

DEPARTMENT OF CIVIL AVIATION,
MINISTRY OF PUBLIC WORKS AND TRANSPORT
LAO PEOPLE'S DEMOCRATIC REPUBLIC

PROJECT COMPLETION REPORT
ON THE PROJECT FOR TECHNICAL SUPPORT
ON CONTINUOUS IMPROVEMENT
OF VIENTIANE INTERNATIONAL AIRPORT
IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

MAY 2022

JAPAN INTERNATIONAL COOPERATION AGENCY

GYROS CORPORATION
PACIFIC CONSULTANTS CO., LTD.

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JR
22-079

I. Basic Information of the Project

The basic information of the project is shown below:

1. Country

Lao People's Democratic Republic

2. Title of the Project

The Project for Technical Support on Continuous Improvement of Vientiane International Airport

3. Duration of the Project (Planned and Actual)

Planned duration: February 2021 to October 2021

Actual duration: February 2021 to March 2022

4. Background (from Record of Discussions (R/D))

In the Lao People's Democratic Republic (herein Lao PDR), which is the only landlocked country in the Association of Southeast Asian Nations (ASEAN) with a mountainous area that occupies 80% of the land, air transport is an important means of transportation for the development of the country. It is necessary for the smooth movement of people and goods and for connectivity with neighboring countries.

Vientiane International Airport, located in Vientiane, the capital of Lao PDR, plays an important role as a gateway to the country. It is a base for economic activities such as tourism and trade. According to the Department of Civil Aviation (DCA), Ministry of Public Works and Transport, the number of passengers increased at an annual rate of about 16% between 2009 and 2019, and approximately 1.79 million international passengers and 570,000 domestic passengers used Vientiane International Airport in 2019.

In order to cope with growing demand, expansion of the international passenger terminal building and construction of a new domestic passenger terminal building was conducted by a 9 million yen loan entitled "Vientiane International Airport Terminal Expansion Project" (2014). Although both terminal buildings began operating in August 2018, the air transport demand has outgrown the original demand forecast.

Vientiane International Airport must be improved, and the development effects of the past project must be maintained. The DCA's capacity building needs to be enhanced by forming a long-term improvement plan that includes the improvement of the appropriate airport facilities and operations along with system development.

5. Overall Goal and Project Purpose (from Record of Discussions (R/D))

Overall Goal:

The usability, efficiency, and safety of Vientiane International Airport have been improved to meet growing air traffic demand.

Project Purpose:

The DCA's capacities relevant to continuous improvement of Vientiane International Airport have been developed.

6. Implementing Agency

The Department of Civil Aviation, Ministry of Public Works and Transport

II. Results of the Project

1. Results of the Project

1-1 Input by the Japanese side

Planned	Actual
<ul style="list-style-type: none"> - Chief Advisor/Airport Planner - Air Traffic Demand Forecast Expert - Runway/ATC Capacity Analysis Expert - Airspace and Flight Procedure Planner - Airport Civil Engineering Facility Planner - Airport Terminal Facility Planner - Air Navigation System Planner - Environmental Impact Expert - Project Cost Estimation Expert - Economic/Financial Analysis Expert 	<ul style="list-style-type: none"> - Chief Advisor/Airport Planner/Runway/ATC Capacity Analysis Expert (2) - Air Traffic Demand Forecast Expert - Runway/ATC Capacity Analysis Expert (1) - Airspace and Flight Procedure Planner - Airport Civil Engineering Facility Planner - Airport Terminal Facility Planner - Air Navigation System Planner - Environmental Impact Expert - Project Cost Estimation Expert - Economic/Financial Analysis Expert - Local Consultant

1-2 Input by the Lao PDR side

Planned	Actual
<p>Counterparts</p> <ul style="list-style-type: none"> - Project Director - Project Manager - Airport Improvement Committee Members <p>Project Office:</p> <ul style="list-style-type: none"> - Office in the DCA headquarters (with desks/chairs) <p>Running Cost</p> <ul style="list-style-type: none"> - Operation and maintenance of Project Office - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-county travel expenses per diem of DCA counterpart personnel 	<p>Counterparts</p> <ul style="list-style-type: none"> - Project Director - Project Manager - Airport Improvement Committee Members <p>Project Office:</p> <ul style="list-style-type: none"> - Office in the DCA headquarters (with desks/chairs) <p>Running Cost</p> <ul style="list-style-type: none"> - Operation and maintenance of Project Office - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-county travel expenses per diem of DCA counterpart personnel

1-3 Activities

Planned	Actual
<p>1. To understand the current situation of Vientiane International Airport</p> <p>1-1 Socioeconomic conditions</p> <p>1-2 Air traffic demand growth trend</p> <p>1-3 Related organizations—government, airport operators, airlines, and others</p> <p>1-4 Government policy on airport development</p> <p>1-5 Facilities at Vientiane International Airport</p>	<p>1. To understand the current situation of Vientiane International Airport</p> <p>1-1 Socioeconomic conditions</p> <p>1-2 Air traffic demand growth trend</p> <p>1-3 Related organizations—government, airport operators, airlines, and others</p> <p>1-4 Government policy on airport development</p> <p>1-5 Facilities at Vientiane International Airport</p>

1-6	Airport access to Vientiane International Airport	1-6	Airport access to Vientiane International Airport
1-7	Past studies on the development of Vientiane International Airport	1-7	Past studies on the development of Vientiane International Airport
1-8	Environmental laws and regulations	1-8	Environmental laws and regulations
2.	To conduct air traffic demand forecasts for Vientiane International Airport up to the year 2050	2.	To conduct air traffic demand forecasts for Vientiane International Airport up to the year 2050
2-1	Projection of future socioeconomic framework	2-1	Projection of future socioeconomic framework
2-2	Forecast of annual passengers, aircraft movement, and cargos	2-2	Forecast of annual passengers, aircraft movement, and cargos
2-3	Peak hour forecasts	2-3	Peak hour forecasts
2-4	Airport access traffic forecast	2-4	Airport access traffic forecast
3.	To evaluate current facilities and services of Vientiane International Airport with respect to current and future requirements	3.	To evaluate current facilities and services of Vientiane International Airport with respect to current and future requirements
3-1	Runway, instrument flight methods, and ATC procedures	3-1	Runway, instrument flight methods, and ATC procedures
3-2	Taxiways and aircraft stands	3-2	Taxiways and aircraft stands
3-3	Passenger terminal facilities	3-3	Passenger terminal facilities
3-4	Cargo terminal facilities	3-4	Cargo terminal facilities
3-5	Rescue and firefighting facilities	3-5	Rescue and firefighting facilities
3-6	Aeronautical ground lighting systems	3-6	Aeronautical ground lighting systems
3-7	Air navigation and meteorological systems	3-7	Air navigation and meteorological systems
3-8	Fuel supply facilities	3-8	Fuel supply facilities
3-9	Airport access	3-9	Airport access
3-10	Airport utility systems	3-10	Airport utility systems
3-11	Drainage	3-11	Drainage
3-12	Others	3-12	Others
4.	To identify immediate improvement needs at Vientiane International Airport	4.	To identify immediate improvement needs at Vientiane International Airport
4-1	Improvement of facilities	4-1	Improvement of facilities
4-2	Improvement of services	4-2	Improvement of services
5.	To develop a long-term improvement plan for Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas	5.	To develop a long-term improvement plan for Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas
5-1	To conduct alternative study to enhance runway capacity	5-1	To conduct alternative study to enhance runway capacity
5-2	To formulate long-term improvement plans for airport facilities, including descriptions of each improvement, general layout plan, implementing organization, etc.	5-2	To formulate long-term improvement plans for airport facilities, including descriptions of each improvement, general layout plan, implementing organization, etc.
5-3	To estimate a project implementation schedule and costs	5-3	To estimate a project implementation schedule and costs
6.	To conduct economic and financial analyses of the long-term improvement plan for Vientiane International Airport	6.	To conduct economic and financial analyses of the long-term improvement plan for Vientiane International Airport

6-1	To conduct an economic analysis of the long-term improvement plan	6-1	To conduct an economic analysis of the long-term improvement plan
6-2	To conduct a financial analysis of the long-term improvement plan	6-2	To conduct a financial analysis of the long-term improvement plan
6-3	To examine the funding plan for the long-term improvement plan	6-3	To examine the funding plan for the long-term improvement plan

2. Achievements of the Project

2-1 Outputs and indicators

Target value	Indicator	Actual value
Output 1: The current situation of Vientiane International Airport has been understood.	A report on current situation of Vientiane International Airport has been produced.	Chapter 2 in the Draft Final Report 100%
Output 2: The air traffic demand forecasts for Vientiane International Airport up to the year 2050 have been conducted.	A report on air traffic demand forecasts up to year 2050 of Vientiane International Airport has been produced.	Chapter 3 in the Draft Final Report 100%
Output 3: Current facilities and services at Vientiane International Airport have been evaluated.	A report on current facilities and services at Vientiane International Airport has been produced.	Chapter 4 in the Draft Final Report 100%
Output 4: Immediate improvement needs of Vientiane International Airport have been identified.	A report on immediate improvement needs of Vientiane International Airport has been produced.	Chapter 5 in the Draft Final Report 100%
Output 5: Development of a long-term improvement plan for Vientiane International Airport in consideration of the social and environmental impacts on the surrounding areas.	A report on long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas has been produced.	Chapter 6 in the Draft Final Report 100%
Output 6: Economic and financial analyses of the long-term improvement plan for Vientiane International Airport have been conducted.	A report on economic and financial analyses on the long-term improvement plan of Vientiane International Airport has been produced.	Chapter 7 in the Draft Final Report 100%

2-2 Project Purpose and indicators

Target Value	Indicator	Actual Value
DCA's capacities relevant to continuous improvement of Vientiane International Airport have been developed.	A report compiling all the outputs of the Project has been produced.	A Draft Final Report was submitted. 100%

3. History of PDM Modification

PDM was modified in September to change the project period from 9 months (until the end of October 2021) to 14 months (until the end of March 2022).

4. Others

4-1 Results of Environmental and Social Considerations

Refer to 6.1.2 Environmental and social impact in the Draft Final Report.

4-2 Results of Considerations on Gender/Peace Building/Poverty Reduction

Not Applicable

III. Results of Joint Review**1. Results of Review based on DAC Evaluation Criteria**

Evaluation Criteria	Results	Evaluation
Relevance	High	The Project objective is relevance to Lao National Socio Economic Development Plan (NSEDP) targets The project output meets the needs of DCA The project is relevant to Japanese ODA policy and program
Effectiveness	High	The project purpose was achieved at an acceptable level. Outputs of the project have contributed to the project purpose.
Efficiency	Moderate	The Japanese Expert have fully dedicated themselves to the project. The counterpart team was appropriate and their capability was good enough to conduct activities. All the outputs were achieved as planned. The project was delayed due to COVID-19.
Impact	High	Through developing the immediate development plan and the long-term improvement plan for Vientiane International Airport, DCA has recognized necessity to continuously improve the airport, and plans to implement the immediate development plan.
Sustainability	High	Phased development plan to sustain development and operation of Vientiane International Airport to meet future demand and international standards were prepared.

2. Key Factors Affecting Implementation and Outcomes

COVID-19 affected the project implementation. Ten Japanese expert initially planned to visit Vientiane International Airport three times in April, August and October 2021. However, due to prevention measures to spread COVID-19, only three experts made one trip each to the site from June to October. Collection of data and information to understand the current situation were

delayed. Activities in Japan were also delayed because of COVID-19 prevention measures took place in Japan. As the result, the project period had to be extended from 9 months to 14 months.

3. Evaluation on the results of the Project Risk Management

The schedule of the project had to be revised due to the prevention measures to spread COVID-19. This risk was recognized at the beginning of the project; however, it was not expected to last long and visiting site by Japanese experts were expected to happen by the middle of 2021. In fact, it was not possible for all ten experts to visit site and only three experts made one trip each. To conduct site survey, tools such as photograph, video, and remote observation through mobile phone, were conducted. The communication between the counterpart and the Japanese experts were mainly by mobile phone and video conference. The JICA experts employed a full-time local consultant to support the experts for collecting information and communication with counterpart team. These tools were efficient but not as efficient as the face-to-face communication.

4. Lessons Learnt

It was difficult to evaluate the current conditions of existing facilities without visiting the site. To collect information and data remotely took a long time. It is important to establish trust relationship between counterparts and Japanese experts at the initial stage however, without face-to-face communication and with only remote meeting, it was not possible. After visiting site by Japanese experts, these difficulties were decreased but it needed time.

It is important for Japanese experts to visit the site in the initial stage of the project to conduct such master plan project efficiently.

IV. For the Achievement of Overall Goals after the Project Completion

1. Prospects to achieve Overall Goal

Overall Goal is:

The usability, efficiency, and safety of Vientiane International Airport have been improved to meet growing air traffic demand.

Recovery of the air traffic demand is expected to happen by 2025 after the COVID-19. The air passenger will be increased rapidly as same as before 2019, it is necessary to develop and rehabilitate the current facilities in Vientiane International Airport.

2. Plan of Operation and Implementation Structure of the Lao PDR side to achieve Overall Goal

The project prepared the immediate development plan to target completion by 2025 and long term development plan toward year 2045. The immediate project focused on ease of congestions and improve safety aircraft operation. DCA plans to implement the immediate development plan.

3. Recommendations for the Lao PDR side

The future development plan prepared in the project is based on the air traffic demand forecast conducted in the study. Since future air traffic demand will be different from the forecast, the forecast and the development plan have to be revised every 5 years to reflect the real situation in the airport.

ANNEX 1: Results of the Project

Member of JICA Technical Cooperation Team

Position	Name	Company
Chief Advisor/Airport Planner/Runway/ATC Capacity Analysis Expert (2)	Mr. Takao Yamaguchi	Gyros Corporation
Air Traffic Demand Forecast Expert	Mr. Hideo Arikawa	Ars System Corporation
Runway/ATC Capacity Analysis Expert (1)	Mr. Atsushi Miwa	Pacific Consultants Co., Ltd.
Airspace and Flight Procedure Planner	Mr. Shinji Hara	Pacific Consultants Co., Ltd.
Airport Civil Engineering Facility Planner	Mr. Keisuke Mizukami	Pacific Consultants Co., Ltd.
Airport Terminal Facility Planner	Mr. Kimihiko Ogihara	Gyros Corporation
Air Navigation System Planner	Mr. Hiroshi Mizumasa	Gyros Corporation
Environmental Impact Expert	Mr. Norikazu Yamazaki	Yachiyo Engineering Co., Ltd.
Project Cost Estimation Expert	Ms. Marie Iokawa	Gyros Corporation
Economic/Financial Analysis Expert	Ms. Kinuyo Fukuda	Gyros Corporation
Local Consultant	Mr. Khamlek Chintavong	Gyros Corporation

Member of Counterpart Team

Organization	Position	Name
DCA	Director General:	Mr.Viengxay Singkham
	Director, Aerodrome Safety and Standard Division (ASSD)	Mr.Sengsangouane Chanthavong
	Deputy Director, Aviation Security	Ms.Thienthong Sopha
	Deputy Director, Air Transport Division (ATD)	Mrs.Pikeo Vongviseth
	Director, Air Navigation Standards Division (ANSD)	Mr.Sohnsacksit Khamkeo
	Project Manager// ASSD	Mr.Komack Keochampa
	Officer, ASSD	Mr.Kingsakda Muongmany
	Officer, ASSD	Mr.Anoosin Liengxay
AOL	Deputy Director, Airport Safety Division	Mr.Phantha Pemphanith
LANS	AIS Officer / Flight Procedure Designer	Ms.Inseelee Bouapao
	Deputy Director, Technical Division	Mr.Somphavanh Kingsada
WIA	Director, Wattay International Airport	Mr.Keosouli Noufongsamouth
L-JATS	Deputy General Director	Mr.Bounthavy Somsanith

Plan of Operation

Year/Month	2021												1	2	3	
	2	3	4	5	6	7	8	9	10	11	12					
Japanese Experts																
1. Chief Advisor/Airport Planner/ Runway/ATC Capacity Analysis Expert (2)																
2. Air Traffic Demand Forecast Expert																
3. Runway/ATC Capacity Analysis Expert (1)																
4. Airspace and Flight Procedure Planner																
5. Airport Civil Engineering Facility Planner																
6. Airport Terminal Facility Planner																
7. Air Navigation System Planner																
8. Environmental Impact Expert																
9. Project Cost Estimation Expert																
10. Economic/Financial Analysis Expert																
Activities																
1. To understand current situation of Vientiane International Airport																
1-1 Socio-economic conditions	✓	✓														
1-2 Air traffic demand growth trend	✓	✓														
1-3 Related organizations – government, airlines, airport operators and others	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1-4 Government policy on airport development	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1-5 Vientiane International Airport facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1-6 Airport access to Vientiane International Airport	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1-7 Past studies on airport development for Vientiane International Airport	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1-8 Environmental laws and regulations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. To conduct air traffic demand forecasts up to year 2050 of Vientiane International Airport																
2-1 Projection of future socio-economic framework	✓	✓														
2-2 Annual passenger, cargo and aircraft movement forecasts	✓	✓														
2-3 Peak hour forecasts	✓	✓														
2-4 Airport access traffic forecast	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3. To evaluate current facilities and services of Vientiane International Airport with respect to current and future requirements																
3-1 Runway, instrument flight procedures and ATC procedures	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-2 Taxiways and aircraft stands	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-3 Passenger terminal facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-4 Cargo terminal facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-5 Rescue and firefighting facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-6 Aeronautical ground lighting systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-7 Air navigation and meteorological systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-8 Fuel supply facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-9 Airport access	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-10 Airport utility systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-11 Drainage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-12 Others	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4. To identify immediate improvement needs at Vientiane International Airport																
4-1 Improvement of facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4-2 Improvement of services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5. To develop long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas																
5-1 To conduct alternative study to enhance runway capacity	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5-2 To formulate long-term development plan for airport facilities including descriptions of each improvement, general layout plan, implementing organization, etc.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5-3 To estimate project implementation schedule and costs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6. To conduct economic and financial analyses on the long-term development plan of Vientiane International Airport																
6-1 To conduct economic analysis of the long-term development plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6-2 To conduct financial analysis on the long-term development plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6-3 To examine funding plan for the long-term development plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Monitoring Plan																
1. Work Plan (Inception Report)																
2. Progress Report																
3. Monitoring Report (Progress Report)																
4. Draft Final Report																
5. Project Completion Report (Final Report)																
6. JCC																

Legend

- Work in Lao PDR
- Work in Japan

**ANNEX 2: List of Products (Report, Manuals, Handbooks, etc.)
Produced by the Project**

1. Inception Report
2. Progress Report
3. Draft Final Report
4. Final Report

ANNEX 3: PDM (All versions of PDM)

Project Title: The Project for Technical Support on Continuous Improvement of Vientiane International Airport

Implementing Agency: Department of Civil Aviation, Ministry of Public Works and Transport (DCA)

Target Group: Airport Improvement Committee (DCA/AOL/LANS/L-JATS/ATS)

Project Site: Vientiane International Airport

Version 2.0

Period of the Project: 14 months

Date: 30 September 2021

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal			
Usability, efficiency and safety of Vientiane International Airport have been improved to meet growing air traffic demand.	1. Immediate improvement of Vientiane International Airport has been undertaken. 2. Funding plan for long-term improvement plan for Vientiane International Airport has been decided by DCA.	Survey	
Project Purpose			
DCA's capacities relevant to continuous improvement of Vientiane International Airport have been developed.	A report compiling all the outputs of the Project has been produced.	Project Completion Report (Final Report)	<ul style="list-style-type: none"> - Budget necessary for immediate improvement of Vientiane International Airport is secured. - MPWT instructs the implementation of long-term improvement plan of Vientiane International Airport.
Outputs			
<ol style="list-style-type: none"> 1. Current situation of Vientiane International Airport has been understood. 2. Air traffic demand forecasts up to year 2050 of Vientiane International Airport have been conducted. 3. Current facilities and services at Vientiane International Airport have been evaluated. 4. Immediate improvement needs of Vientiane International Airport have been identified. 5. Long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas has been developed. 6. Economic and financial analyses on the long-term improvement plan of Vientiane International Airport have been conducted. 	<p>A report on current situation of Vientiane International Airport has been produced.</p> <p>A report on air traffic demand forecasts up to year 2050 of Vientiane International Airport has been produced.</p> <p>A report on current facilities and services at Vientiane International Airport has been produced.</p> <p>A report on immediate improvement needs of Vientiane International Airport has been produced.</p> <p>A report on long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas has been produced.</p> <p>A report on economic and financial analyses on the long-term improvement plan of Vientiane International Airport has been produced.</p>	<p>Monitoring Report (Progress Report 1 & 2)</p> <p>Monitoring Report (Progress Report 1 & 2)</p> <p>Monitoring Report (Progress Report 1 & 2)</p> <p>Monitoring Report (Progress Report 1 & 2)</p> <p>Draft Project Completion Report (Draft Final Report)</p> <p>Draft Project Completion Report (Draft Final Report)</p>	

PM Form 4 Project Completion Report

Activities	Inputs		
	Japanese Side	Lao Side	
<p>1. To understand current situation of Vientiane International Airport</p> <p>1-1 Socio-economic conditions</p> <p>1-2 Air traffic demand growth trend</p> <p>1-3 Related organizations – government, airlines, airport operators and others</p> <p>1-4 Government policy on airport development</p> <p>1-5 Vientiane International Airport facilities</p> <p>1-6 Airport access to Vientiane International Airport</p> <p>1-7 Past studies on airport development for Vientiane International Airport</p> <p>1-8 Environmental laws and regulations</p> <p>2. To conduct air traffic demand forecasts up to year 2050 of Vientiane International Airport</p> <p>2-1 Projection of future socio-economic framework</p> <p>2-2 Annual passenger, cargo and aircraft movement forecasts</p> <p>2-3 Peak hour forecasts</p> <p>2-4 Airport access traffic forecast</p> <p>3. To evaluate current facilities and services of Vientiane International Airport with respect to current and future requirements</p> <p>3-1 Runway, instrument flight procedures and ATC procedures</p> <p>3-2 Taxiways and aircraft stands</p> <p>3-3 Passenger terminal facilities</p> <p>3-4 Cargo terminal facilities</p> <p>3-5 Rescue and firefighting facilities</p> <p>3-6 Aeronautical ground lighting systems</p> <p>3-7 Air navigation and meteorological systems</p> <p>3-8 Fuel supply facilities</p> <p>3-9 Airport access</p> <p>3-10 Airport utility systems</p> <p>3-11 Drainage</p> <p>3-12 Others</p> <p>4. To identify immediate improvement needs at</p>	<p>Experts:</p> <ul style="list-style-type: none"> - Chief Advisor/Airport Planner/Runway/ATC Capacity Analysis (2) - Air Traffic Demand Forecast Expert - Runway/ATC Capacity Analysis (1) - Airspace and Flight Procedure Planner - Airport Civil Engineering Facility - Airport Terminal Facility Planner - Air Navigation System Planner - Environmental Impact Expert - Project Cost Estimation Expert - Economic/Financial Analysis Expert 	<p>Counterparts:</p> <ul style="list-style-type: none"> - Project Director - Project Manager - Airport Improvement Committee Members <p>Project Office:</p> <ul style="list-style-type: none"> - Office in the DCA headquarters (with desks/chairs) <p>Data and Information related to the Project</p> <p>Running Cost:</p> <ul style="list-style-type: none"> - Operation and maintenance of Project Office - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-country travel expenses per diem of DCA counterpart personnel 	<ul style="list-style-type: none"> - Counterparts involve in the Project throughout the project period. - Counterparts implement the Project with sufficient ownership. <hr/> <p>Pre-conditions</p> <ul style="list-style-type: none"> - Ministry of Public Works and Transport supports the implementation of the Project. - DCA secures budget necessary for the implementation of the Project.

<p>Vientiane International Airport</p> <p>4-1 Improvement of facilities</p> <p>4-2 Improvement of services</p> <p>5. To develop long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas</p> <p>5-1. To conduct alternative study to enhance runway capacity</p> <p>5-2. To formulate long-term improvement plan or airport facilities including descriptions of each improvement, general layout plan, implementing organization, etc.</p> <p>5-3. To estimate project implementation schedule and costs</p> <p>6. To conduct economic and financial analyses on the long-term improvement plan of Vientiane International Airport</p> <p>6- 1. To conduct economic analysis of the long-term improvement plan</p> <p>6-2. To conduct financial analysis on the long-term improvement plan</p> <p>6-3. To examine funding plan for the long-term improvement plan</p>			
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ANNEX 4: R/D, M/M, Minutes of JCC (copy)

RECORD OF DISCUSSIONS

FOR

THE PROJECT FOR TECHNICAL SUPPORT ON
CONTINUOUS IMPROVEMENT OF
VIENTIANE INTERNATIONAL AIRPORT

AGREED UPON BETWEEN

DEPARTMENT OF CIVIL AVIATION, MINISTRY OF PUBLIC WORKS
AND TRANSPORT

OF

THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Dated 10th June 2020



Based on the minutes of meetings on the Detailed Planning Survey for The Project for Technical Support on Continuous Improvement of Vientiane International Airport (hereinafter referred to as "the Project") signed on 7 February 2020 between the Department of Civil Aviation, Ministry of Public Works and Transport of the Lao People's Democratic Republic (hereinafter referred to as "the Counterpart") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with the Counterpart and relevant organizations to develop a detailed plan of the Project.

The purpose of this record of discussions (hereinafter referred to as "the R/D") is to establish a mutual agreement for its implementation by both parties and to agree on the detailed plan of the Project as described in the followings and the Annexes, which will be implemented within the framework of the Agreement on Technical Cooperation signed on 12 December 2003 (hereinafter referred to as "the Agreement") and the Note Verbales exchanged on 21 May 2020 between the Government of Japan and the Government of the Lao People's Democratic Republic.

The Counterpart will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of the Lao People's Democratic Republic.

Both parties also agreed that the Project will be implemented in accordance with the "Basic Principles for Technical Cooperation" published in December 2016 (hereinafter referred to as "the BP"), unless other arrangements are agreed in the R/D.

The R/D is delivered at Vientiane as of the day and year first above written. The R/D may be amended by a minutes of meetings between both parties, except the plan of operation to be modified in monitoring sheets. The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the R/D.



Yoshihiko Yoneyama
Chief Representative
Laos Office
Japan International Cooperation Agency



Vanpheng Chanthaphone
Director General
Department of Civil Aviation,
Ministry of Public Works and Transport

- Annex 1 Main Points Discussed
- Annex 2 Project Design Matrix (PDM)
- Annex 3 Plan of Operation (PO)
- Annex 4 Implementation Structure
- Annex 5 List of Proposed Members of Joint Coordinating Committee
- Annex 6 Basic Principles for Technical Cooperation, December 2016

MAIN POINTS DISCUSSED

I. The Project Title

Both sides agreed that the title of the Project is "The Project for Technical Support on Continuous Improvement of Vientiane International Airport".

II. Airport Improvement Committee

DCA will organize Airport Improvement Committee. The purpose of the Committee is to plan and realize continuous improvement of Vientiane International Airport, and act as the counterpart of this Project. It will be chaired by the Project Director and composed of members from DCA, Wattay International Airport under Airports of Laos (AOL), Lao Air Navigation Services (LANS), Lao-Japan Airport Terminal Services (L-JATS) and Airport Terminal Service (ATS).



Project Design Matrix

Project Title: The Project for Technical Support on Continuous Improvement of Vientiane International Airport
Implementing Agency: Department of Civil Aviation, Ministry of Public Works and Transport (DCA)
Target Group: Airport Improvement Committee (DCA/AOL/LANS/L-JATS/IATS)
Project Site: Vientiane International Airport
Version 0.0
Date: 10 June 2020
Period of the Project: 9 months

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p>Overall Goal Usability, efficiency and safety of Vientiane International Airport have been improved to meet growing air traffic demand.</p>	<ol style="list-style-type: none"> Immediate improvement of Vientiane International Airport has been undertaken. Funding plan for long-term improvement plan for Vientiane International Airport has been decided by DCA. 	Survey	
<p>Project Purpose DCA's capacities relevant to continuous improvement of Vientiane International Airport have been developed.</p>	<p>A report compiling all the outputs of the Project has been produced.</p>	Project Completion Report (Final Report)	<ul style="list-style-type: none"> Budget necessary for immediate improvement of Vientiane International Airport is secured. MPWT instructs the implementation of long-term improvement plan of Vientiane International Airport.
<p>Outputs</p> <ol style="list-style-type: none"> Current situation of Vientiane International Airport has been understood. Air traffic demand forecasts up to year 2050 of Vientiane International Airport have been conducted. Current facilities and services at Vientiane International Airport have been evaluated. Immediate improvement needs of Vientiane International Airport have been identified. 	<p>A report on current situation of Vientiane International Airport has been produced.</p> <p>A report on air traffic demand forecasts up to year 2050 of Vientiane International Airport has been produced.</p> <p>A report on current facilities and services at Vientiane International Airport has been produced.</p> <p>A report on immediate improvement needs of Vientiane International Airport has been produced.</p>	Monitoring Report (Progress Report) Monitoring Report (Progress Report) Monitoring Report (Progress Report)	

<p>5. Long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas has been developed.</p> <p>6. Economic and financial analyses on the long-term improvement plan of Vientiane International Airport have been conducted.</p>	<p>A report on long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas has been produced.</p> <p>A report on economic and financial analyses on the long-term improvement plan of Vientiane International Airport has been produced.</p>	<p>Draft Project Completion Report (Draft Final Report)</p> <p>Draft Project Completion Report (Draft Final Report)</p>	<p>Counterparts involve in the Project throughout the project period.</p> <ul style="list-style-type: none"> - Counterparts implement the Project with sufficient ownership. 				
<p>Activities</p> <ol style="list-style-type: none"> To understand current situation of Vientiane International Airport <ol style="list-style-type: none"> 1-1 Socio-economic conditions 1-2 Air traffic demand growth trend 1-3 Related organizations – government, airlines, airport operators and others 1-4 Government policy on airport development 1-5 Vientiane International Airport facilities 1-6 Airport access to Vientiane International Airport 1-7 Past studies on airport development for Vientiane International Airport 1-8 Environmental laws and regulations To conduct air traffic demand forecasts up to year 2050 of Vientiane International Airport <ol style="list-style-type: none"> 2-1 Projection of future socio-economic framework 2-2 Annual passenger, cargo and aircraft movement forecasts 2-3 Peak hour forecasts 2-4 Airport access traffic forecast To evaluate current facilities and services of Vientiane International Airport with respect to current and future requirements <ol style="list-style-type: none"> 3-1 Runway, instrument flight procedures and ATC procedures 		<p>Inputs</p> <p>Japanese Side</p> <p>Experts:</p> <ul style="list-style-type: none"> - Chief Advisor/Airport Planner - Air Traffic Demand Forecast Expert - Runway/ATC Capacity Analysis Expert - Airspace and Flight Procedure Planner - Airport Civil Engineering Facility Planner - Airport Terminal Facility Planner - Air Navigation System Planner - Environmental Impact Expert - Project Cost Estimation Expert - Economic/Financial Analysis Expert - Others as necessary 		<p>Lao Side</p> <p>Counterparts:</p> <ul style="list-style-type: none"> - Project Director - Project Manager - Airport Improvement Committee Members <p>Project Office:</p> <ul style="list-style-type: none"> - Office in the DCA headquarters (with desks/chairs) <p>Data and Information related to the Project</p> <p>Running Cost:</p> <ul style="list-style-type: none"> - Operation and maintenance of Project Office - Supply or replacement of machinery, equipment and materials necessary for the Project other than provided by JICA - In-country travel expenses per diem of DCA counterpart personnel 		<p>Pro-conditions</p> <ul style="list-style-type: none"> - Ministry of Public Works and Transport supports the implementation of the Project. - DCA secures budget necessary for the implementation of the Project. 	

<p>3-2 Taxiways and aircraft stands 3-3 Passenger terminal facilities 3-4 Cargo terminal facilities 3-5 Rescue and firefighting facilities 3-6 Aeronautical ground lighting systems 3-7 Air navigation and meteorological systems 3-8 Fuel supply facilities 3-9 Airport access 3-10 Airport utility systems 3-11 Drainage 3-12 Others</p> <p>4. To identify immediate improvement needs at Vientiane International Airport 4-1 Improvement of facilities 4-2 Improvement of services</p> <p>5. To develop long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas 5-1. To conduct alternative study to enhance runway capacity 5-2. To formulate long-term improvement plan for airport facilities including descriptions of each improvement, general layout plan, implementing organization, etc. 5-3. To estimate project implementation schedule and costs</p> <p>6. To conduct economic and financial analyses on the long-term improvement plan of Vientiane International Airport 6-1. To conduct economic analysis of the long-term improvement plan 6-2. To conduct financial analysis on the long-term improvement plan 6-3. To examine funding plan for the long-term</p>			
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Yue

Chu

improvement plan

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Annex 3

PLAN OF OPERATION (PO)

Version 0.0
Date: 10 June 2020

Project Title: The Project for Technical Support on Continuous Improvement of Vientiane International Airport

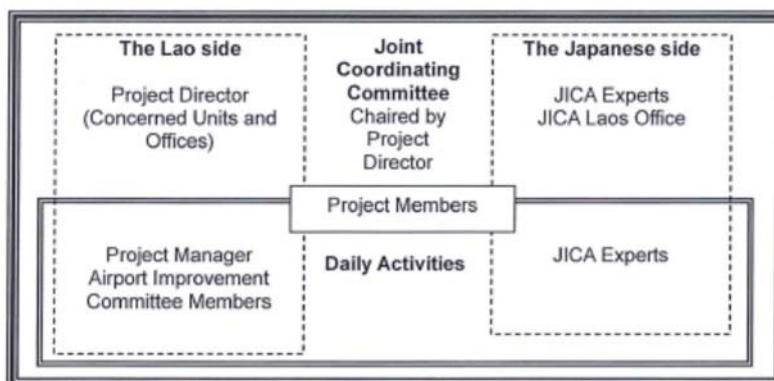
Year/Month	2020			2021								
	10	11	12	1	2	3	4	5	6	7	8	9
Japanese Experts												
1. Chief Advisor/Airport Planner	■	■	■	■	■	■	■	■	■	■	■	■
2. Air Traffic Demand Forecast Expert	■	■	■	■	■	■	■	■	■	■	■	■
3. Runway/ATC Capacity Analysis Expert	■	■	■	■	■	■	■	■	■	■	■	■
4. Airspace and Flight Procedure Planner	■	■	■	■	■	■	■	■	■	■	■	■
5. Airport Civil Engineering Facility Planner	■	■	■	■	■	■	■	■	■	■	■	■
6. Airport Terminal Facility Planner	■	■	■	■	■	■	■	■	■	■	■	■
7. Air Navigation System Planner	■	■	■	■	■	■	■	■	■	■	■	■
8. Environmental Impact Expert	■	■	■	■	■	■	■	■	■	■	■	■
9. Project Cost Estimation Expert	■	■	■	■	■	■	■	■	■	■	■	■
10. Economic/Financial Analysis Expert	■	■	■	■	■	■	■	■	■	■	■	■
Activities												
1. To understand current situation of Vientiane International Airport	■	■	■	■	■	■	■	■	■	■	■	■
1-1 Socio-economic conditions	■	■	■	■	■	■	■	■	■	■	■	■
1-2 Air traffic demand growth trend	■	■	■	■	■	■	■	■	■	■	■	■
1-3 Related organizations – government, airlines, airport operators and others	■	■	■	■	■	■	■	■	■	■	■	■
1-4 Government policy on airport development	■	■	■	■	■	■	■	■	■	■	■	■
1-5 Vientiane International Airport facilities	■	■	■	■	■	■	■	■	■	■	■	■
1-6 Airport access to Vientiane International Airport	■	■	■	■	■	■	■	■	■	■	■	■
1-7 Past studies on airport development for Vientiane International Airport	■	■	■	■	■	■	■	■	■	■	■	■
1-8 Environmental laws and regulations	■	■	■	■	■	■	■	■	■	■	■	■
2. To conduct air traffic demand forecasts up to year 2030 of Vientiane International Airport	■	■	■	■	■	■	■	■	■	■	■	■
2-1 Projection of future socio-economic framework	■	■	■	■	■	■	■	■	■	■	■	■
2-2 Annual passenger, cargo and aircraft movement forecasts	■	■	■	■	■	■	■	■	■	■	■	■
2-3 Peak hour forecasts	■	■	■	■	■	■	■	■	■	■	■	■
2-4 Airport access traffic forecast	■	■	■	■	■	■	■	■	■	■	■	■
3. To evaluate current facilities and services of Vientiane International Airport with respect to current and future requirements	■	■	■	■	■	■	■	■	■	■	■	■
3-1 Runway, instrument flight procedures and ATC procedures	■	■	■	■	■	■	■	■	■	■	■	■
3-2 Taxiways and aircraft stands	■	■	■	■	■	■	■	■	■	■	■	■
3-3 Passenger terminal facilities	■	■	■	■	■	■	■	■	■	■	■	■
3-4 Cargo terminal facilities	■	■	■	■	■	■	■	■	■	■	■	■
3-5 Rescue and firefighting facilities	■	■	■	■	■	■	■	■	■	■	■	■
3-6 Aeronautical ground lighting systems	■	■	■	■	■	■	■	■	■	■	■	■
3-7 Air navigation and meteorological systems	■	■	■	■	■	■	■	■	■	■	■	■
3-8 Fuel supply facilities	■	■	■	■	■	■	■	■	■	■	■	■
3-9 Airport access	■	■	■	■	■	■	■	■	■	■	■	■
3-10 Airport utility systems	■	■	■	■	■	■	■	■	■	■	■	■
3-11 Drainage	■	■	■	■	■	■	■	■	■	■	■	■
3-12 Others	■	■	■	■	■	■	■	■	■	■	■	■
4. To identify immediate improvement needs at Vientiane International Airport	■	■	■	■	■	■	■	■	■	■	■	■
4-1 Improvement of facilities	■	■	■	■	■	■	■	■	■	■	■	■
4-2 Improvement of services	■	■	■	■	■	■	■	■	■	■	■	■
5. To develop long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas	■	■	■	■	■	■	■	■	■	■	■	■
5-1 To conduct alternative study to enhance runway capacity	■	■	■	■	■	■	■	■	■	■	■	■
5-2 To formulate long-term development plan for airport facilities including descriptions of each improvement, general layout plan, implementing organization, etc.	■	■	■	■	■	■	■	■	■	■	■	■
5-3 To estimate project implementation schedule and costs	■	■	■	■	■	■	■	■	■	■	■	■
6. To conduct economic and financial analyses on the long-term development plan of Vientiane International Airport	■	■	■	■	■	■	■	■	■	■	■	■
6-1 To conduct economic analysis of the long-term development plan	■	■	■	■	■	■	■	■	■	■	■	■
6-2 To conduct financial analysis on the long-term development plan	■	■	■	■	■	■	■	■	■	■	■	■
6-3 To examine funding plan for the long-term development plan	■	■	■	■	■	■	■	■	■	■	■	■
Monitoring Plan												
1. Work Plan (Inception Report)	▲											
2. Monitoring Report (Progress Report)				▲								
3. Project Completion Report (Final Report)								▲ (Draft)	▲			
4. JOC	▲			▲								

Legend
 ■ Work in Lao PDR
 □ Work in Japan

Annex 4

**IMPLEMENTATION STRUCTURE OF
THE PROJECT FOR TECHNICAL SUPPORT ON CONTINUOUS IMPROVEMENT
OF VIENTIANE INTERNATIONAL AIRPORT**

The Project will be implemented by Department of Civil Aviation, Ministry of Public Works and Transport (DCA) in cooperation with JICA. The Project Organization Chart indicating joint implementation structure is shown below:



(1) DCA

(a) Project Director

Director General of DCA will be responsible for overall administration and implementation of the Project.

(b) Project Manager

Deputy Director of Aerodrome Safety and Standard Division of DCA will be responsible for the administration, implementation and management of the Project.

(c) Airport Improvement Committee Members

Airport Improvement Committee Members including representatives from AOL, LANS, L-JATS and ATS will be responsible for the operational matters of the Project.

(2) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to DCA on any matters pertaining to the implementation of the Project.

Annex 5

**PROPOSED MEMBERS OF JOINT COORDINATING COMMITTEE FOR
THE PROJECT FOR TECHNICAL SUPPORT ON CONTINUOUS IMPROVEMENT
OF VIENTIANE INTERNATIONAL AIRPORT**

1. Composition

(1) Project Team

- 1) Project Director, Director General of DCA
- 2) Project Manager, Deputy Director of Aerodrome Safety and Standard Division of DCA
- 3) Airport Improvement Committee Members
- 4) JICA Experts
- 5) Representatives and staff of JICA Laos Office
- 6) Others whom are to be agreed by the Counterpart and JICA

(2) Other members from the Lao side, if necessary:

- 1) Cooperation partners,
- 2) Other persons that the Lao side might consider necessary (consultants, technicians, etc.)

(3) Other members from Japanese side, if necessary:

- 1) Staff from JICA Headquarters, other national and foreign offices
- 2) Staff from the Embassy of Japan
- 3) Other persons that Japanese side might consider necessary



BASIC PRINCIPLES
FOR
TECHNICAL COOPERATION

December, 2016

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)



Basic Principles for Technical Cooperation
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Basic Principles for Technical Cooperation

I. Introduction

Section 1.1 Introduction

The purpose of the Basic Principles for Technical Cooperation (hereinafter referred to as "the BP") is to set forth the basic principles generally applicable to Technical Cooperation Project and Technical Cooperation for Development Planning implemented jointly by the Japan International Cooperation Agency and the implementing agency of the recipient country (hereinafter referred to as "Technical Cooperation"), which consists of the record of discussions (hereinafter referred to as "the R/D") agreed upon between the Japan International Cooperation Agency (hereinafter referred to as "JICA") and the implementing agency of the recipient country (hereinafter referred to as "the Counterpart").

Section 1.2 Inconsistency with the R/D

If any contents of the BP is inconsistent with any contents of the R/D, such contents of the R/D will prevail.

II. Definition of Technical Cooperation

Section 2.1 Technical Cooperation

Technical Cooperation supports human resource development, research and development, technology dissemination and the development of institutional frameworks essential for the development of economies and societies in the recipient country.

Section 2.2 Technical Cooperation Project

Technical Cooperation Project refers to a systematic and comprehensive project implementation to attain certain outcomes within certain time period, in which input includes, but not limited to, the dispatch of members of JICA missions and/or JICA experts, acceptance of training participants, and/or provision of equipment from JICA.

Section 2.3 Technical Cooperation for Development Planning

In Technical Cooperation for Development Planning, JICA conducts necessary studies to support the recipient country to formulate policies and master plans, by dispatching members of JICA missions. Based on the results of this cooperation, the recipient country is expected to formulate plans for sector/regional development or rehabilitation/reconstruction by utilizing the results, to implement plans by raising funds from international organizations and others, and/or to carry out the recommended organizational/institutional reforms and other proposed activities.



III. Implementation Structure

Section 3.1 Project Team

Project team will work together for implementing Technical Cooperation. Its members include, but not limited to, Project Director, Project Manager, personnel from the Counterpart, members of JICA missions, JICA experts, and/or other members to be determined by both parties (hereinafter referred to as "the Project Team"). Details are described in the R/D.

Section 3.2 Roles of Project Team Members

General roles of members of the Project Team are as follows. Roles for other members will be determined by both parties for specific Technical Cooperation.

(1) Project Director

The project director, appointed from the Counterpart, will be responsible for the overall implementation and coordination of Technical Cooperation.

(2) Project Manager

The project manager, appointed from the Counterpart, will manage Technical Cooperation on a regular basis, and be responsible for administrative and technical matters of Technical Cooperation.

(3) Members of JICA Missions

The members of JICA missions will conduct studies regarding Technical Cooperation in cooperation with the Counterpart.

(4) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to the Counterpart on any matters pertaining to the implementation of Technical Cooperation.

Section 3.3 Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to manage Technical Cooperation, and its proposed members are listed in the R/D. JCC will be held at least once a year and whenever deems it necessary and plays vital roles for implementing Technical Cooperation as follows.

(1) JCC for Technical Cooperation Project

Main tasks are 1) to review the progress, 2) to revise the overall plan when necessary, 3) to approve an annual work plan, 4) to suggest modifications of the framework (including the Project Design Matrix (hereinafter referred to as "PDM") and the Plan of Operation (hereinafter referred to as "PO") for Technical Cooperation Project), 5) to conduct evaluation of Technical Cooperation Project, and 6) to exchange opinions on major issues that arise during the implementation of Technical Cooperation Project.

(2) JCC for Technical Cooperation for Development Planning



Main tasks are to discuss on the progress and major issues that arise during the implementation of Technical Cooperation for Development Planning.

IV. Undertakings of the Counterpart

Section 4.1 Grant of Privileges, Exemptions, Benefits to JICA, the members of JICA missions and the JICA experts

The Counterpart and the government of the recipient country will take necessary measures to grant JICA, the members of JICA missions and the JICA experts privileges, exemptions and benefits in accordance with international agreements concluded between the government of Japan and the government of the recipient country.

Section 4.2 Provision of Conveniences for the members of JICA missions and the JICA experts

The Counterpart and the government of the recipient country will take necessary measures to provide conveniences listed hereto at its own expense;

- (1) Information as well as support in acquiring suitable furnished accommodation for the JICA experts and their families;
- (2) Information as well as support in obtaining medical service for the members of JICA missions, the JICA experts and their families; and
- (3) Credentials or identification cards as necessary to the members of JICA missions and the JICA experts.

Section 4.3 Provision of Services, Facilities and Local-Cost Bearing for the Technical Cooperation

The Counterpart and the government of the recipient country will take necessary measures to provide services, facilities and local-cost bearing listed hereto at its own expense;

- (1) Services of the Counterpart's personnel;
- (2) Suitable office space for the Project Team with necessary equipment;
- (3) Running expenses necessary for the implementation of Technical Cooperation;
- (4) Expenses necessary for transportation within the recipient country of the equipment provided by JICA for Technical Cooperation Project as well as for the installation, operation and maintenance thereof;
- (5) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of Technical Cooperation other than those prepared and provided by JICA;
- (6) Travel allowances for the Project Team for official travel within the recipient country; and
- (7) Available data (including maps and photographs) and information



related to Technical Cooperation.

V. Reporting

Section 5.1 Reporting for Technical Cooperation Project

The Project Team will prepare the Project Completion Report three (3) months before the completion of Technical Cooperation Project.

Section 5.2 Reporting for Technical Cooperation for Development Planning

The Project Team will prepare and submit the following reports to the Counterpart. Details, such as the language of the reports, will be determined based on mutual consultation.

- (1) Inception Report at the commencement of the work period in the recipient country
- (2) Interim Report at the middle of the work period in the recipient country
- (3) Draft Final Report at the end of the work period in the recipient country
- (4) Final Report within one (1) month after the receipt of the comments on the Draft Final Report

VI. Monitoring and Evaluation

Section 6.1 Regular Monitoring and Evaluation for Technical Cooperation Project

The Project Team will jointly and regularly monitor the progress of Technical Cooperation Project through the monitoring sheets based on PDM and PO every six (6) months, while JCC will conduct overall evaluations of Technical Cooperation Project.

Section 6.2 Ex-post Evaluations

JICA will conduct the following ex-post evaluations and surveys to verify sustainability and impact of Technical Cooperation and draw lessons. The Counterpart will make best efforts to provide necessary support for them.

- (1) Ex-post evaluation three (3) years after the completion of Technical Cooperation, in principle
- (2) Follow-up surveys, as necessary



VII. Ownership of Equipment, Machinery, and Materials

Section 7.1 Equipment, Machinery, and Materials provided by JICA

The equipment, machinery and materials provided by JICA will become the property of the Counterpart or competent authorities of the recipient country upon being delivered to the Counterpart or the authorities.

Section 7.2 Equipment, Machinery, and Materials owned by JICA

The equipment, machinery and materials prepared by JICA for the performance of duties of the members of JICA missions and the JICA experts will remain the property of JICA unless a separate arrangement is agreed between JICA and the Counterpart or competent authorities of the recipient country.

VIII. Construction of Pilot Facility

Section 8.1 Ownership of Pilot Facility

When a pilot facility is constructed in Technical Cooperation, based on a separate arrangement to be agreed between the relevant parties, JICA will provide necessary services for constructing the pilot facility for Technical Cooperation throughout the implementation period. Upon the completion of the construction, the pilot facility will become a property of the Counterpart or competent authorities of the recipient country. The Counterpart or the authorities will ensure proper and effective operation and maintenance of the pilot facility.

Section 8.2 Safety Management of Construction

JICA and the Counterpart will assure safety management of the construction in accordance with 'the Guidance for the Management of Safety for Construction Works in Japanese ODA Projects'.

IX. Public Relations

Section 9.1 Promotion of Public Support

For the purpose of promoting support for Technical Cooperation, JICA and the Counterpart will take appropriate measures to make Technical Cooperation widely known to the people of Japan and the recipient country.



X. Environmental and Social Considerations

Section 10.1 Policy

JICA and the Counterpart abide by 'JICA Guidelines for Environmental and Social Considerations (April, 2010)' in order to ensure that appropriate considerations will be made for the environmental and social impacts of Technical Cooperation.

XI. Miscellaneous

Section 11.1 Misconduct

All related personnel and organizations will keep the highest ethics and prevent any corrupt or fraudulent practices in the implementation of Technical Cooperation.

If JICA or the Counterpart receives information related to suspected corrupt or fraudulent practices in the implementation of Technical Cooperation, JICA and the Counterpart will cooperate to take appropriate measures against such practices and provide the other party with such information as the other party may reasonably request, including information related to any concerned personnel of the contractor, consultant, government and/or public organizations.

JICA and the Counterpart will not, unfairly or unfavorably treat the person and/or organization which provided the information related to suspected corrupt or fraudulent practices in the implementation of Technical Cooperation.

Section 11.2 Mutual Consultation

JICA and the Counterpart will consult each other whenever any issues arise in the course of implementation of Technical Cooperation.



MINUTES OF THE MEETING
PRE JOINT COORDINATING COMMITTEE
FOR
THE PROJECT FOR TECHNICAL SUPPORT ON CONTINUOUS IMPROVEMENT
OF
VIENTIANE INTERNATIONAL AIRPORT
BETWEEN
THE GOVERNMENT OF LAO PEOPLE'S DEMOCRATIC REPUBLIC
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

The Pre Joint Coordinating Committee (hereinafter referred to as "Pre JCC") for the Project for Technical Support on Continuous Improvement of Vientiane International Airport (hereinafter referred to as the "Project") was held on 17th February, 2021.

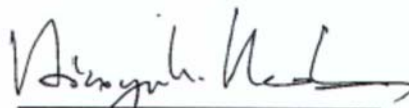
The meeting was chaired by Mr. Bountaeng Symoon, the Deputy Director General from Department of Civil Aviation (hereinafter referred to as "DCA"), the Government of Lao People's Democratic Republic. Others in attendance are listed in Attachment-1.

As a result of the discussions, both sides agreed to the matters in the documents attached as Attachment-2.

Vientiane, 17th February, 2021



Mr. Bountaeng Symoon
Project Director
Director of Civil Aviation
the Government of Lao People's
Democratic Republic



Mr. Hiroyuki Ueda
Senior Transport Sector Advisor
Japan International Cooperation Agency

Attachment-1: List of Participants

Date: 17th February, 2021
Time: 9:00 - 10:30 (Lao PDR Time)
11:00 - 12:30 (Japan Time)
Venue: DCA conference room (Vientiane, Lao PDR)
JICA Headquarters (Tokyo, Japan)
Consultant Office (Japan)

Attendance:

DCA

Deputy Director General:	Mr.Bountaeng Symoon
Deputy Director ASSD:	Mr.Sengsangouane Chanthavong
Officer:	Mr.Kingsakda Muongmany
Officer:	Mr.Anoosin Liengxay

LANS

AIS Officer:	Ms.Inseelee Bouapao
Deputy Director of Technical Division:	Mr.Somphavanh Kingsada

DCAL

Deputy Director of Air Transport Division:	Mrs.Pikeo Vongviseth
Director of ANSD:	Mr.Sohmsacksit Khamkeo
Director of ASSD:	Mr.Sackda Sourisack
Deputy Director Aviation Security:	Ms.Thienthong Sopha

AOL

Deputy Director of Airport Safety Division:	Mr.Phantha Pemphanith
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WIA

Director of WIA:	Mr.Keosouli Noufongsamouth
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JICA Headquarters

Senior Transport Sector Advisor: Mr. Hiroyuki Ueda
Deputy Assistant Director: Ms. Shiori Kondo

JICA Lao Office

Senior Program Officer: Mr. Phouthaphone Vorabouth

JICA Experts

Chief Advisor/Airport Planner/ Runway/ATC Capacity Analysis Expert (2): Mr. Takao Yamaguchi
Air Traffic Demand Forecast Expert Mr. Hideo Arikawa
Runway/ATC Capacity Analysis Expert (1) Mr. Atsushi Miwa
Airspace and Flight Procedure Planner Mr. Shinji Hara
Airport Civil Engineering Facility Planner Mr. Keisuke Mizukami
Airport Terminal Facility Planner Mr. Kimihiko Ogihara
Air Navigation System Planner Mr. Hiroshi Mizumasa
Environmental Impact Expert Mr. Norikazu Yamazaki
Project Cost Estimation Expert Ms. Marie Iokawa
Economic/Financial Analysis Expert Ms. Kinuyo Fukuda
Local Consultant: Mr. Khamlek Chintavong

Attachment-2: Matters Discussed

1) Opening and Introduction of Participants

- Mr. Bountaeng Symoon (BS) welcomed the meeting participants and expressed his gratitude and appreciation to the Japanese Government and JICA for the continued support to the Lao PDR, as well as the DCA in improving civil aviation infrastructure and capacity building.
- Mr. Hiroyuki Ueda (HU) briefed the purpose of the Pre JCC and the importance of this project. And Mr. Ueda added that the cooperation of the Lao government was essential for the success of this project.
- All participants introduced themselves

2) Presentations & Discussions

Mr. Takao Yamaguchi (TY) made a presentation about Inception Report. He shared the background, purpose and outputs of this project.

3) Question & Answer

1. BS asked if DCA could assign some staffs outside Airport Improvement Committee as counterparts.
HU answered that DCA could assign the related persons from outside.
2. BS asked that he needed to hear clarification from experts regarding the existing system of PANADES which the license is already expired.
Mr. Shinji Hara (SH) answered that the situation was not simple. He would like to have a separate meeting on this matter.
3. BS said that if the project considered the Airport Collaborative Decision-Making (ACDM) and Air Traffic Flow Management (ATFM), it might be efficient for the limited Vientiane airspace.
HU said that if the airspace above the downtown area and a part of Thai territory were usable, it would make aircraft departures and arrivals more efficient. However, coordination with Thai Civil Aviation Agency would be required to utilize the southern half of the airspace around Vientiane International Airport.

4) Actions to be Taken

1. Expert Acceptance Procedure: JICA Office to receive CVs of consultant teams and work with DCA for expert acceptance process with Ministry of Planning and Investment (MPI). Entry permit will need to be applied separately after acceptance procedure.
2. Questionnaires: related counterpart personnel to start working on the provided

questionnaires and consultant team to make contact with each staff in charge based on the email list provided in this Pre JCC.

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MINUTES OF THE MEETING

**FIRST JOINT COORDINATING COMMITTEE
FOR
THE PROJECT FOR TECHNICAL SUPPORT ON CONTINUOUS IMPROVEMENT
OF
VIENTIANE INTERNATIONAL AIRPORT
BETWEEN
THE GOVERNMENT OF LAO PEOPLE'S DEMOCRATIC REPUBLIC
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY**

The First Joint Coordinating Committee (hereinafter referred to as "First JCC") for the Project for Technical Support on Continuous Improvement of Vientiane International Airport (hereinafter referred to as the "Project") was held on 2nd November, 2021.

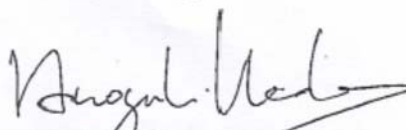
The meeting was chaired by Mr. Viengxay Singkham, the Director General from Department of Civil Aviation (hereinafter referred to as "DCA"), the Government of Lao People's Democratic Republic. Others in attendance are listed in Attachment-1.

As a result of the discussions, both sides agreed to the matters in the documents attached as Attachment-2.

Vientiane, 2nd November, 2021



Mr. Viengxay Singkham
Project Director
Director of Civil Aviation
the Government of Lao People's
Democratic Republic



Mr. Hiroyuki Ueda
Senior Transport Sector Advisor
Japan International Cooperation Agency

Attachment-1: List of Participants

Date: 2nd November, 2021
 Time: 14:00 - 16:00 (Lao PDR Time)
 16:00 - 18:00 (Japan Time)
 Venue: DCA conference room (Vientiane, Lao PDR)
 JICA Malawi Office (Lilongwe, Malawi)
 Consultant Office (Japan)

Attendance:

DCAL

Director General:	Mr. Viengxay Singkham
Director of ASSD:	Mr. Sengsangouane Chanthavong
Deputy Director of ASD:	Ms. Thienthong Sopha
Civil Engineer of ASSD:	Mr. Komack Keochampa
Civil Engineer of ASSD:	Mr. Kingsackda Muongmany
Civil Engineer of ASSD:	Mr. Anosin Lienxay
Director of ATD:	Mr. Soukxhongthong Voraphet
Director of ANSD:	Mr. Sohnsacksit Khamkeo
Deputy Director of ASSD:	Ms. Malaythong Phimmasone

AOL

Deputy Director of ASD:	Mr. Phantha Pemphanith
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LANS

Officer of LANS:	Ms. Inseelee Bouapao
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JICA Malawi Office

Senior Transport Sector Advisor:	Mr. Hiroyuki Ueda
Deputy Assistant Director:	Ms. Shiori Kondo

JICA Lao Office

Senior Representative	Ms. Sanada Akiko,
Senior Program Officer:	Mr. Phouthaphone Vorabouth

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Program Officer

Mr. Saitavong Phommachack

JICA Experts

Chief Advisor/Airport Planner/ Runway/ATC Capacity Analysis Expert (2): Mr. Takao Yamaguchi

Runway/ATC Capacity Analysis Expert (1) Mr. Atsushi Miwa

Airspace and Flight Procedure Planner Mr. Shinji Hara

Airport Civil Engineering Facility Planner Mr. Keisuke Mizukami

Airport Terminal Facility Planner Mr. Kimihiko Ogihara

Air Navigation System Planner Mr. Hiroshi Mizumasa

Environmental Impact Expert Mr. Norikazu Yamazaki

Project Cost Estimation Expert Ms. Marie Iokawa

Economic/Financial Analysis Expert Ms. Kinuyo Fukuda

Local Consultant: Mr. Khamlek Chintavong

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Attachment-2: Matters Discussed

1) **Opening and Introduction of Participants**

- Mr. Viengxay Singkham(VS) welcomed the meeting participants and expressed his gratitude and appreciation to the Japanese Government and JICA for the continued support to the Lao PDR and the DCA in improving civil aviation infrastructure and capacity building.
- Mr. Hiroyuki Ueda (HU) briefed the purpose of the First JCC and the importance of this project. And Mr. Ueda added that the cooperation of the Lao government was essential for the success of this project.
- Group photo session.

2) **Presentations & Discussions**

Mr. Takao Yamaguchi (TY) made a presentation about Progress Report. He shared the understanding of current situations, air traffic forecast, evaluation of existing facilities and services, and study of runway capacity enhancement.

3) **Question & Answer**

1. **Progress Report**

DCA agreed on the contents of the Progress Report.

2. **Obstacle Control measures (both existing and new obstacles).**

Mr. Phantha Pemphanith (PP) commented that obstacles in the vicinity of the airport are an issue and requested advice from JICA Experts on controlling obstacles.

TY explained it is necessary to put an obstacle light on the existing obstacle and coordinate with the city development plan to control the future obstacles. Mr. Shinji Hara (SH) explained there are three measures to maintain obstacles, 1) to publish the obstacles in AIP, 2) to install lights on the obstacles, and 3) to assess the existing obstacles.

3. **Terminal Management / Restructure:**

3.1 **Check-in area**

Mr.Soukxhongthong Voraphet (SV) commented check-in area would be congested because the size of aircraft will become larger such as B787 will be operated more frequently.

TY explained it is difficult to expand the area, but introducing a self-check-in system in the airport is one of the measures to reduce congestion.

3.2 **Security Checkpoint**

SV commented expansion of security checkpoint area would be necessary. TY explained utilization of the space before entering the checkpoint will be studied.

3.3 **Departure Lounge**

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SV commented that the utilization of space in the area could be possible, and if the proposed expansion is a three-story structure, it would be better because the third floor would be increased. TY explained that the JICA Experts would study the necessity of the third floor and the future terminal building expansion plan.

4. Technical Training

Mr. Sengsangouane Chanthavong (SC) explained it is difficult to complete the airport certificate system this year and face difficulty on human resources. SC requested JICA to assist aerodrome certificate and obstacle control.

4) Actions to be Taken

1. JICA Experts will explain 1) the expansion plan of the security area, 2) a detailed plan of expansion of the departure lounge, and 3) long term development plan with DCA when they complete these plans.
2. DCA and JICA will discuss the possibility of further technical cooperation on 1) obstacle control and 2) aerodrome certificate.

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**MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
DEPARTMENT OF CIVIL AVIATION, MINISTRY OF PUBLIC WORKS AND TRANSPORT
OF
THE LAO PEOPLE'S DEMOCRATIC REPUBLIC
FOR AMENDMENT OF THE RECORD OF DISCUSSIONS
ON
THE PROJECT FOR TECHNICAL SUPPORT ON
CONTINUOUS IMPROVEMENT OF
VIENTIANE INTERNATIONAL AIRPORT**

The Japan International Cooperation Agency (hereinafter referred to as "JICA") and the Department of Civil Aviation, Ministry of Public Works and Transport of the Lao People's Democratic Republic hereby agree that the Record of Discussions on The Project for Technical Support on Continuous Improvement of Vientiane International Airport signed on 10th June 2020 is amended as follows;

1. Annex 2 Project Design Matrix (PDM)

Before	Amended Version
The period of the Project will be 9 months. (Until the end of October 2021)	The period of the Project will be 14 months. (Until the end of March 2022)
Reason: Because of the global spread of the coronavirus disease 2019 (COVID-19), some of the project activities have been suspended/slowed. In order to achieve the project purpose, project duration needs to be extended. The duration may be further amended depending on the COVID-19 situation.	

Annex 1 : Record of Discussions (signed on 10th June 2020)

Annex 2 : Amended Project Design Matrix




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NAGASE Toshio
Chief Representative
Laos Office
Japan International Cooperation Agency



Vientiane, 30 September 2021

Viengxay SINGKHAM
Director General
Department of Civil Aviation,
Ministry of Public Works and Transport

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MINUTES OF THE MEETING
SECOND JOINT COORDINATING COMMITTEE
FOR
THE PROJECT FOR TECHNICAL SUPPORT ON CONTINUOUS IMPROVEMENT
OF
VIENTIANE INTERNATIONAL AIRPORT
BETWEEN
THE GOVERNMENT OF LAO PEOPLE'S DEMOCRATIC REPUBLIC
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

The Second Joint Coordinating Committee (hereinafter referred to as "Second JCC") for the Project for Technical Support on Continuous Improvement of Vientiane International Airport (hereinafter referred to as the "Project") was held on 31st March 2022.

The meeting was chaired by Mr. Viengxay Singkham, the Director General from Department of Civil Aviation (hereinafter referred to as "DCA"), the Government of Lao People's Democratic Republic. Others in attendance are listed in Attachment-1.

As a result of the discussions, both sides agreed to the matters in the documents attached as Attachment-2.

Vientiane, 6th April 2022

Mr. Viengxay Singkham
Project Director
Director of Civil Aviation
the Government of Lao People's
Democratic Republic

Mr. Hiroyuki Ueda
Senior Transport Sector Advisor
Japan International Cooperation Agency

Attachment-1: List of Participants

Date: 31st March 2022
 Time: 14:00 - 15:30 (Lao PDR Time)
 16:00 - 17:30 (Japan Time)
 Venue: DCA conference room (Vientiane, Lao PDR)
 JICA Headquarters (Japan)
 Consultant Office (Japan)

Attendance:

DCAL

Director General:	Mr. Viengxay Singkham
Director of ASSD:	Mr. Sengsangouane Chanthavong
Deputy Director of ASSD:	Ms. Thienthong Sopha
Civil Engineer of ASSD:	Mr. Komack Keochampa
Civil Engineer of ASSD:	Mr. Kingsackda Muongmany
Civil Engineer of ASSD:	Mr. Anosin Lienxay
Deputy Director of ATD:	Ms. Pikeo Vongviseth

AOL

Deputy Director of AOL:	Mr. Khamsavanh Sysomboun
Deputy Director of ASD:	Mr. Phantha Pemphanith

LANS

Deputy Director of AIS:	Ms. Davone Vilayseng
Officer of LANS:	Mr. Sompasong Tannavong

L-JATS

Director of Administration Department:	Ms. Chanpheng Nanthavong
Officer of Security Service Department:	Mr. Detharounh Chanthavong

JICA Headquarters

Senior Transport Sector Advisor:	Mr. Hiroyuki Ueda
Deputy Assistant Director:	Ms. Shiori Kondo
Senior Assistant Director:	Mr. Katsuji Miyata

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JICA Laos Office

Senior Representative	Mr. Koji Ohikiri
Representative	Mr. Tsuyoshi Yamamoto
Senior Program Officer:	Mr. Phouthaphone Vorabouth
Program Officer	Mr. Saitavong Phommachack

JICA Experts

Chief Advisor/Airport Planner/ Runway/ATC Capacity Analysis Expert (2):	Mr. Takao Yamaguchi
Runway/ATC Capacity Analysis Expert (1)	Mr. Atsushi Miwa
Airspace and Flight Procedure Planner	Mr. Shinji Hara
Airport Civil Engineering Facility Planner	Mr. Keisuke Mizukami
Airport Terminal Facility Planner	Mr. Kimihiko Ogihara
Air Navigation System Planner	Mr. Hiroshi Mizumasa
Environmental Impact Expert	Mr. Norikazu Yamazaki
Project Cost Estimation Expert	Ms. Marie Iokawa
Economic/Financial Analysis Expert	Ms. Kinuyo Fukuda
Local Consultant:	Mr. Khamlek Chintavong

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Attachment-2: Matters Discussed

1) Opening and Introduction of Participants

Mr. Viengxay Singkham welcomed the meeting participants and expressed his gratitude and appreciation to the Japanese Government and JICA for the continued support to the Lao PDR and the DCA in improving civil aviation infrastructure and capacity building.

2) Presentations & Discussions

Mr. Takao Yamaguchi gave a presentation on the Draft Final Report and Draft Project Completion Report. He explained the outcomes of the study, including the evaluation of the condition and capacity of existing infrastructures, facilities and services, air traffic demand forecasts, immediate improvement needs, and long-term development plans.

3) Question & Answer

1. Draft Final Report

DCA agreed in principle on the overall results presented in the Draft Final Report.

2. Air Traffic Demand Forecast

Mr. Koji Ohikiri requested additional explanations on the approaches and factors applied in the analysis of the forecast of air traffic demand.

Mr. Yamaguchi explained that the linear regression model was applied in the correlation analysis between previous GDP values and annual passengers for both international and domestic passengers. In addition, the forecast of GDP for Lao PDR up to 2027, published by the IMF, and the long-term GDP projections of OECD countries from 2027 to 2050 were also taken into account.

Mr. Phouthaphone Vorabouth asked whether the air traffic forecast was conducted separately for international and domestic demand. He also expressed concern based on his observation about the shift in domestic travel from air transport to rail, which could contribute to the lower demand for domestic air traffic in the future.

Mr. Yamaguchi responded that the demand for domestic and international air traffic was estimated separately. The competition between air transport and rail in the domestic market was not taken into account in the forecast since impact of express rail transport is uncertain.

3. Airline Survey

Mr. Tsuyoshi Yamamoto asked whether the future plans were considered in the forecast.

Mr. Yamaguchi explained that interview survey with airlines in Lao PDR were conducted in which future fleet and route expansion plans were also analyzed in the forecast.

ANNEX 5: Monitoring Sheet (copy)

PROJECT MONITORING SHEET

Project Title : THE PROJECT FOR TECHNICAL SUPPORT ON CONTINUOUS
IMPROVEMENT OF VIENTIANE INTERNATIONAL AIRPORT

Version of the Sheet: Ver.2 (Term: 18 January 2021 - 30 September 2021)

Name: Takao Yamaguchi

Title: Chief Advisor

Submission Date: 8 October 2021

I. Summary : Table of Contents

1 Progress
1-1. Progress of Inputs
1-2. Progress of Activities
1-3. Achievement of Output
1-4. Achievement of the Project Purpose
1-5. Changes of Risks and Actions for Mitigation
1-6. Progress of Actions undertaken by JICA
1-7. Progress of Actions undertaken by Gov. of Lao
1-8. Progress of Environmental and Social Considerations (if applicable)
1-9. Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)
1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)
2 Delay of Work Schedule and/or Problems (if any)
2-1. Detail
2-2. Cause
2-3. Action to be taken
2-4. Roles of Responsible Persons/Organization (JICA, Gov. of Lao, etc.)
3 Modification of the Project Implementation Plan
3-1. PO:
3-2. Other modifications on detailed implementation plan
4 Preparation of Gov. of Lao PDR toward after completion of the Project

II. Project Monitoring Sheet I & II (Version 2.0) as attached**1. Progress****1-1 Progress of Inputs**

(1) Input from Japanese Side

Dispatch of Japanese Experts

Ten JICA Experts have been assigned to the Projects. A list of JICA Experts and their total assignment period up to 30 September 2021 is shown in Table 1-1-1.

Table 1-1-1 Inputs of JICA Experts

Experts	Name	Work in Lao PDR (Days)	Work in Japan (Days)	Total (P/M)
1. Chief Advisor/Airport Planner/Runway/ATC Capacity Analysis Expert (2)	Mr. Takao Yamaguchi	0	55	2.75

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2. Air Traffic Demand Forecast Expert	Mr. Hideo Arikawa	0	44	2.20
3. Runway/ATC Capacity Analysis Expert (1)	Mr. Atsushi Miwa	0	53	2.65
4. Airspace and Flight Procedure Planner	Mr. Shinji Hara	30	29	2.45
5. Airport Civil Engineering Facility Planner	Mr. Keisuke Mizukami	0	40	2.00
6. Airport Terminal Facility Planner	Mr. Kimihiko Ogihara	55	10	2.33
7. Air Navigation System Planner	Mr. Hiroshi Mizumasa	40	21	2.38
8. Environmental Impact Expert	Mr. Norikazu Yamazaki	0	37	1.85
9. Project Cost Estimation Expert	Ms. Marie Iokawa	0	5	0.25
10. Economic/Financial Analysis Expert	Ms. Kinuyo Fukuda	0	19	0.95
Total		125 (4.17P/M)	313 (15.65P/M)	19.82 P/M

Note: Person/Month (P/M) is calculated as 30 days per 1 month for Work in Lao PDR and 20 days for 1 month for Work in Japan.

As of 30th September 2021, the total number of person-months (P/M) of JICA Experts is 19.82, which is equivalent to 71.3% of the planned total P/M of 27.80. JICA Expert team has dispatched only three Experts from June to September 2021. This dispatch becomes the first visit to Lao PDR due to the restrictions under COVID-19 situation, and two of them are extending their stay up to the middle of the October.

Local Staff

A local staff has been employed since February 2021 in order to facilitate works for correcting necessary data of Vientiane International Airport and for coordinating required communications between JICA Experts and Airport Improvement Committee Members.

(2) Inputs from Lao PDR Side

Assignment of Counterpart Personnel

Table 1-1-2 shows a list of Counterpart personnel who attended to Pre-Joint Coordinating Committee (pre-JCC) held on 17th February 2021. Those personnel have helped to organize the task-specified working teams as presented in Table 1-1-3 in order for the effective conduct of the Project. Figure 1-1-1 shows the current implementation structure of the Project of Lao side at the time of this version of monitoring sheet in September 2021.

Table 1-1-2 Counterpart Personnel (February 2021)

Organization	Position	Name
DCA	Deputy Director General:	Mr.Bountaeng Symoon
	Deputy Director, Aerodrome Safety and Standard Division (ASSD)	Mr.Sengsangouane Chanthavong
	Officer, ASSD	Mr.Kingsakda Muongmany
	Officer, ASSD	Mr.Anoosin Liengxay
	Deputy Director, Air Transport Division (ATD)	Mrs.Pikeo Vongviseth
	Director, Air Navigation Standards Division (ANSD)	Mr.Sohnsacksit Khamkeo

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	Director, ASSD	Mr.Sackda Sourisack
	Deputy Director, Aviation Security	Ms.Thienthong Sopha
LANS	AIS Officer / Flight Procedure Designer	Ms.Inseelee Bouapao
	Deputy Director, Technical Division	Mr.Somphavanh Kingsada
AOL	Deputy Director, Airport Safety Division	Mr.Phantha Pemphanith
WIA	Director, Wattay International Airport	Mr.Keosouli Noufongsamouth

Tele-meetings of the task-specified working Teams have been organized as required. Coordinators of both sides supported to set up those periodical meetings.

Office Space and Equipment

Lao Counterpart provided an air-conditioned office with necessary equipment for JICA Experts in the DCA office building and a desk in AIS Office of LANS.

Equipment

Automated Flight Procedure Design System, PANADES, which was implemented under the JICA grant aid project in 2013, has been restored for the normal operations with the support from JICA Expert. PANADES, which was installed at AIS Office of LANS for the regular works, has been fully utilized for the concerned works related to this Project, such as the development of Instrument Flight Procedures (IFPs) and obstacle assessment of Obstacle Limitation Surfaces (OLS) of Vientiane International Airport. PANADES consists of the following equipment and software, which has not been updated since 2016:

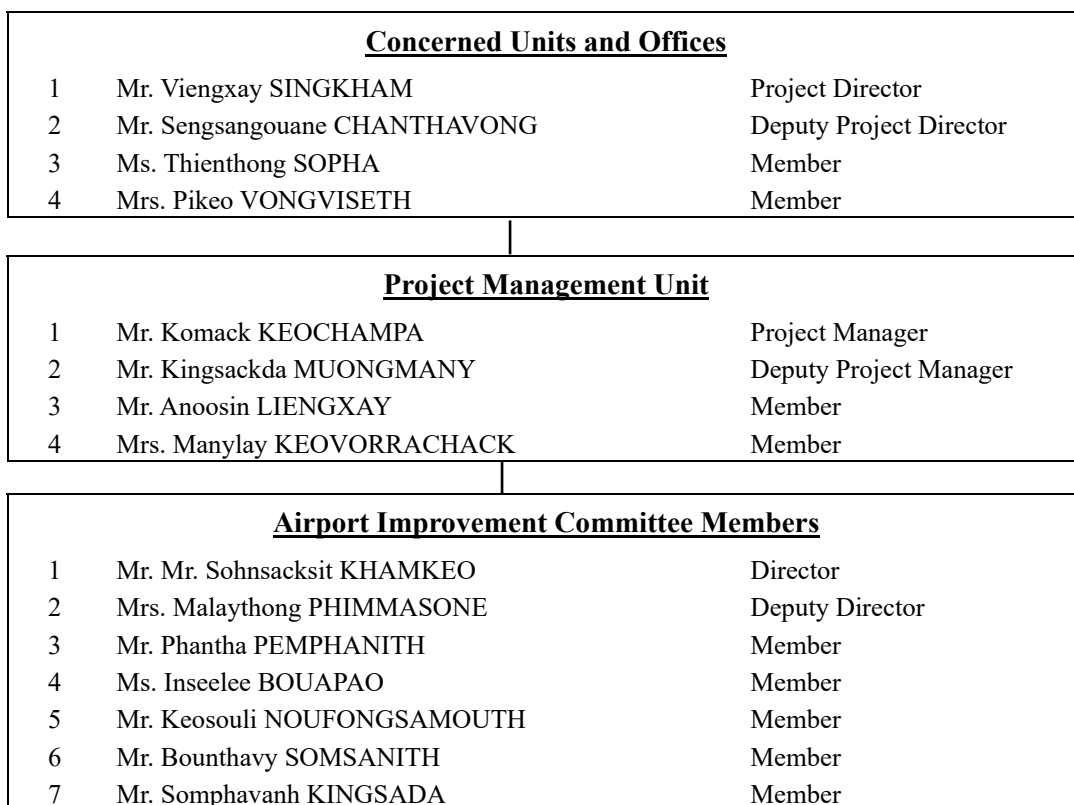
- (a) 1 desktop PC with 2 external displays
- (b) Flight procedure design software (PANADES), database software, map display software, office software, and virus protection software.

Table 1-1-3 Members of Task Specific Working Teams (March 2021)

Team	JICA side		Counterpart side	
	Name	Position	Name	Position
Air traffic demand forecast				
	Mr. Hideo Arikawa	Air Traffic Demand Forecast Expert	Mr. Soukhhongthong VORAPHET	Director, ATD
	Mr. Takao Yamaguchi	Airport Planner	Mrs. Pikeo VONGVISETH	Deputy Director, ATD
Air navigation and air traffic control				
	Mr. Shinji Hara	Airspace and Flight Procedure Planner	Mr. Sohnsacksit KHAMKEO	Director, ANSD
	Mr. Atsushi Miwa	Runway/ATC Capacity Analysis Expert (1)	Mr. Somphavanh KINGSADA	Deputy Director, Technical Division, LANS
	Mr. Hiroshi Mizumasa	Air Navigation System Planner	Ms. Inseelee BOUAPAO	Flight Procedure Designer, LANS
	Mr. Takao Yamaguchi	Runway/ATC Capacity Analysis Expert (2)		
Airport facilities				
	Mr. Takao Yamaguchi	Airport Planner	Mr. Komack KEOCHAMPA	Civil Engineer, ASSD
	Mr. Keisuke Mizukami	Airport Civil	Mr. Kingsakda	Civil Engineer, ASSD

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		Engineering Facility Planner	MUONGMANY	
	Mr. Kimihiko Ogihara	Airport Terminal Facility Planner	Mr. Anosin LIENGXAY	Civil Engineer, ASSD
	Mr. Hiroshi Mizumasa	Air Navigation System Planner	Mr. Sengsangouane CHANTHAVONG	Deputy Director, ASSD
	Ms. Marie Iokawa	Cost Estimate		
Airport operation				
	Mr. Takao Yamaguchi	Airport Planner	Mr. Phantha PEMPANITH	Deputy Director, Airport Safety Division (AOL)
	Mr. Atsushi Miwa	Runway/ATC Capacity Analysis Expert (1)	Mr. Bounthavy SOMSANITH	Director, Security Division (L-Jats)
	Mr. Shinji Hara	Airspace and Flight Procedure Planner		
	Ms. Kinuyo Fukuda	Economic/ Financial Analysis		
Environment				
	Mr. Norikazu Yamazaki	Environmental Impact	Mrs. Malaythong PHIMMASONE	Deputy Director, ASSD
			Ms. Thienthong SOPHA	Deputy Director, Security Division
Economic and Financial Analysis				
	Ms. Kinuyo Fukuda	Economic/ Financial Analysis	Mr. Soukkhongthong VORAPHET	Director, ATD
			Mrs. Manilay KEOVORACHACK	Human Resource and Administration Division
Coordinator				
	Mr. Khamlek Chintavong	Local staff	Mr. Sengsangouane CHANTHAVONG	Deputy Director, ASSD
			Ms. Thienthong SOPHA	Deputy Director, Security Division



List of Parties Concerned in the Project of Lao side

- | | | |
|-----|-------------------------------|------------------------------------|
| 1. | Mr. Viengxay SINGKHAM | Director General, DCA |
| 2. | Mr. Sengsangouane CHANTHAVONG | Aerodrome Safety and Standards |
| | Division | |
| 3. | Mr. Komack KEOCHAMPA | Aerodrome Safety and Standards |
| | Division | |
| 4. | Mrs. Malaythong PHIMMASONE | Aerodrome Safety and Standards |
| | Division | |
| 5. | Mr. Kingsackda MUONGMANY | Aerodrome Safety and Standards |
| | Division | |
| 6. | MR. Anoosin LIENGXAY | Aerodrome Safety and Standards |
| | Division | |
| 7. | Mr. Sohnsacksit KHAMKEO | Air Navigation Standards Division |
| 8. | Ms. Thienthong SOPHA | Security Standards Division |
| 9. | Mrs. Pikeo VONGVISETH | Air Transport Division |
| 10. | Mrs. Manylay KEOVORRACHACK | Human Resource and Administration |
| | Division | |
| 11. | Mr. Phantha PEMPHANITH | Airport of Laos |
| 12. | Ms. Inseelee BOUAPAO | Lao Air Navigation Service |
| 13. | Mr. Keosouli NOUFONGSAMOUTH | Wattay International Airport |
| 14. | Mr. Bounthavy SOMSANITH | Lao-Japan Airport Terminal Service |
| 15. | Mr. Somphavanh KINGSADA | Airport Terminal Service |

Figure 1-1-1 Implementation Structure of Lao side for the Project (September 2021)

1-2 Progress of Activities

The current status of Activities of the Project is summarized in Table 1-2-1. The rate of the progress and remarks of each activity as of September 2021 is shown in the table.

Table 1-2-1 Progress Rate of Activities

Activities	Progress Rate (%)	Remarks
1: To understand current situation of Vientiane International Airport		
1.1. Socio-economic conditions	100	The necessary information and data of the airport have been corrected and summarized in the Progress Report.
1.2. Air traffic demand growth trend	100	ditto
1.3. Related organizations – government, airport operators, airlines, and others	100	ditto
1.4. Government policy on airport development	100	ditto
1.5. Facilities at Vientiane International Airport	100	ditto
1.6. Airport access to Vientiane International Airport	100	ditto
1.7. Past studies on development of Vientiane International Airport	100	ditto
1.8. Environmental laws and regulations	100	ditto
2: To conduct air traffic demand forecasts up to year 2050 of Vientiane International Airport		
2.1. Projection of future socio-economic framework	100	The expected future socio-economic framework has been projected and summarized in the Progress Report.
2.2. Forecast of annual passengers, aircraft movement and cargos	100	The forecast of annual passengers, aircraft movement and cargos has been conducted and summarized in the Progress Report.
2.3. Peak hour forecasts	100	The forecast of peak hour passengers and aircraft movement has been conducted and summarized in the Progress Report.
2.4. Airport access traffic forecast	100	The forecast of airport access traffic has been conducted and summarized in the Progress Report.
3: To evaluate current facilities and services of Vientiane International Airport with respect to current and future requirements		
3.1. Runway, instrument flight methods and ATC procedures	100	The current facilities and services of the airport have been assessed. The results have been summarized in the Progress Report.
3.2. Taxiways and aircraft stands	100	The current facilities and their service level have been evaluated. The results are summarized in the Progress Report.
3.3. Passenger terminal facilities	100	The current PTB facilities, both international and domestic, have been evaluated. The results are summarized in the Progress Report.
3.4. Cargo terminal facilities	100	The current cargo facilities have been evaluated and the

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		results are summarized in the Progress Report.
3.5. Rescue and firefighting facilities	100	The current use of R&F facilities has been assessed. The results are summarized in the Progress Report.
3.6. Aeronautical ground lighting systems	100	The current aeronautical ground lighting systems have been evaluated. The results are summarized in the Progress Report.
3.7. Air navigation and meteorological systems	100	The current status air navigation and meteorological systems have been evaluated. The results are summarized in the Progress Report.
3.8. Fuel supply facilities	100	The current situation of concerned facilities has been assessed. The results are summarized in the Progress Report.
3.9. Airport access	100	The current situation of airport access, in particular, of parking lots has been evaluated. The results are summarized in the Progress Report.
3.10. Airport utility systems	100	The current situation of concerned facilities has been assessed. The results are summarized in the Progress Report.
3.11. Drainage	100	The current situation of drainage system and its facilities have been assessed. The results are summarized in the Progress Report.
3.12. Others	100	The current situation of other utility facilities has been assessed. The results are summarized in the Progress Report.
4: To identify immediate improvement needs at Vientiane International Airport		
4.1. Improvement of facilities	80	The short-term needs of improvement of facilities in order to conduct expected airport operations that aims to prolong the airport capability have been assessed and explained in the Progress Report. The priority of those needs, however, is still under considerations.
4.2. Improvement of services	80	The possible improvement of services that accommodate forecasted traffic for short to long term has been assessed and explained in the Progress Report. However, the level of services to be achieved and needs of required improvement of the services would vary depending on the expected timing of improvement as the implementation scheme should be coordinated with the improvement of facilities
5: To develop long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas		
5.1. To conduct alternative study to enhance runway capacity	70	The improvement scheme of runway capacity in terms of runway operation mode has been developed based on the evaluation of current airport and runway operations. The implementation of expected runway operation mode should be coordinated with improvement of facilities as well as services.
5.2. To formulate long-term improvement plan for airport facilities including descriptions of each improvement, general layout plan, implementing organization, etc.	10	The formulation of long-term improvement plan is on-going. The ultimate operation mode of airport services has not been agreed, and therefore the needs of the required facilities as components for those improvements are under the process of selection and prioritization The details of such improvement will be finalized and summarized in the Draft Project Completion Report.
5.3. To estimate project implementation schedule	10	This item will be discussed, calculated and summarized after Activities of 5.1 and 5.2 are finalized. So far, related and

and costs		necessary environmental information has been collected.
6: To conduct economic and financial analyses of the long-term improvement plan of Vientiane International Airport		
6.1. To conduct economic analysis of the long-term improvement plan	10	The required financial information has been collected. Missing and further information will be gathered once long-term improvement plan is formulated.
6.2. To conduct financial analysis of the long-term improvement plan	0	Financial analysis will be conducted once the long-term improvement plan is finalized.
6.3. To examine funding plan for the long-term improvement plan	0	Examination of funding plan will be conducted along with financial analysis after the long-term improvement plan is finalized.

1-3 Achievement of Outputs

The current achievement status of Outputs for the Project is summarized in Table 1-3-1. The rate of the achievement and remarks of each output as of September 2021 is shown in the table.

Table 1-3-1 Achievement Rate of Outputs

Outputs	Achievement Rate (%)	Remarks
1. Current situation of Vientiane International Airport has been understood.	100	Completed. The results can be found in the Progress report.
2. Air traffic demand forecasts up to year 2050 of Vientiane International Airport have been conducted.	100	Completed. The results can be found in the Progress report.
3. Current facilities and services at Vientiane International Airport have been evaluated.	100	Completed. The results can be found in the Progress report.
4. Immediate improvement needs of Vientiane International Airport have been identified.	80	The results can be found in the Progress report. However, the contents of the immediate improvement may be modified depending on the formulation of long-term improvement plan.
5. Long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas has been developed.	30	The improvement scheme of runway capacity in terms of runway operation mode has been developed. The required components of long-term improvement plan that accommodates the intended runway operation mode will be formulated. The influences of social and environmental impacts will also be assessed in the formulation process.
6. Economic and financial analyses of the long-term improvement plan of Vientiane International Airport has been conducted.	10	Economic analysis will be conducted analysis after the long-term improvement plan is finalized

1-4 Achievement of the Project Purpose

The purpose of the Project is “DCA’s capacities relevant to continuous improvement of Vientiane International Airport have been developed”. Objectively verifiable indicator for the achievement is “A report compiling all the outputs of the Project has been produced”. The approximate progress status of the report, which is still under the development, is 70% as shown in 1-3 above.

1-5 Changes of Risks and Actions for Mitigation

In order to conduct the expected activities under the Project smoothly, the following actions are considered crucial and necessary:

(1) Schedule management to implement the Project

From the start of the Project, the risk of COVID-19 has been identified, and the Project has been trying to minimize its influence, which has been and will be unpredictable.

The Project has been struggled with the communication between JICA Experts and counterparts: the first site visit had been postponed almost 5 months in the early stage of the Project and the first visit was finally made in June but with only limited number of Experts as it was found difficult to dispatch full of ten JICA Experts on site.

The first dispatch of JICA Expert Team was made with three members, two from June and one from July. At the time of this monitoring sheet, two of those dispatched Experts continues their works on site in order to conduct necessarily tasks for their own fields as well as to cover

all the specific fields of other JICA Experts, who could not be dispatched to Lao PDR.

This situation made schedule management of the Project more crucial for overall progress, but it has been found difficult to conduct the works on site as expected since on site works also affected and restricted under the COVID-19 situation. As a result, the stay of dispatched Experts has been extended from the originally expected duration.

(2) Direct Communications between JICA Experts and Counterparts

In order to implement the Project efficiently with sufficient communication among the Project members, task-specific working teams has been formulated. These teams are relatively small and considered effective to facilitate the intended communications.

Such team-based communications had intended to facilitate the communications among Project members, however, has not been found effective as much as expected. This ended to some delay in the progress of the Project while the dispatched Experts and local staff has tried such communications as much as possible. Details are described in Part 2 “Delay of Work Schedule and/or Problems”.

1-6 Progress of Actions undertaken by JICA

While JICA has tried to input the JICA Expert team based on the consultant contract, the implementation schedule of the Project has to be modified with various operational restrictions of both countries to dispatch those Experts. In September 2021, JICA and Lao side have agreed to extend the Project period up to March 2022, but still continue to monitor the situation as there is still a possibility of further extension of the Project.

1-7 Progress of Actions undertaken by Government of Lao

DCA, an executing agency under Ministry of Public Works and Transport (MPWT), has successively organized Airport Improvement Committee as well as the task-specific working teams at the early stage of the Project in order to conduct the Project Activities as mentioned in the paragraph 1.1 (2). DCA has also been trying to coordinate and secure necessary human resources from not only DCA but other member organizations such as LANS, AOL and L-JATS for the Project.

1-8 Progress of Environmental and Social Considerations (if applicable)

Not Applicable at this version of the monitoring sheet. The influences of social and environmental impacts will be assessed in the formulation process of Draft Final Report (DFR).

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)

Not Applicable.

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

Possible delay of the overall Project influenced by COVID-19 situation would be the most remarkable issue that has been and will impact the implementation of the Project. This issue is further described in Part 2 of this document.

2. Delay of Work Schedule and/or Problems (if any)

2-1 Details (Discussions in Pre-Joint Coordinating Committee (Pre-JCC))

Pre-JCC was held on 17 February 2021, and both Lao and Japan sides shared the necessity of

high level of flexibility regarding the implementation schedule of the Project due to the COVID-19 situation that both countries had faced. With this common understanding, the timing of the first visit of JICA Experts to Lao PDR was temporarily set to be in April at the time of JCC, which had been already postponed from original schedule in January 2021.

JICA Experts requested setting-up of task-specific working teams in the Pre-JCC in order to facilitate the communications among the Project members in the remote environment, and Lao counterparts have agreed with it. The teams have been successfully set-up and some teams such as Air Navigation and Air Traffic Control team and Airport Facilities team have held some meetings on-line before the expected first visit.

However, efficiency and effectiveness for the progress of the Project have been a crucial issue. It has been found that the actual needs of communication in the early stage of the Project to establish close relationship among the Project members through daily-base interactions. That is, the set-up of task specific working teams could not make communication as active as expected without initiation of the communication by face to face basis.

Both sides had understood possibility of the extension of the Project period in the later stage at the time of Pre-JCC. Then, having the first visit of JICA Experts on site in June, both sides agreed in September 2021 to extend the project period to the end of March 2022 with a duration of total of 14-months. It is also mentioned in the agreement that this 14-month duration may be further extended depending on the COVID-19 situation.

2-2 Causes

- (1) The complexity of various restrictions and unpredictability of COVID-19 has been the major cause of the delay. The restrictions have been keeping JICA Experts away from on-site works and the Project members are left from face to face communication for a long time.

The most effective improvement for the progress of the Project would be site visits of full members of JICA Experts, which is unrealistic under the current COVID-19 situation. The level of communication stays low unfortunately.

- (2) The Project Team recognizes the following two issues to be addressed for the formulation of immediate and long-term improvement plans:

- (a) Differences in the level of understanding among specific fields

Three JICA Experts have been dispatched to Lao PDR from June 2021. The communication among Project members has been facilitated in particular for those three specific fields with the presence of JICA Experts. Consequently, the level of understanding of the current situation of the airport has been improved. Other specific fields, however, have left with less information while those three JICA Experts along with a local staff on site have been trying to cover up those other specific fields. Such differences in the level of works performed on site has become obvious in particular for data collection and communication with counterparts.

- (b) Human resource development as a Technical Cooperation Project

In relation to the issue a) above, the low level of direct communication left some counterparts in the fields without JICA Experts on site less in the understanding of the Project activities. This situation may lead some specific fields with less sufficient human resources to follow the development of Vientiane International Airport during and after the Project. Some follow-up actions to secure qualified human resources may become necessary in order to keep the effectiveness of the Project as this Project supposes to be a technical cooperation project by which necessary human resources for the concerned issues can be developed.

2-3 Action to be taken

(a) Actions for differences in the level of understanding among specific fields

There would not be effective actions in the course of the Project unless the presence of all JICA Experts on site. The JICA Expert team should simply try to have more direct communication on site and/or remote, in particular for those specific field with less interactions so far by utilizing the relationship already developed among Project members through the dispatchment of JICA Experts.

(b) Actions for human resource development

The JICA Expert team could hold workshop sessions for each specific field at the end of the Project. While the explanation of the Draft Final Report (DFR) at the final dispatch of JICA Experts, some area specific workshops could be organized on-site or remote in order to follow up the overall activities in relation to the contents of this Project. This kind of additional activities would enhance the understanding of the counterparts regarding the future application of the project outputs and would also strengthen the relationship among members of task specific working teams.

2-4 Roles of Responsible Persons/Organization (JICA, Gov. of Lao PDR, etc.)

The JICA Expert team should discuss with Airport Improvement Committee members for the necessity of such actions mentioned in 2-3 above. Necessary coordination could be made through Joint Coordination Committee (JCC) with participation of Project Director from Lao side and JICA Lao Office as well as JICA HQs.

3. Modification of the Project Implementation Plan

3-1 PO

The Project Members have updated the Plan of Operation (PO) based on the PDM version 2.0, which was agreed and amendment on 30 September 2021. The updated PO, which will be Version 2.0, is presented as Project Monitoring Sheet II with necessary adjustments in assignment periods of JICA Experts, amount of Project activities on site and timing of those Project activities in accordance with the changes of PDM.

3-2 Other modifications on detailed implementation plan

The influence of COVID-19 has made the Project period extended as amended in PDM version 2.0, which is attached as Project Monitoring Sheet I. This change of the Project period has also led various modifications as mentioned in 3-1 above in PO Version 2, which is attached as Project Monitoring Sheet II.

Both PDM and PO may have to be amended further in case that the influence of COVID-19 stays around, and the Project implementation plan and related environment are affected by that.

4. Preparation of Gov. of Lao PDR toward after completion of the Project

To be discussed at a later stage.

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Monitoring Sheet II

Plan of Operation (PO)

The Project for Technical Support on Continuous Improvement of Vientiane International Airport

Version 3.0
Date: 10 March 2022

Year/Month	2021												1	2	3
	2	3	4	5	6	7	8	9	10	11	12				
Japanese Experts															
1. Chief Advisor/Airport Planner/ Runway/ATC Capacity Analysis Expert (2)															
2. Air Traffic Demand Forecast Expert															
3. Runway/ATC Capacity Analysis Expert (1)															
4. Airspace and Flight Procedure Planner															
5. Airport Civil Engineering Facility Planner															
6. Airport Terminal Facility Planner															
7. Air Navigation System Planner															
8. Environmental Impact Expert															
9. Project Cost Estimation Expert															
10. Economic/Financial Analysis Expert															
Activities															
1. To understand current situation of Vientiane International Airport															
1-1 Socio-economic conditions	✓	✓													
1-2 Air traffic demand growth trend	✓	✓													
1-3 Related organizations – government, airlines, airport operators and others	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1-4 Government policy on airport development	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1-5 Vientiane International Airport facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1-6 Airport access to Vientiane International Airport	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1-7 Past studies on airport development for Vientiane International Airport	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1-8 Environmental laws and regulations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. To conduct air traffic demand forecasts up to year 2050 of Vientiane International Airport															
2-1 Projection of future socio-economic framework	✓	✓													
2-2 Annual passenger, cargo and aircraft movement forecasts	✓	✓													
2-3 Peak hour forecasts	✓	✓													
2-4 Airport access traffic forecast	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3. To evaluate current facilities and services of Vientiane International Airport with respect to current and future requirements															
3-1 Runway, instrument flight procedures and ATC procedures	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-2 Taxiways and aircraft stands	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-3 Passenger terminal facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-4 Cargo terminal facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-5 Rescue and firefighting facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-6 Aeronautical ground lighting systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-7 Air navigation and meteorological systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-8 Fuel supply facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-9 Airport access	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-10 Airport utility systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-11 Drainage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3-12 Others	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4. To identify immediate improvement needs at Vientiane International Airport															
4-1 Improvement of facilities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4-2 Improvement of services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5. To develop long-term improvement plan of Vientiane International Airport in consideration of social and environmental impacts on the surrounding areas															
5-1 To conduct alternative study to enhance runway capacity	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5-2 To formulate long-term development plan for airport facilities including descriptions of each improvement, general layout plan, implementing organization, etc.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5-3 To estimate project implementation schedule and costs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6. To conduct economic and financial analyses on the long-term development plan of Vientiane International Airport															
6-1 To conduct economic analysis of the long-term development plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6-2 To conduct financial analysis on the long-term development plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6-3 To examine funding plan for the long-term development plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Monitoring Plan															
1. Work Plan (Inception Report)	▲														
2. Progress Report										▲					
3. Monitoring Report (Progress Report)										▲					
4. Draft Final Report															▲
5. Project Completion Report (Final Report)															▲
6. JCC	▲									▲					▲

Legend
 ■ Work in Lao PDR
 □ Work in Japan

Separate Volume: Copy of Products Produced by the Project