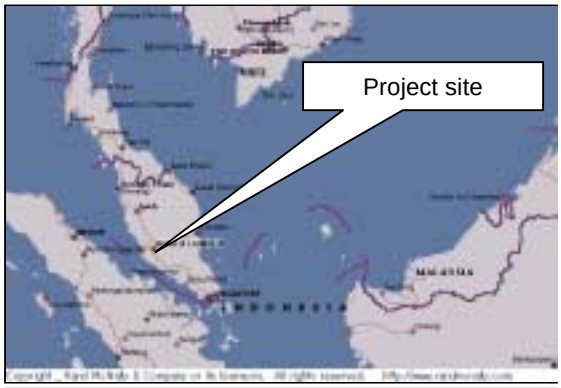
Malaysia

Kuala Lumpur International Airport Construction Project

Report date: March 2001
Field survey: September 2000

1. Project Profile and Japan's ODA Loan



Site map: Malaysia Kuala Lumpur

Kuala Lumpur International Airport

1.1. Background

Due to its geographical conditions, the air transport sector plays an important role in Malaysia where alternative means of transportation are underdeveloped.

Although at the time of appraisal of this project (1994) air transport occupied a small fraction of all domestic transport sectors in terms of passengers and freight volume (air transport accounted for 0.5% of passengers and less of freight in the Malay Peninsula as of 1991), the number of passengers and the freight volume of the air transport sector had increased remarkably during the preceding 10 years as a result of an increase in foreign investment and economic globalization. Air transport passengers including international, domestic and transit passengers increased from 7.2 million in 1980 to 18.15 million in 1990, a 2.5-fold increase, and the freight volume increased more than four-fold from 58,400 tons to 241,500 tons in the same period. It was expected that these increases would accelerate to reach the capacity of the existing Kuala Lumpur International Airport (Subang) some time in 1997.

1.2. Objectives

The objective of the project was to construct a new international airport in Sepang, about 50 km south of Kuala Lumpur, comprising of main airport facilities including two runways, a control tower, aprons and an airport terminal building and related infrastructure including roads, in order to handle the increased number of passengers projected for 2003 to 2005 (25 million).

1.3. Project Scope

Among the facilities of the Kuala Lumpur International Airport (KLIA), the ODA loan

covered 75% of the project cost for the construction of the main terminal building of the airport terminal complex and the contact pier and consultant services (designing and construction supervision).

1.4. Borrower/Executing Agency

Kuala Lumpur International Airport Berhad (KLIAB) (guaranteed by the government of Malaysia)

1.5. Outline of Loan Agreement

Loan amount/Loan disbursed amount	¥61,518 million/¥50,309 million
Exchange of notes/Loan agreement	July 1994/July 1994
Terms and conditions	Interest Rate: 3.0%, Repayment period (grace period): 25 years (7 years), General untied
Final disbursement date	Disbursement unfinished (as of February 2001) Project completion date is June 1998

2. Results and Evaluation

2.1. Relevance

Air transport in Malaysia is an important means of acquiring foreign currency in the service sector and simultaneously plays an important role in the promotion of physical distribution, trade and tourism as well as in socioeconomic development. The project covered the construction of a new airport based on the projection that the volume of air transport would increase to reach the capacity of the existing Kuala Lumpur International Airport (Subang) some time in 1997. From the mid- and long-term perspective, the air transport sector, particularly the new international airport which handles a large percentage of international flights, has remained quite important to date. In 2000, the volume of international air freight at KLIA was about 480,000 tons, occupying 70% of the total 650,000 tons in Malaysia, and the number of passengers on international flights was 10.62 million, occupying 80% of the total 12.55 million.

2.2. Efficiency

The project was executed by Kuala Lumpur International Airport Berhad (KLIAB)[1] almost as scheduled except for a slight delay in completion attributed to the test and commissioning of the mechanical and electrical system of the cargo conveyance system, which took longer than expected. There were no particular problems with either the schedule or the implementation of the project. As a major environmental

[1] KLIAB was established as a project team under the Ministry of Transport in August 1992, and became an independent corporation 100% funded by the Ministry of Finance in May 1993. At the time of the field survey, it was settling the accounts of the airport project following the completion of construction, while preparing for the transformation to an organization providing project management services and other services for governmental projects.

measure, buffer ponds were dug at three locations prior to construction to prevent waste water from the construction site from silting up rivers or drainage ditches and causing flooding in the lower reaches. In addition, the executing agency took appropriate measures to prevent problems from occurring. These efforts contributed to the smooth implementation of the project.

As for the project cost, both the total project cost and the disbursed amount were almost within the planned amount.

2.3. Effectiveness

(2.3.1.) Number of Passengers and Freight Volume

The number of passengers and the volume of the freight that moved through KLIA are shown in Figure 1 and Figure 2, respectively. Since the airport opened in June 1998, both passenger and freight volume have been increasing through the second year 1999 and 2000.

At appraisal, the number of passengers was projected on the assumption that the GDP growth rate would be 7%, given that it had remained at 7-8% from 1980 to 1992. The number of passengers was projected at 20.1 million for 2000 and 29.7 million for 2005. Freight volume was projected at 945,000 tons for 2000 and 1.465 million tons for 2005. However, the actual results did not reach the projected level for either passenger numbers or freight volume. The primary reason being that the GDP growth rate, which had remained at 7 to 10% from 1992 through 1997, declined to -7.5% in 1998 due to the Asian Economic Crisis in 1997. On the other hand, in another projection assuming lowest level growth rates for GDP, trade value and consumption, the number of passengers was projected at 12.5 million for 2000. In this case, the actual result of 15 million exceeded the projected number.

Figure 1 Number of Passengers at KLIA

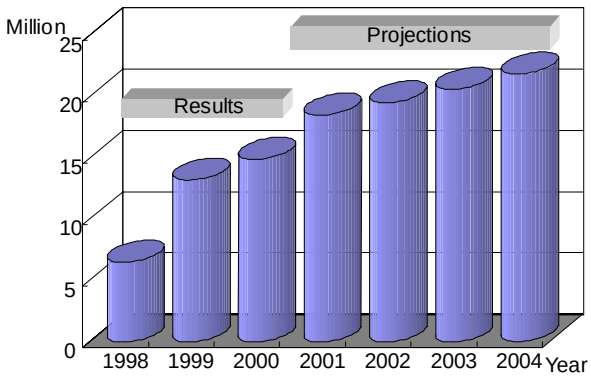


Figure 2 Freight Volumes at KLIA

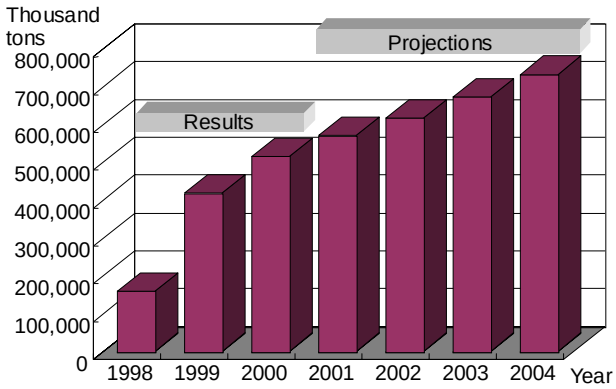
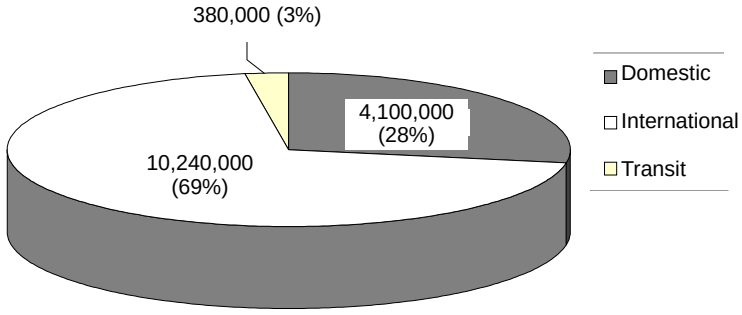


Figure 3 Percentage of Domestic and International Passengers (2000)



Source: Malaysia Airports (Sepang) Sdn Bhd
Note: The projected freight volumes for 2001 to 2004 include those at Subang

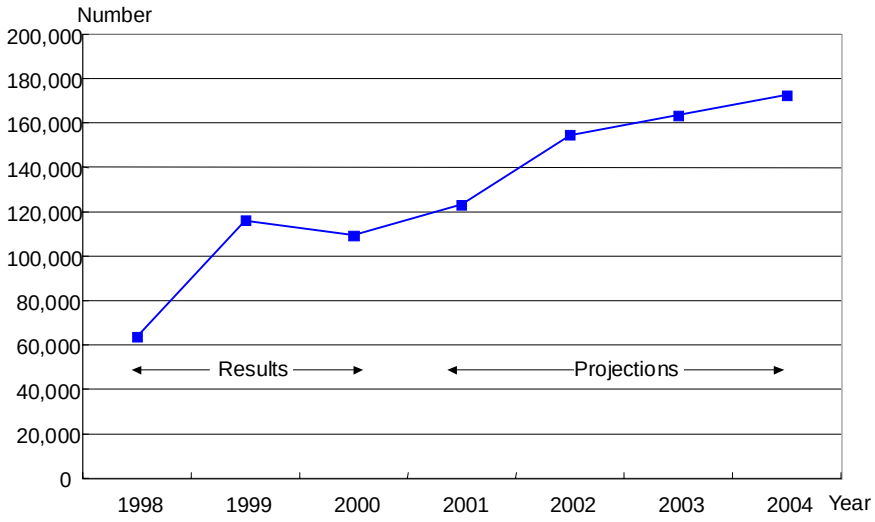
(2.3.2.) Passenger Satisfaction

According to a survey (Global Airport Monitor) conducted by the International Air Transport Association (IATA) in April 1999, KLIA ranked first in terms of business passenger satisfaction in the category of airports handling 15-25 million passengers per annum, and third in overall passenger satisfaction in the open category. Moreover, the survey determined that KLIA has the second highest potential as a hub airport in Asia following Sydney Airport (MAHB's annual report for 1999).

(2.3.3.) Number of Arrivals and Departures

Figure 3 shows that the number of arrivals and departures exceeded 100,000 per annum in the second year 1999. In spite of the increases in passengers and freight volume mentioned in (2.3.1), the number of arrivals and departures decreased slightly in 2000 from the previous year. This is thought to be attributable to the increases in passengers and freight volume per flight in the first half of the year.[2] The number of arrivals and departures is expected to increase further with the recovery of the economy.

Figure 4 Number of Flight Departures from and Arrivals at KLIA



Source: Malaysia Airports (Sepang) Sdn Bhd

[2] According to Malaysia Airports Holdings Bhd (MAHB) which maintains airports

(2.3.4) Financial Internal Rate of Return (FIRR)

FIRR was recalculated to be 2.7% on the basis of the following conditions which were the same at the time of appraisal. It has declined from the initially calculated 8.8% because 1) the portion of the loan to KLIAB was larger than planned and 2) the passenger increase rate was smaller than initially projected.

Benefits: aviation income (landing fee, aircraft parking fee, airport usage fee) + non-aviation income (miscellaneous rentals, sales, goodwill income, etc.)
Cost: construction cost + operating-management cost
Project Life: 28 years

2.4. Impact

(2.4.1.) Number of Tourists and Business Passengers

The increase rate in tourists and business passengers, which was negative in 1997 and 1998, stood at 42.9% in the 1998-1999 period following the completion of KLIA. The number in 2000 had already reached 8.35 million as of October, surpassing the previous year's total of 7.93 million.

Table 1 Change in the Number of Tourists, Business Passengers, etc.[1)]

Unit: 1000 persons

Year	1996	1997	1998	1999	2000[2)]
Malay Peninsula	6,775	5,859	5,203	7,483	-
Sabah and Sarawak	363	352	347	447	-
Total	7,138	6,211	5,550	7,931	8,359

Source: Yearbook of Statistics Malaysia 2000, Malaysia Tourism Promotion Board
Notes:
1) Passengers arriving in Malaysia and staying at least one night for the purpose of sightseeing, business, visiting relatives, etc.
2) As of the end of October 2000

(2.4.2.) Impact on the Environment and Society

According to Malaysia Airports Sepang Sdn Bhd (MASSB) and the Department of Environment (DOE) of the Malaysian government, no environmental problems have been reported, and the examination of water quality in the airport suggests no particular problems. Noise pollution is not considered to be a problem because the airport is located far from residential areas.

Prior to the project, about 2,000 people including 85 indigenous families (425 members) were relocated and received compensation from the government.[3] Information on the current conditions of the families is not available at the executing

[3] According to the executing agency, these people received compensation for moving from their original place of residence (Kg. Air Ritam and Bust) to a new village (Kg. Busut Baru) where the indigenous people live in an improved environment. However, since it takes several years to grow agricultural products, their income has dropped albeit temporarily. Therefore, the Malaysian government is considering providing additional funds.

agency level.

(2.4.3.) Economic Impact

According to a report by the executing agency, development of surrounding areas is being promoted and a project to construct highways and a monorail to provide access to the airport is under way, as a ripple effect from the project.

2.5. Sustainability

KLIA is operated by MASSB[4] based on a concession. MASSB, the Ministry of Transport of the Malaysian government, and the Federal Land Commissioner's Office entered into a concession/lease agreement of KLIA in 1998. Under this agreement, MASSB is authorized to lease the airport site, provide airport services at KLIA, collect fees from users of airport services and facilities, operate and maintain the airport, and take possession of the airport site with an area of 9,694 hectares. The term of the concession is 50 years from 1998.

MASSB has 1,500 employees engaged in operation and maintenance of airports. No problems that may constitute an obstacle to airport operations have been reported in connection with the staff and organization, except that it is pointed out that baggage handling is overly time consuming.[5]

During the two years since the opening of the airport in 1998, both sales and pre-tax income have increased. If the use of the airport increases as projected, stable operation is expected to be secured for the future.

[4] MASSB was established in November 1992 as a 100% government-funded agency; it assumed responsibility for the operation and maintenance of all airports from the Department of Civil Aviation (DCA). It is affiliated with MAHB which was listed on the Kuala Lumpur Stock Exchange in November 1999.

[5] MASSB explained that this is because the baggage handling system has to run over long distances due to the design of the airport. At peak times when a large volume of aircraft are arriving and departing, passengers have to wait more than 1 hour before receiving their baggage.

Comparison of Original and Actual Results

Item	Plan	Results
1. Project scope Airport terminal complex · Main terminal building · Contact pier · Satellite · Cargo conveyance system · Passenger train transport system (TTS) · Building automation system (BAS) and other facilities · Consulting services	3 buildings (total floor area: 457,000 m^2)	No change in the main terminal building and the contact pier covered by ODA loan
2. Implementation schedule	April 1994 to December 1997	April 1994 to June 1998
3. Project cost		
Foreign currency	¥107,208 million	¥50,309 million
Local currency	¥44,376 million	¥92,480 million
Total	¥151,584 million	¥142,789 million[1]
ODA loan portion	¥61,518 million	¥50,309 million[2]
Exchange rate	M$ 1.00=¥43.10	M$ 1.00=¥38.75 (main part) M$ 1.00=¥43.10 (consultant)

Note 1: Including the amount to be paid in 2001
Note 2: The amount of ODA loan disbursed by 2000