flights. Therefore, the premise of the evaluation will necessarily be changed.</p> <p>(c) Construction of an access road At present, taxis and motorcycles are mainly used to get from the center of the city to the airport, and these vehicles rely entirely on urban streets to get to and from the airport. Consequently, the problem of accessibility caused by deteriorating traffic congestions is assuming</p>
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		<p>serious proportions. During the project period, noise levels were monitored at the construction site and in the area surrounding the airport. However, no major problems were found at the construction site, but it was discovered that the noise level of vehicles traveling on urban streets outside the airport was higher than the permissible environmental level established by the government. The launch of the new terminal is projected to increase the total number of passengers by about two-fold in the next several years, raising concerns that the problem of noise caused by traffic accessing the airport would be intensified. In Ho Chi Minh City, a plan to build a transit system like the one listed below is being implemented (based on a hearing held in CAAV and in the Ho Chi Minh City Transportation Authority).</p> <ul style="list-style-type: none"> • Construction of an elevated road linking the city to the airport (land acquisition commenced) • Widening the existing arterial road (Nguyen Van Troi Street, land acquisition commenced, to be completed in 2010) • Subway lines extending all the way to the airport (several lines are being planned supported by the Japanese ODA Loan, Asian Development Bank, and other donors) • Shuttle services offered by each hotel • Development of bus-only roads (F/S executed by The World Bank) <p>(d) Utility provision</p> <p>With regards to the operation of the new terminal, there still remain problems to be solved concerning water and fuel provision.</p> <p>1) Water</p> <p>Ho Chi Minh City is supposed to supply water, but the water pressure in the city is so low that it will be difficult to supply the required volume of water to the new terminal. Therefore, it is inevitable to supply water by tank trucks at the beginning of the terminal operation. The city has</p>
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<p>(3) Factors which may influence the sustainability</p>	<p>(3) Factors which may influence the sustainability (a) Operation and maintenance system The Southern Airport Authority, which is under the supervision of the Civil Aviation Administration of Vietnam, will carry out the operation, maintenance and management of the project.</p>	<p>promised to gradually improve its water supply system, but it is unclear when this will begin. 2) Fuel oil An underground petrol pipe was laid for fueling aircraft, but the construction of oil transfer facilities has not made any progress. This is because the company that was supposed to provide the capital investment failed to keep its promise. Consequently, when the new terminal begins its operation, it will be necessary to deliver and fuel the terminal with tank trucks. The company that has reneged on its promise will be reminded to come through with the investment. Its response will be carefully monitored, and if it still fails to keep its promise, it will be necessary to take action, including asking the government to step in.</p> <p>(3) Factors which may influence the sustainability (a) Operation and maintenance system There have been no changes since the original plan. (b) Training of O&P personnel The contractors will provide the training for the personnel assigned to handle the operation and maintenance of the project. The Southern Airport Authority (SAA) has already assigned the O&M personnel, and is now preparing for the start of the training. By May 2007, the contractors will have completed the preparation, including the writing of the course materials. (c) Execution capability on the fiscal front SAA operates and maintains seven airports located in the southern part of Vietnam including Tan Son Nhat Airport. A self-supporting accounting system is adopted under which various expenses, including maintenance and facility improvement costs, are paid out from the earnings made in the aviation business (airport facility fee, landing fee, rent receivable, etc.). Earnings gained from operating Tan Son Nhat Airport remain in the black to the tune of the total maintenance</p>
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		expenses for the seven airports, which means that on the fiscal front, there is no concern with the financial aspect for the operation and maintenance of the project.																																																																																																		
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Roads/ parking area	Roads		58,630 m ²																																																																																																	
	Parking area		27,115 m ²																																																																																																	
	Support vehicle passage																																																																																																			
Aircraft fueling facilities	Fuel filler pipe and related facilities		2 X 1,700 m																																																																																																	
Utilities	Power/communication/water supply/sewage treatment/solid waste treatment																																																																																																			
Consulting services	Foreigners		535 months																																																																																																	
	Vietnamese		1,236 months																																																																																																	

		<p>At the time of the project was launching, the No. 2 wing was added and one floor was added between the ground floor and the second floor. As a result, the floor area increased by 24% over the original plan. In addition, in order to meet the expected increase in the number of passengers using the new terminal, the number of hand luggage processing systems, inspection equipment, etc was increased. These changes have been made to enable the new terminal to handle many more passengers without increasing the total cost of the project. Therefore, they are evaluated as changes to bring positive effects.</p> <p><Reasons for the changes></p> <p>1) Addition of the wing</p> <ul style="list-style-type: none"> · To increase the opportunity for passengers to get on and off aircrafts directly. · By constructing a passage connecting international flights and domestic flights, it will be possible to manage the two in an integrated manner. <p>2) Addition of the floor and expansion of the floor area</p> <ul style="list-style-type: none"> · To streamline customer management for efficiency by preventing the moving line of arrival passengers and that of departing passengers from crossing each other. · To secure sufficient space for check-in counters, offices, passenger waiting rooms, and technical service rooms. <p>3) Increase in the number of related facilities</p> <ul style="list-style-type: none"> · To deal with the surge in the number of passengers and operate the terminal more efficiently.
<p>(2) Project period</p>	<p>(2) Project period March 2002 – December 2006 (57 months)</p>	<p>(2) Project period March 2002 – June 2007 (63 months) The project period was extended by 6 months from the original plan. The terminal building has been open since July 2007.</p>

<p>Results of Special Yen Loan Satisfaction Survey</p>	<p>The significance of the Special Yen Loan at the time of loan providing is as follows;</p> <p>The Vietnamese economy was hit hard by the Asian economic crisis. While it maintained a growth rate of 8–9% over the several years prior to the crisis, the high pace of growth began showing signs of a slowdown, with the growth rate dipping to 4.8% in 1999. While the Vietnamese economy is seen to have strong potential, its economic foundation continues to be fragile in comparison with other ASEAN member countries. Given, among other things, the urgent need for infrastructure building and the fear that the slowdown in economic growth will strengthen the voices of those critical of the government’s Doi Moi (renovation) policy, thereby forcing the government to rollback on its commitment to make the transition to a market economy, it is essential that Japan continues to provide support for Vietnam.</p> <p>(a) Degree of maturity Already approved by F/S and EIA</p> <p>(b) Provision of a business environment that is highly effective in boosting the economy and attracting private investment In Ho Chi Minh City, the center of Vietnam’s economy which has a high potential for economic growth, the project will provide an extremely important infrastructure for improving the efficiency of distribution systems and for its economic activities, and thereby contribute to the growth of the Vietnamese economy as a whole.</p> <p>(c) Reflection of Japan’s know-how and technology, and procurement from Japan The project will put into use the full force of Japan’s know-how and advanced technologies in the manufacturing of special equipment and installations. These include the technique of constructing giant building</p>	<p>(1) Purpose of adoption While the Ministry of Finance cites the low interest rate, long repayment period, and high technology as reasons for adopting the Special Yen Loan, the executing agency cites the low interest rate, long repayment period, securing high-quality project, and adoption of advanced technology.</p> <p>(2) Competition and procurement All three companies participating in P/Q passed it, and two of these three participated in the bidding. Since leading Japanese contractors (both successful and unsuccessful bidders) formed a consortium and participated in the bidding, only three P/Q participants actually participated. Competitive bidding by a large number of companies, which the Government of Vietnam had expected, was not materialized. The Ministry of Finance indicated that this lack of participants hurt the competition. Commenting on the qualifications required for subcontracting or assuming the role of eligible source countries, the executing agency said: “We often experienced difficulty implementing the project because of the strict regulations governing the Special Yen Loan, and because of the restrictions imposed on subcontractors, we could not select our subcontractors from a large pool of companies. Thus, we were forced to select from a limited number of candidates. The regulations governing eligible source countries presented an even greater difficulty. Even when a piece of equipment was better than the one proposed by the contractor, or there was a much cheaper substitute, we were forced to stick with the one proposed by the contractor. We hope to see a broadening of the range of eligible source countries.” Meanwhile, one of the contractors offered this comment: “Because of the regulations governing subcontractors, we are not allowed to employ subcontractors from a third country even if they have better skills than those in Vietnam. Instead, we are forced to hire Vietnamese companies</p>
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	<p>structures, highly reliable electrical installation work, hand luggage processing system, and flight information system. Additionally, procurement of materials and equipment and services required in construction is expected to exceed 50 percent of the total amount of Japanese ODA Loan. Thus, the contributions of Japanese companies are extremely high.</p>	<p>with inferior skills. Also, due to regulations governing countries of origin, we are prevented from procuring better materials, equipment and services from third countries. What’s more, as a result of the successful globalization of Japanese companies’ production process, there are now only a limited number of products and equipment that can be defined as “procured domestically,” which made it difficult to effectively implement the project.” The same contractor cited the following case as a concrete example of the difficulty he had faced: “Many electrical goods are sold under Japanese brands, but most are actually made in Southeast Asia, so they deviate from the definition of “Made in Japan.” For instance, when we purchase elevators, we first procure their components; then we assemble them locally into end products. The country of origin is defined by Japan’s tariff law as “the country where the final act that confers a new characteristic.” On the basis of this definition, we argued that since the parts were assembled in Vietnam, it should be regarded as “Made in Vietnam.” Our argument was rejected. These sorts of isolated problems have occurred frequently, and each time, the executing agency, the consultant and JBIC have had to confer with each other. These procedures required many hours and efforts to resolve.”</p> <p>(3) Competence of primary subcontractors</p> <p>Under the Special Yen Loan system, primary sub-contracts are bilateral and are tied. Five companies were selected as primary subcontractors to handle the building of the body. All five were Vietnamese companies. The executing agency intended to select the consultant and contractors from companies that are uniformly recognized by the executing agency as being among Vietnam’s leading companies; however, there were cases where companies that were regarded as excellent withdrew. Generally speaking, Vietnamese people were weak in terms of implementing capability. In addition, comments from the contractors</p>
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		<p>and consultant confirm that, generally speaking, primary subcontractors in Vietnam are cash-strapped, which makes it hard to mobilize enough workers for the project.</p> <p>(4) Project cost A hearing from the consultant, it was found that there was a case where primary subcontractors in Vietnam had stood the bilateral tie on its head and demanded the contract more costly than usual. In this case, the consultant explained that the contract amount had become 103% of the estimated price approved by the government. The executing agency regards this ratio higher than the standard ratio observed in Vietnam.</p> <p>(5) The executing agency’s evaluation of the contractors In evaluating the performance of the contractors, the executing agency rated their performance in terms of five items: 1) Handling of the process, 2) Quality of execution, 3) Project management, 4) Quality of deliverables, and 5) Technology transfer. On a scale of 1–5, the executing agency gave the contractors the second rating “Satisfied for 2) and 4), the third rating “Somewhat satisfied” for 1) and 3), and the mark “Unable to evaluate, saying that the project has not been completed” for 5). The executing agency’s evaluation of the project implemented with the Special Yen loan is high (i.e., satisfied) for execution of the construction work and deliverables, but not quite as satisfied for construction and process management.</p>
<p>Lessons Learned and Recommendations</p>	<p>[Recommendations]</p> <ul style="list-style-type: none"> · The new terminal that will be built under this project is expected by 2012 to have enough installed capacity to handle the number of passengers that will be using the new terminal. Although the project is still in progress, a survey on the construction of the second airport has already started. In addition to carefully monitoring the demand trend going forward, while ascertaining the capacity of the existing airport, including the new terminal, and keeping in mind that it will be some time before the new airport is built, thorough preparation and implementation are recommended with the view to realizing an effective execution period, sharing of airport capacity, and management. 	

	<ul style="list-style-type: none"> · Given the difficulty of providing utilities at the same level as originally planned due to reasons best known to the supply side, there is concern that the effectiveness of the project may be affected. It is recommended that close coordination and consultation be carried out with each supplier and advance effective measures to resolve this issue. · It is important to reduce the load on city traffic and improve accessibility to Tan Son Nhat International Airport by diversifying the access measures. Thus, it is recommended that necessary measures be taken. · In monitoring and evaluating the effectiveness of the project, taking into account the objective and the actual condition of the site, it is recommended that, of the contents agreed upon as operation and effect indicators, those adopted as effect indicators be reconsidered in terms of the contents discussed in the next section. 																									
<p>Indicators set for use at the time of ex-post evaluation</p>	<p>JBIC and the executing agency agree to monitor the following operation and effect indicators.</p> <table border="1" data-bbox="443 576 1240 1369"> <thead> <tr> <th></th> <th>Indicator</th> <th>Unit</th> <th>Application</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Operation indicator</td> <td>Number of international passengers at peak months (departure/arrival) (round)</td> <td>Passenger/month</td> <td>Annual number of international passengers at peak months (departure/arrival) (round trip) (unit: passenger/m)</td> </tr> <tr> <td>Number of international passengers at peak days (departure/arrival) (round)</td> <td>Passenger/day</td> <td>Annual number of international passengers at peak days (departure/arrival) (round trip) (unit: passenger/m)</td> </tr> <tr> <td rowspan="4">Effect indicator</td> <td>Number of international passengers per annum (round)</td> <td>Mil. pass./year</td> <td>Total number of international passengers per annum</td> </tr> <tr> <td>Number of foreign passenger arrivals per annum (one-way)</td> <td>Mil. pass./year</td> <td>Total number of arriving foreign passengers per annum</td> </tr> <tr> <td>Number of international tourist arrivals per annum (one-way)</td> <td>Mil. pass./year</td> <td>Total number of arriving international tourists per annum</td> </tr> <tr> <td>Number of international business passenger arrivals per annum (one-way)</td> <td>Mil. pass./year</td> <td>Total number of arriving international business passengers per annum</td> </tr> </tbody> </table>		Indicator	Unit	Application	Operation indicator	Number of international passengers at peak months (departure/arrival) (round)	Passenger/month	Annual number of international passengers at peak months (departure/arrival) (round trip) (unit: passenger/m)	Number of international passengers at peak days (departure/arrival) (round)	Passenger/day	Annual number of international passengers at peak days (departure/arrival) (round trip) (unit: passenger/m)	Effect indicator	Number of international passengers per annum (round)	Mil. pass./year	Total number of international passengers per annum	Number of foreign passenger arrivals per annum (one-way)	Mil. pass./year	Total number of arriving foreign passengers per annum	Number of international tourist arrivals per annum (one-way)	Mil. pass./year	Total number of arriving international tourists per annum	Number of international business passenger arrivals per annum (one-way)	Mil. pass./year	Total number of arriving international business passengers per annum	<p>(1) Monitoring Of the agreed upon monitoring indicators, SAA has continued to monitor the number of international passengers at peak hours and number of international passenger per annum. However, continuous monitoring has not been conducted for the number of international passenger during peak months, the number of foreign passengers per annum, the number of international tourist passengers per annum, and the number of business passengers per annum. The number of international passengers, the number of domestic passengers, the amount of freight handled, and the number of landings, etc. has been continuously monitored as important indicators, and are recorded as shown in the Appendix Table.</p> <p>(2) Problems in monitoring implementation The number of landings and the number of domestic passengers, which are basic indicators in airport management, are not included in the agreed upon indicators. These indicators are affected by factors other than the construction of an international passenger terminal. However, it is desirable that these indicators be continuously monitored as relevant indicators.</p>
	Indicator	Unit	Application																							
Operation indicator	Number of international passengers at peak months (departure/arrival) (round)	Passenger/month	Annual number of international passengers at peak months (departure/arrival) (round trip) (unit: passenger/m)																							
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Appendix Table Actual Performance of Tan Son Nhat International Airport

	Unit	2001		2002		2003		2004		2005		2006	
		Actual	Compared with previous year	Actual	Compared with previous year	Actual	Compared with previous year	Actual	Compared with previous year	Actual	Compared with previous year	Actual	Compared with previous year
Number of passengers	1000•%	4,499	—	5,319	18.2%	5,062	▲4.8%	6,244	23.4%	7,345	17.6%	8,472	15.3%
International	1000•%	2,657	—	3,199	20.4%	2,898	▲9.4%	3,726	28.6%	4,312	15.7%	4,865	12.8%
Domestic	1000•%	1,841	—	2,120	15.2%	2,164	2.1%	2,517	16.3%	3,033	20.5%	3,608	19.0%
Int. Departure	1000•%	1,379	—	1,652	19.8%	1,502	▲9.1%	1,921	27.9%	2,220	15.6%	2,500	12.6%
Int. Arrival	1000•%	1,279	—	1,548	21.0%	1,396	▲9.8%	1,805	29.3%	2,092	15.9%	2,365	13.0%
Dom. Departure	1000•%	913	—	1,037	13.4%	1,062	2.4%	1,232	16.0%	1,488	20.8%	1,776	19.4%
Dom. Arrival	1000•%	928	—	1,082	16.6%	1,102	1.8%	1,285	16.6%	1,545	20.2%	1,832	18.6%
Total amount of cargo handled	1000 t•%	102	—	133	30.4%	159	19.5%	184	15.7%	196	6.5%	220	12.2%
International	1000 t•%	68	—	92	35.3%	113	22.8%	130	15.0%	133	2.3%	147	10.5%
Domestic	1000 t•%	34	—	41	20.6%	46	12.2%	54	17.4%	63	16.7%	73	15.9%
Int. Departure	1000 t•%	36	—	51	41.7%	64	25.4%	73	14.1%	73	0.0%	81	11.0%
Int. Arrival	1000 t•%	32	—	41	28.1%	50	22.0%	57	14.0%	60	5.3%	67	11.7%
Dom. Departure	1000 t•%	20	—	23	15.0%	25	8.7%	29	16.0%	36	24.1%	42	16.7%
Dom. Arrival	1000 t•%	15	—	18	20.0%	22	22.2%	25	13.6%	28	12.0%	31	10.7%
Total number of aircraft *1	Aircraft•%	38,521	—	44,589	15.8%	44,216	▲0.8%	53,627	21.3%	59,243	10.5%	63,989	8.0%
International *1	Aircraft•%	22,262	—	25,469	14.4%	24,413	▲4.1%	30,340	24.3%	32,740	7.9%	35,360	8.0%

Domestic *1	Aircraft*%	16,259	—	19,120	17.6%	19,803	3.5%	23,287	17.6%	26,503	13.8%	28,629	8.0%
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Note *1 In recording the number of landings and takeoff, each landing or takeoff is counted as involving 1 separate plane. Therefore, when a plane lands and takes off, the action is counted as involving two planes.

Source: Southern Airport Authority