

## Ex-ante Evaluation

### 1. Name of the Project

Country : Republic of the Philippines

Project : New Bohol Airport Construction and Sustainable Environment Protection Project

Loan Agreement : 27 March 2013

Loan Amount : 10,782 million yen

Borrower : The Government of the Republic of the Philippines

### 2. Background and Necessity of the Project

#### (1) Current State and Issues of the air transportation sector in the Philippines

The Philippines, as an island nation composed of more than 7,000 islands, depends on air transportation for mobility. Over the past five years, the volume of domestic and international passengers in the Philippines has undergone an annual growth of approximately 10 percent. The airport in Bohol Province has also undergone a rapid increase in air demand over the past decade, rising from 39,268 passengers in 2001 to 572,476 in 2010. In addition to the increase in air travel demand, Bohol Province expects to have an expansion in the number of tourists because of its characteristic sightseeing resources, which include the Chocolate Hills and tarsiers (relatives of the monkeys), and attractive natural sightseeing features such as beautiful beaches with coral reefs. Expanding the existing airport, however, would be difficult due to environmental, social and other issues, and a new airport must therefore be constructed that is compliant with international safety standards and that has adequate handling capacity.

#### (2) Development Policies Regarding Air Transportation Sector in the Philippines and Priority of the Project

Philippine Development Plan (2011-2016) emphasizes the necessity of promoting local airports to open to international flights to mitigate the over-congestion of Ninoy Aquino International Airport in Manila. Philippine Development Plan also emphasizes the compliance of safety and security standards by transport system. The New Bohol Airport is prioritized in 51 prioritized projects in the Public Investment Program (PIP) of Department of Transportation and Communications (DOTC) (2011-2016). Moreover, in 2010, the New Aquino Administration defined the New Bohol Airport Construction Project as one of the 10 priority infrastructure projects to be implemented under Public Private Partnership (PPP). Thus, the Project is highly consistent with the national development plan and policy.

#### (3) Japan's and JICA's Policy and Operations in the Air Transportation Sector

JICA Country Analytical Work for the Republic of the Philippines analyses that "XX" is an important issue. Under the Country Assistance Program for the Republic of the

Philippines (April 2012), Japan is committed to provide “XX” as one of its priority development issues and focuses on the improvement of infrastructure.

In line with this, regarding air transportation sector, Japan has provided assistance for the airport development such as “MACTAN (CEBU) international airport development project”(1991), “New Iloilo Airport Development Project”(2000) and for improvement of airport operation safety such as “New Communications, Navigation and Surveillance/ Air Traffic Management (CNS/ATM) Systems Development Project”(2002). Also, regarding environmental protection around tourist area, Japan has provided assistance for tourism development concerning environmental protection such as “Sustainable Environmental Manage Project in Northern Palawan”(2001).

#### (4) Other Donor Operations

Regarding Air Transportation sector, Asian Development Bank (ADB) has supported improvement of operation safety of existing local airports, through “Third Airports Development project”, which extend them.

#### (5) Necessity of the Project

The Project supports construction of a new airport with domestic and international standards for operational safety and efficiency, responding rapid increase in air traffic demand. This project is aligned with the Philippines’ development policy and Japan and JICA’s country assistance policies. Therefore, JICA’s support to the Project is necessary and relevant.

### **3. Project Description**

#### (1) Project Objectives

The objective of the Project is to improve operational safety and efficiency of air transportation by constructing a new airport in Panglao Island, Province of Bohol, thereby contributing to sustainable development of the Province. The funds will be allocated to civil works for constructing the runway and terminal building, as well as consulting services.

#### (2) Project site/Target Area

Panglao Island, bohol Province

#### (3) Project Outline

##### ①Construction Works :

Runway2,000m × 45m,Taxiways,Apron,Passanger Terminal Buildings,Control tower, Utility Works, Navigation system (International Competitive Bidding)

##### ②Consulting Services :

Tendering support, Construction supervision, Environmental management and monitoring, Resettlement support etc. (Short list selection)

#### (4) Total Project Cost

13,348 million yen (Yen Loan Amount : 10,782 million yen)

(5) Project Implementation Schedule

February 2013-June 2017 (53 months) The commencement date of service (June 2016) shall be the time of the Project's completion.

(6) Project Implementation Structure

1) Borrower : The Government of the Republic of the Philippines

2) Project Executing Agency :

DOTC (Department of Transportation and Communications)

3) Operation and Maintenance System : Concessionaire which will be selected through bidding

(7) Environmental and Social Consideration, Poverty Reduction, and Social Development

1) Environmental and Social Considerations

① Category : A

② Reason for Categorization : The Project falls into the categories of the "Airport" sector and "Sensitive Characteristics", as specified in the "Japan International Cooperation Agency (JICA) Guidelines for Environmental and Social Considerations" (April 2010)

③ Environmental Permit : Environmental Compliance Certificate (ECC) for this project has been issued by the Department of Environment and Natural Resources (hereinafter referred to as "DENR") on 4<sup>th</sup> June 2003. ECC has been extended on 3<sup>rd</sup> June 2008 will be valid until June 2013.

④ Anti-Pollution Measures : Regarding noise and dust, the contractor conducts construction work only in the daytime and regularly sprinkle water. And the contractor will prevent water pollution by management of waste oil. Also, after commencement of operation, set noise buffer zone as noise control, make departure and arrival schedule limited to the daytime, implement waste management plan as waste management. Through construction and operation phase, soil pollution will be prevented. Regarding discharge from the airport facility, it will be treated by the facility inside the airport and discharged into soaking yard and then into the underground.

⑤ Natural Environment : The Project is not conducted in or near a sensitive area such as national parks, and is expected to cause little adverse environmental impacts. Regarding terrestrial ecosystem, Provincial government of Bohol will implement biodiversity protection plan, which mention 200thousands tree plantings around the Province, in cooperation with Bohol Island State university and local people. Regarding marine ecosystem, monitoring will be conducted mainly by Local Government Unit in order to minimize the negative impact to ecosystem

⑥ Social Environment : The project may cause about 229 ha of land acquisition resettlement of 64 households. Land acquisition and resettlement has been

started in accordance with the country's laws and regulations and Resettlement Action Plan (RAP). Although there were some project affected family who request for early and smooth resettlement, there is no objection against resettlement site and the project itself from them.

⑦ Other/Monitoring : Based on Environment Management Plan and Monitoring plan, Multi-partite Monitoring Team (MMT) will conduct monitoring on air quality, noise and waste. MMT consists of National government agency such as DENR and DOTC, Local Government Unit, related agencies and NGO. Also, Provincial government of Bohol will conduct monitoring tree planting, land acquisition, resettlement and livelihood activity.

⑧ Conclusion : It is not expected that this project has significant impact on environmental and social aspects, by appropriate measures mentioned above. It is necessary to confirm the progress the following stuffs through progress report and others;

(1) Result of the environmental monitoring during construction and after commencement of the operation

(2) Result of the monitoring on land acquisition and resettlement

(3) Establishment of MMT

2) Promotion of Poverty Reduction :

The unemployed applicants in and near the Project site will be preferentially hired for the construction of the airport.

3) Promotion of Social Development :

During the construction, it is expected that a significant number of workers (migrant workers) will come from areas outside of the Project sites. To cope with this issues, JICA will request the Executing Agency to incorporate an HIV/AIDS clause into bidding documents so that construction contractors can provide measures to prevent the development of HIV/AIDS among construction workers.

(8) Cooperation with other donors : None

(9) Other Important Issues :

- Under the concept of Eco-Airport, Japanese technologies such as energy saving air control system, solar power generation system, LED lights, geotextile sheet at the bottom of soaking yard are planned to be used under the STEP Loan.

- Detailed Design will be carried out under JICA Grant (Yen Loan Technical Assistance). The scale and TOR are as follows.

① TOR : Review of existing detailed design, Draft of bidding documents, Review of Resettlement Action Plan (RAP) and Support of implementation of RAP, Review of EIS etc

② Period of Detailed Design, Scale : December 2012-June 2013, Approximately 260 million yen

#### 4. Outcome Targets

##### (1) Quantitative Effect

##### 1) Performance Indicators (Operation and Effect Indicators)

Indicator	Baseline (2010 Actual)	Target(2018) 【2 years after Project completion】
Number of Passenger/year (including passenger for international flight)	572,476	1,277,647
Number of aircraft movements/year(including international flight)	4,664	12,898

##### 2) Internal Rate of Return

Assuming the conditions listed below, the Project's economic internal rate of return (EIRR) is 24.77%, and financial internal rate of return (FIRR) is 2.0%

##### 【EIRR】

Cost : Project cost (excluding tax), O&M cost

Benefit : shortening of travel time (avoidance of moving via Cebu, in case that passengers cannot take direct flight between manila-tagbilaran, Tourism revenue from foreigners, reduction of transportation cost

Project Life : 34years (30 years after commencement of airport operation)

##### 【FIRR】

Cost : Project cost(excluding tax), O&M cost

Benefit : airport fee, passenger terminal fee

Project Life : 34years (30years after airport operation)

##### (2) Qualitative Effect

- 1) Improvement of operation safety
- 2) Improvement of passenger's satisfaction

#### 5. External Conditions/Risk Control

- (1) Significant change of related ICAO standard
- (2) Severe natural disaster, which affect construction period

#### 6. Lessons Learned from Findings of Similar Projects Undertaken in the Past

##### (1) Findings of Similar Projects :

The ex-post evaluations of "New iloilo airport development project" points out that it is important to accumulate and manage the result of the resettlement, because it is uncertain if assistance for livelihood activity led to improvement of the livelihood of the households resettled, due to the loss of the report.

##### (2) Lessons Learned :

The project also requires a large scale resettlement. JICA will request related agencies to consider assistance for livelihood activities which will surely lead to improvement of income and monitor the result of the assistance, by making and store

the report.

## **7. Plans for Future Evaluation**

(1) Indicators for future Evaluation

1) Number of Passenger/year (including passengers for international flight)

2) Number of aircraft movement/year (including international flight)

3) EIRR

4) FIRR

(2) Timing of Next Evaluation

Two years after Project completion

END