

# Philippines

## Ninoy Aquino International Airport Terminal 2 Development Project

Report Date: September, 2002  
Field Survey: July, 2001

### 1. Project Profile and Japan's ODA Loan



Location Map of the Project



Project Site

#### 1.1 Background

Air transportation in the Philippines is imperative for the country's socio-economic development and for its interaction with the international community. Ninoy Aquino International Airport (NAIA), located in the capital of the country, handles almost 100% of the country's international flights and more than 60% of its domestic flights. The number of passengers passing through NAIA was already 5.2 million per year for international and 3 million for domestic flights in 1992. Although the volume was still growing rapidly, passenger traffic had already exceeded the respective capacities of the airport's terminals, which stood at 4.3 million for international flights and 2 million for domestic flights. As a result, both international and domestic terminals were heavily congested with passengers. In order to cope with the future demand for air transport and to ensure smoothness, comfort, and security for the passengers, the construction of a second terminal became a priority project for the national air transport sector program of the Philippines.

#### 1.2 Objectives

To increase the capacity of NAIA through construction of the second terminal, in order to cope with rapidly increasing international and domestic passenger traffic. The new terminal will eventually serve all the passengers of the old domestic passenger terminals.

#### 1.3 Project Scope

- (1) Construction of the second terminal in NAIA, to cope with 6 million domestic passengers and

1 million international passengers.

(2) Construction of related facilities including parking, apron, and a sewage treatment plant.

(3) Consultancy services for tendering and supervising construction works, as well as operation and maintenance support. The detailed design was carried out by French cooperation.

#### **1.4 Borrower/Executing Agency**

The Government of the Republic of the Philippines / Manila International Airport Authority (MIAA)

#### **1.5 Outline of Loan Agreement**

Loan Amount	18,120 million Yen
Loan Disbursed Amount	18,014 million Yen
Exchange of Notes	Aug. 1993
Loan Agreement	Aug. 1993
Terms and Conditions	
Interest Rate	3.00%
Repayment Period (Grace Period)	30 years (10 years)
Procurement	General Untied (General Untied for Consulting Services)
Final Disbursement Date	Dec. 2000

## **2. Results and Evaluation**

### **2.1 Relevance**

The Philippines is a country composed of over 7,000 islands, and thus the improvement of air transport is considered to be a critical factor for the country's development. Assuring the efficiency of transport services to meet the needs of dynamic market demand was one of the major objectives of in the Philippines' transport sector, as outlined in the Medium-Term Development Plan 1993-98. The Government undertook a strategy of continuously upgrading transport facilities and service standards to ensure that qualitative and quantitative improvements kept pace with traffic growth. Thus, the upgrading of Ninoy Aquino International Airport (NAIA) was given priority through the construction of Terminal 2.

The importance of air transport in the Philippines continues to grow. The Medium Term Development Plan 1999-2004 states that, "consistent with the globalization of the economy, the development of more international gateways to cater to different regional markets and the upgrading of domestic airports to international standards will be pursued to attract domestic linkages with foreign carriers." In this light, the current project has maintained its relevance with the Government's development policy to the present.

### **2.2 Efficiency**

#### ***2.2.1 Project Scope***

There was no major modification in the project scope; all originally planned construction has been implemented and equipment installed. Some facilities such as remote international passenger terminal apron and rapid exit taxiways were additionally constructed within initially concurred contract amount to meet the needs of fast-growing domestic passenger traffic in Manila.

#### ***2.2.2 Implementation Schedule***

The project was completed two years later than originally scheduled, owing to the above-mentioned additional civil works.

#### ***2.2.3 Project Cost***

The Philippine Peso depreciation in 1997 offered an incentive to the contractor to make use of more local materials than originally planned in order to achieve cost-efficiency. The actual disbursement did not exceed the total cost estimated at appraisal.

### **2.3 Effectiveness**

#### ***2.3.1 Coping with the Increasing Demand***

Because of the modification of the use of Terminal 2 and the decrease in passengers due to the

Asian economic crisis, Terminal 2 is currently underused.

The original objective of the project was to construct Terminal 2 to cope with the demand of all domestic flight passengers and part of international flight passengers in the year 2002, numbering 6 million and 1 million passengers, respectively. The use of Terminal 2 for international flights was considered temporary; Terminal 3, which is currently under construction through BOT (built-operate-transfer), was designed to take over all international flights served by Terminal 2 and the existing International Terminal, leaving Terminal 2 for the exclusive use of domestic passengers.

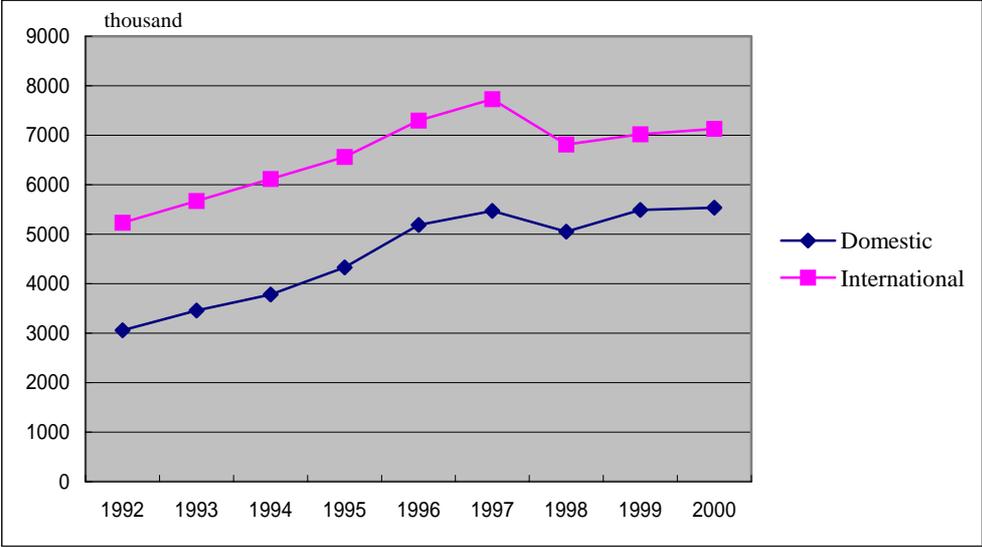
Terminal 2 started operation in September 1999. Although Terminal 2 was, at the time of appraisal, deemed to be coping with all domestic flights, its current use is somewhat modified. Terminal 2 is being used exclusively by the Philippine Airlines (PAL) for its domestic and international flights, while DPT1 (Domestic Passenger Terminal 1) and DPT2 continue to be used for the flights of the other domestic airline companies. It is expected that when the construction of Terminal 3 is completed, all international flights will move to Terminal 3 from Terminal 2 and the existing International Terminal, while non-PAL domestic airline companies in DPT1 and DPT2 will move to Terminal 2. The following table shows the modification of the use of terminals from the original plan. MIAA is currently discussing the future use of DPT 1, DPT 2 and the International Terminal. These could be transformed into cargo terminals and/or leased to business courier services.

**Table 1 Modification of the Use of the Terminals**

Terminal	Original Plan	Current Use	From 2003
DPT 1 & DPT 2	-	Non-PAL domestic flights	(Not determined)
International Terminal	International flights	Non-PAL international flights	(Not determined)
Terminal 2	All domestic flights & part of international flights (1 million passengers)	PAL domestic and international flights	All domestic flights
Terminal 3	-	-	All international flights

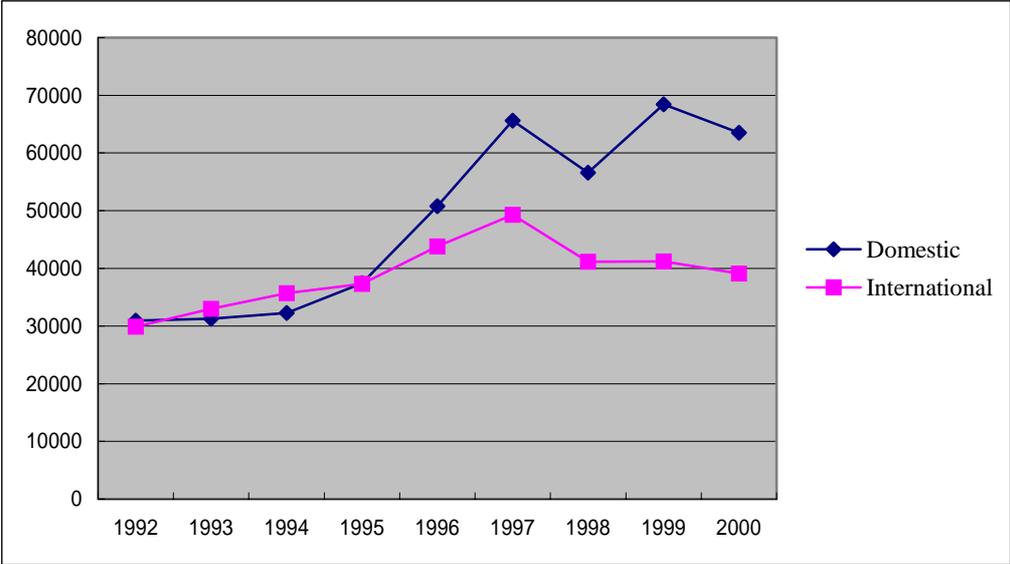
Until 1997, the increase in the number of passengers and flights exceeded the forecast at the time of appraisal. After a sharp decline in 1998 due to the Asian economic crisis, the number of passengers started growing again, while the number of international flights has been stagnating. Figures 1 and 2 show the number of international and domestic passengers and flights. Although there is no separate data for the number of passengers and flights handled by Terminal 2, it can be said that PAL accounts for roughly 60% of all domestic flight revenues.

**Figure 1 Number of Passengers (Departing and Arriving)**



(Source: NAIA)

**Figure 2 Number of Flight (Departing and Arriving)**



(Source: NAIA)

**2.3.2 Re-Estimate of the Financial Internal Rate of Return**

The Financial Internal Rate of Return (FIRR) of the project was re-estimated, based on the actual costs and revenues associated with Terminal 2. It is assumed that from year 2003, PAL’s international flights, which account for 70% of the Terminal 2’s revenues, will be transferred to the new international terminal, while the domestic flights of non-PAL airlines, which account for 40% of all domestic flight revenues, will be handled in Terminal 2. The annual operation and maintenance costs were assumed to be five percent of the total construction cost, while the project life was assumed to be

20 years from the beginning of the operation. At appraisal, the FIRR of the project was estimated at 7.6%. The re-estimated FIRR has decreased to 3.7%, owing to the increase in the investment cost in Peso terms, to the decline of the number of passengers due to the Asian economic crisis, and to the current limited use of Terminal 2.

### ***2.3.3 Service Level***

An interview survey of 161 departing passengers (international and domestic) was conducted at Terminal 2, DPT 1, and the International Terminal. Most of the interviewees were frequent fliers, who were capable of comparing past and current service levels. Two-thirds of both international and domestic passengers were aware that the waiting time had been reduced for the departure check-in period, for landing, and for baggage claim on arrival. 60% to 90% of passengers appreciate Terminal 2's higher service level, including benefits such as less congestion and better facilities (air-conditioning, toilets, and information) than that of the old terminals. The improvement of the service level is perceived more on arrival than on departure, and more in domestic terminals than in international terminals.

## **2.4 Impact**

### ***2.4.1 Impact on the Economic Development***

At the time of appraisal, the project was expected to promote socio-economic development in the Philippines by stimulating demand for international and domestic transport. Before the construction of NAIA Terminal 2, the demand for international and domestic flights was suppressed owing to the limited handling capacity of the old terminals; flights filled quickly throughout the year and thus flight opportunities were lost. Since the completion of the project, the loss of flight opportunities has definitely been reduced. According to the interview survey conducted by the JBIC evaluation mission, 70% of international and 80% of domestic passengers admit that the booking of flights has become easier than before. Furthermore, the construction of NAIA Terminal 2 paved the way for the expansion of airlines' operations, which, in turn, led to competition between airline companies, resulting in the reduction of travel time and cost for passengers. It is also envisaged that the expansion of airlines' operations will enhance business opportunities in the region, attracting more visitors and investments.

### ***2.4.2 Social Impact***

Approximately 300 families, most including informal sector workers, such as street vendors, were illegally occupying part of the project area and had to be relocated. The Manila International Airport Authority (MIAA) undertook the relocation program in cooperation with the National Housing Authority. Each family was given a certain amount of compensation, and relocation site was provided in Dasmarinas, Cavite, where the First Cavite Industrial Estate is located. The Estate is composed of many business establishments and factories, which provide good job opportunities to the relocated families. Through this relocation program, the negative social impact was mitigated. There was no other significant environmental impact, including impact on natural environment, caused by the project.

## 2.5. Sustainability

### 2.5.1 Financial Viability

The Manila International Airport Authority (MIAA), a 100% state-owned company, is responsible for the operation and maintenance of the project. Table 2 shows the MIAA's financial performance in 1999 and 2000.

**Table 2 MIAA's Financial Performance (million Pesos)**

Year	1999	2000
<b>Financial Statement</b>		
Total Assets	26,432	24,807
Current Assets	5,589	4,084
Current Liabilities	2,570	2,699
Equity and Retained Earnings	15,555	15,068
Operating Income	4,732	3,896
Net Income after Tax	1,100	851
<b>Financial Indicators</b>		
Return on Total Assets	4.1%	3.4%
Return on Sales	23.2%	25.9%
Total Assets Turnover	0.18	0.16
Current Ratio	217%	151%
Stockholder's Equity Ratio	58.8%	60.7%

(Source: MIAA)

Although the MIAA pays approximately 15% of its operating income to the Government as a royalty, it is quite profitable, reporting an 800 to 1,000 million Pesos net income after tax every year. The MIAA is adequately liquid and solvent.

### 2.5.2 Operation and Maintenance

Since the MIAA has sufficient experience in airport operations, it does not have any difficulties in the operation and maintenance of Terminal 2. The MIAA has adopted the SWEDAVIA - Swedish Aviation Development AB - procedures, which offer complete know-how for civil aviation. The Systems Procedures and Improvement Division (SPID), under Corporate Planning, has responsibility for the establishment and improvement of operation procedures. Furthermore, the MIAA is currently preparing for ISO accreditation.

The organization of the MIAA has been modified and strengthened to accommodate Terminal 2 operations. There are approximately 2,000 employees in the entire MIAA, of which 500 serve at Terminal 2. Some of these employees have been redeployed from old terminals and some of them are new hires. These employees have been adequately trained through the MIAA's own training programs. Among others, the maintenance structure of the MIAA has been reorganized and strengthened.

From the above perspectives, the Ninoy Aquino International Airport Terminal 2 Development Project is considered to be sustainable.

## Comparison of Original and Actual Scope

Item of major works	Original	Actual
<b>Project Scope</b>		
Infrastructure		
Taxiway	10,500 sqm	54,600 sqm
Apron	117,000 sqm	166,200 sqm
Roads	15,000 sqm of dual carriageway	As planned
Car Parks	47,000 sqm	55,000 sqm
Sewage Treatment Plant	4,000 ton/day	As planned
Landscaping	30,000 sqm of grassed areas	63,150 sqm
Building (Rotunda, South and North Wings)	67,000 sqm of total floor areas	98,600 sqm of total floor areas
Consulting Services		
Foreign	426 M/M	512 M/M
Local	245 M/M	700 M/M
<b>Construction Schedule</b>		
Selection of Consultant	Sep. 1993 to Jan. 1994	Sep. 1993 to Mar. 1994
PQ, Bidding, and Contract	Mar. 1994 to May 1995	Jul. 1994 to Nov. 1995
Construction work	Jun. 1995 to Jul. 1997	Dec. 1995 to Dec. 2000
Maintenance and Supervision	Aug. 1997 to Sep. 1998	Oct. 1998 to Oct. 1999
<b>Project Cost</b>		
Foreign Currency	13,115 million Yen	9,460 million Yen
Domestic Currency	2,200 million Pesos.	3,645 million Pesos
Total	24,160 million Yen	20,613 million Yen
ODA Loan Portion	18,120 million Yen	18,014 million Yen
Exchange Rate	1 Peso = 5.02 yen	1 Peso = 3.06 yen

# **Independent Evaluator's Opinion on Ninoy Aquino International Airport Terminal 2 Development Project**

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## **1. Relevance**

From the time of its design until now, the Ninoy Aquino International Airport Terminal 2 Development Project is highly relevant. It is contributing to the economic policy of the country, more specifically, integrating the Philippines to the global market.

The project is enabling the Philippines to comply with the International Civil Aviation Organization (ICAO) standards and practices.

Several upgradings done (i.e., taxiway, apron and landscaping) made the project more appropriate and its relevance was maintained.

## **2. Impact**

The preliminary impact of the project include: (a) easier booking of flights; (b) reduction in the waiting time for checking-in; (c) better accessibility; (d) lesser congestion at the check-in counter and pre-departure area; (e) improved boarding facilities, air conditioning, restaurants, toilets and information/signage; and (f) reduction in the waiting time for baggage claim. The project is also stimulating demand for international and domestic transport.

The long-term impact would be the expansion of airlines operation, enhancement of business operation in the region and promotion of socio-economic development – creation of job opportunities, trade, commerce and other economic opportunities, cultural exchange and, educational opportunities.

The potential negative social impact brought about by the resettlement of 300 affected families was mitigated through a package of compensation and relocation program.

## **3. Efficiency**

The project was constructed as originally designed. Some upgrading (i.e., taxiway, apron and landscaping) caused the project to be delayed two years than the original scheduled. More local materials were used to achieve cost efficiency that made actual disbursement (including upgrading) lesser than estimated costs.

## **4. Effectiveness**

The project is achieving its intended objective: increasing the capacity of MIAA to handle the rapidly increasing international and domestic passengers and flights, more than expected. Overall service level was perceived by passenger-respondents to have improved, especially in passengers arrival and in the domestic terminals

## **5. Sustainability**

The operation and maintenance of the terminal is the responsibility of the Manila International Airport Authority. It is technically and financially capable of operating, maintaining and sustaining the project.

## **6. Lessons Learned**

Project sustainability is guaranteed if the capacity of the institution tasked to operate and maintain remains strong. The sufficient experience of MIAA in airport operations made it highly capable of sustaining the project. Institutional –building component should be part of the similar project.