

Republic of Indonesia

FY2022 Ex-Post Evaluation Report of Technical Cooperation Project<sup>1</sup>

“JABODETABEK<sup>2</sup> Urban Transportation Policy Integration”

“JABODETABEK Urban Transportation Policy Integration Project Phase 2”

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## **0. Summary**

“JABODETABEK Urban Transportation Policy Integration” (hereinafter referred to as “JUTPI1”) was implemented to support the revision of the Master Plan for urban transport infrastructure development and the establishment of the necessary framework in order to coordinate the implementation of wide-area urban transport projects through the capacity building of central and local government officials involved in urban transport infrastructure planning in JABODETABEK, thereby contributing to urban development based on public transport systems in the area. “JABODETABEK Urban Transportation Policy Integration Project Phase 2” (hereinafter referred to as “JUTPI2”) was implemented to improve the administrative functions of the urban transportation system by enhancing coordination and project implementation capacity among urban transportation agencies and organizations, thereby contributing to urban development based on public transportation systems in the area.

From the time of planning to the completion of the project, the contents of this project were consistent with the development policy of the Government of Indonesia, which emphasized the development of public transportation in JABODETABEK and with the development needs to promote public transportation. In addition, lessons learned from similar projects in the past were utilized in project implementation, and the approach was appropriate. Although the content of the project was consistent with the assistance policy of the Government of Japan for Indonesia at the time of ex-ante evaluation, no specific collaborative effects between the project and other JICA projects or linkages with other donors were identified. Based on the above, relevance and coherence of the project are high. With the implementation of this project, the approval of the draft Master Plan, which was set as the project purpose, was achieved as planned. As for the overall goal of the project, “to improve urban transportation comprehensively,” although the legalization for the JUTPI2 Master Plan is still in progress, almost all the target local governments have reflected the findings from the Master Plan preparation process in their medium-term development plans, transportation plans, spatial plans, and so on. In addition, many cases of actual public transportation

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<sup>1</sup> In this ex-post evaluation, the two technical cooperation projects are evaluated collectively as one project. Therefore, the two projects are referred to as “project.”

<sup>2</sup> Name of the region taken from the first two (or three) letters of each city's name: Jakarta, Bogor, Depok, Tangerang, and Bekasi.

improvement efforts were confirmed. Therefore, the effectiveness and impacts of the project are high. Since both the project cost and project period exceeded the plan, the efficiency of the project is moderately low. Regarding the sustainability of the project effect, some minor issues have been observed in terms of the institutional/organizational and financial aspects. The prospects for improvement and resolution are currently uncertain. Therefore, sustainability of the project effects is moderately low.

In light of the above, this project is evaluated to be satisfactory.

## 1. Project Description



Project Locations (Source: Document provided by JICA)



Improvement of Transportation Nodes in Kabupaten Bogor<sup>3</sup> (Source: Field survey)

### 1.1 Background

Transportation in JABODETABEK in Indonesia was heavily dependent on road traffic, and chronic traffic congestion was serious and caused significant economic losses. In the transportation sector in JABODETABEK, the Government of Indonesia and JICA have implemented various projects since the 1980s. Through the development study “Study on Integrated Transport Master Plan for JABODETABEK” (hereinafter referred to as “SITRAMP”), which was carried out from 2001 to 2004, an urban transportation Master Plan (“SITRAMP Master Plan”) was developed. Among the projects proposed by SITRAMP Master Plan are the Bus Rapid Transit (BRT) and the Mass Rapid Transit (MRT),<sup>4</sup> which was constructed with the financial support of Japan’s ODA Loan toward the improvement of transportation in JABODETABEK. Subsequently, the number of vehicles increased more rapidly than anticipated when the SITRAMP Master Plan was formulated. Therefore, the revision of the SITRAMP Master Plan and the implementation of projects necessary to alleviate traffic congestion became an urgent task. From 2009 to 2012, JUTPI1 was

<sup>3</sup> Development of transfer and transit facilities that interconnect different modes of transportation (and in some cases, the same mode of transportation). With the aim of enhancing the continuity of travel based on the findings from JUTPI2, construction is underway to connect Bojong Gede Station in Kota Bogor on the commuter network connecting JABODETABEK with a bus terminal located 400 meters northwest of the station via a skybridge.

<sup>4</sup> In March 2019, the Jakarta MRT North-South Line Phase 1 (between Lebak Bulus Station and Bundaran HI Station) with Japanese assistance started its operation, and the construction of MRT North-South Line Phase 2A (between Bundaran HI Station and Kota Station) is underway with JICA’s ODA loan as of June 2023.

implemented to support the update of SITRAMP Master Plan and the establishment of the Jakarta Metropolitan Area Transportation Authority (JABODETABEK Transportation Authority, hereinafter referred to as “JTA”). Although JUTPI contributed to improving the policymaking capacity of counterpart agencies, the remaining issues after the implementation of JUTPI1, such as the establishment of a cross-sectoral framework between the central and local governments and the improvement of the capacity to implement projects to improve urban transportation, required continued support, and JUTPI2 was implemented from 2014 to 2020.

## 1.2 Project Outline

		JUTPI1	JUTPI2
Overall Goal		To improve the urban transportation system in JABODETABEK to ease traffic congestion and to develop urban economic activities. <sup>5</sup>	To promote urban development based on the public transport system in JABODETABEK.
Project Purpose		1. Enhancement of governance for implementing JABODETABEK urban transportation projects. 2. Improvement for capability and technical strength of target group on urban transportation planning.	To enhance institutional arrangement and capacity for improvement of urban transport-based system in JABODETABEK.
Output(s)	Output 1	Revised and updated of the SITRAMP (The Study on Integrated Transportation Master Plan for JABODETABEK). <sup>6</sup>	To develop a cross-ministerial and cross-boundary framework to promote integrated urban transportation policies in JABODETABEK. <sup>7</sup>

<sup>5</sup> English translation of the PDM in Japanese version: To improve the urban transportation system in JABODETABEK comprehensively to ease traffic congestion and to develop urban economic activities.

<sup>6</sup> English translation of the PDM in Japanese version: Continuous update and maintenance of the SITRAMP (Study on Integrated Transport Master Plan for JABODETABEK).

<sup>7</sup> English translation of the PDM in Japanese version: To develop a cross-ministerial and cross-boundary framework to implement integrated urban transportation policies.

	Output 2	Substantial progress toward establishment of JTA. <sup>8</sup>	To enhance capacity of urban transportation related agencies to implement transportation projects in JABODETABEK through implementation of pilot project. <sup>9</sup>
	Output 3		To enhance capacity of urban transportation related agencies to implement Transit-Oriented Development (TOD) projects in JABODETABEK. <sup>10</sup>
Total Cost (Japanese Side)		484 million yen	677 million yen
Period of Cooperation		July 2009-March 2012 (Extension period: October 2011-March 2012)	August 2014-September 2020 (Extension period: August 2017-September 2020)
Target Area <sup>11</sup>		JABODETABEK (see Figure 1): Jakarta Special Capital Province (DKI Jakarta), Kabupaten Bogor, Kota Bogor, Kota Depok, Kabupaten Bekasi and Kota Bekasi in West Java Province, Kabupaten Tangerang, Kota Tangerang and Kota Tangerang Selatan in Banten Province	
Implementing Agency		Coordination Ministry of Economic Affairs (CMEA), National Development Planning Agency (BAPPENAS), Greater Jakarta Transportation Authority of Ministry of Transportation (BPTJ) <sup>12</sup> , above nine local governments in JABODETABEK	
Other Relevant Agencies/Organizations		General Directorate of Land Transport and General Directorate of Railways of Ministry of Transport, Ministry of Public Works and National Housing, Ministry of State Enterprises, various transportation operators	

<sup>8</sup> English translation of the PDM in Japanese version: Support for the establishment of the JTA preparatory committee.

<sup>9</sup> English translation of the PDM in Japanese version: To enhance capacity of urban transportation agencies and organizations to implement transportation improvement projects through the experience of implementing pilot project.

<sup>10</sup> English translation of the PDM in Japanese version: To enhance capacity of urban transportation related agencies and organizations to implement Transit-Oriented Development (TOD) projects.

<sup>11</sup> In Indonesia's local administrative divisions, the provinces are the highest level of local administrative units. Under the provinces are counties (Indonesian: kabupaten) and cities (Indonesian: kota), but they do not have an encompassing relationship and are institutionally at the same level.

<sup>12</sup> BPTJ was a counterpart organization for this project since its establishment in 2016.

Consultant	Oriental Consultants Co., Ltd. ALMEC CORPORATION	ALMEC CORPORATION
Related Projects	<p>[Technical Cooperation]</p> <p>&lt;Technical Cooperation for Development Planning&gt;</p> <ul style="list-style-type: none"> <li>• Study on Integrated Transport Master Plan for JABODETABEK (2000-2004)</li> <li>• Project for the Study on JABODETABEK Public Transportation Policy Implementation Strategy (2011-2012)</li> </ul> <p>&lt;Technical Cooperation Project&gt;</p> <ul style="list-style-type: none"> <li>• JABODETABEK Urban Transportation Policy Integration Project Phase 3 (JUTPI3) (2022-)</li> </ul> <p>&lt;Preparatory Survey for Public-Private Partnership (hereinafter referred to as “PPP”) Infrastructure Projects&gt;</p> <ul style="list-style-type: none"> <li>• Jakarta Integrated Urban Transport Hub Development (2011-2013)</li> <li>• Preparatory Survey Lebak Bulus Station Area Development (2013-2015)</li> <li>• Preparatory Survey on Intelligent Transport System Project to Mitigate Traffic Congestion in Jakarta (2013-2015)</li> </ul> <p>&lt;Individual Expert&gt;</p> <ul style="list-style-type: none"> <li>• Advisor for MRT project (2007-)</li> <li>• Advisor for Road Policy (2005-)</li> </ul> <p>&lt;Preparatory Survey&gt;</p> <ul style="list-style-type: none"> <li>• Preparatory Survey for Jakarta Mass Rapid Transit North-South Line Section Extension Project (2009-2013)</li> <li>• Preparatory Survey for Jakarta Mass Rapid Transit East-West line project (2011-2013)</li> <li>• Preparatory Survey for Metropolitan Arterial Road Improvement Project (2011-2012)</li> </ul> <p>&lt;ODA Loans&gt;</p> <ul style="list-style-type: none"> <li>• Master Plan for Establishing Metropolitan Priority Area for Investment and Industry in JABODETABEK area (2011-2012)</li> <li>• Construction of Jakarta Mass Rapid Transit Project (2006-)</li> <li>• Tanjung Priok Access Road Construction Project (2005-)</li> </ul>	

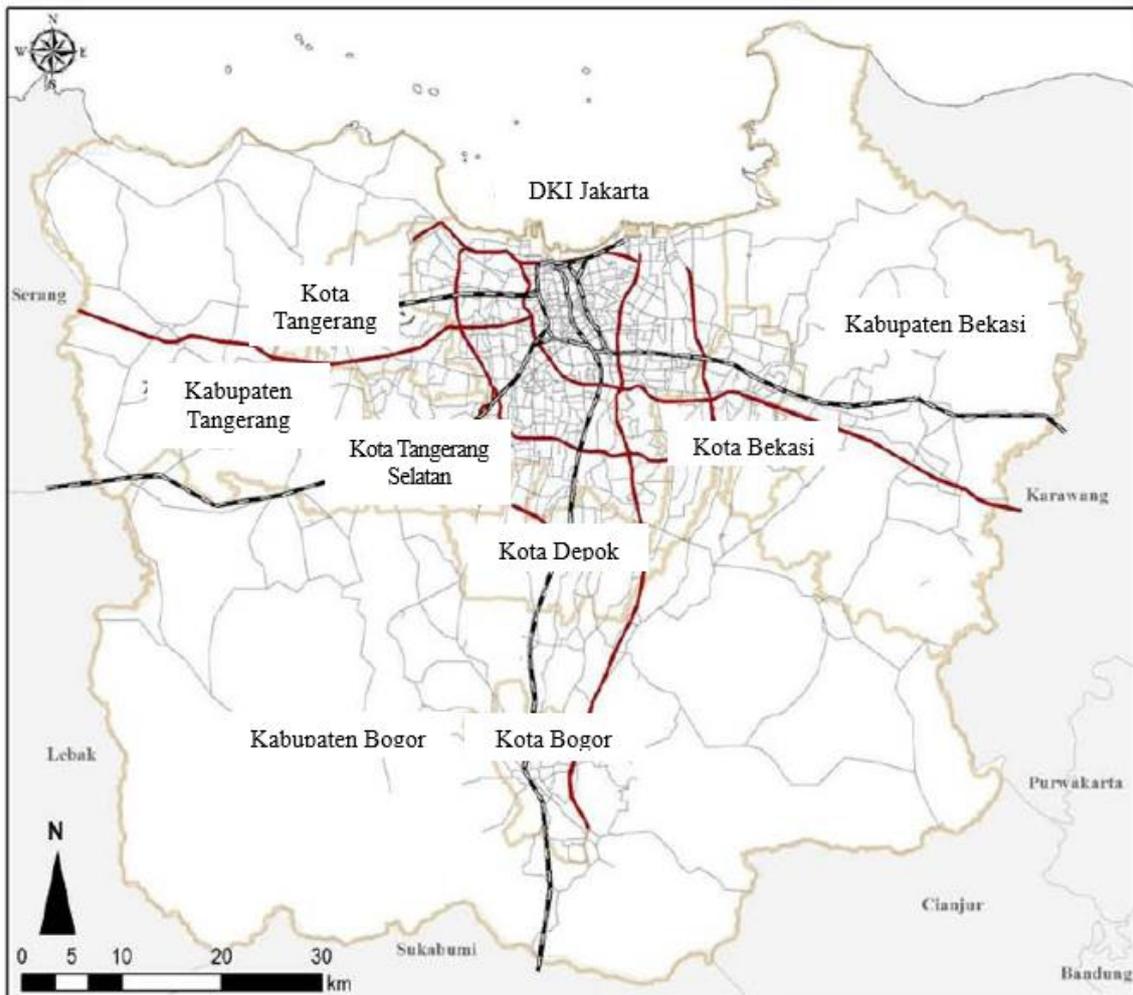


Figure 1 Target Area

Source: Documents provided by JICA.

### 1.3 Outline of the Final Report<sup>13</sup>

A summary of JUTPI2 at project completion is shown below. Please refer to “3.2 Effectiveness and Impacts” for the actual achievement at the time of project completion.

#### 1.3.1 Projected Achievement of Overall Goals at Project Completion

In the JUTPI2 Final Report, the overall goal was expected to be achieved as follows:

- The SITRAMP Master Plan, which was updated by JUTPI1, was subsequently transformed into the JABODETABEK Transportation Master Plan (*Rencana Transportasi JABODETABEK*, hereinafter referred to as “RITJ”) by BPTJ with the addition of new projects, and so on. RITJ was refined in JUTPI2 and became the JUTPI2

<sup>13</sup> In the ex-post evaluation report, a summary of the terminal evaluation of the final phase is to be stated for projects implemented in phases, but because no terminal evaluation was conducted for JUTPI2, a summary at the time of project completion is stated.

Master Plan. The JUTPI2 Master Plan included annual monitoring and evaluation sheets to enable the Indonesian side to prioritize transportation-related projects for the realization of future infrastructure development. The scenarios set up through the project also considered various future situations and were expected to serve as a reference for policymakers to increase the use of public transportation.

- Pilot projects implemented in the form of a pedestrian path, bus shelter, and wayfinding board would be beneficial in encouraging people to use public transportation and were expected to be further improved.
- The TOD guideline within the project's scope of work was expected to be a common guidance to TOD implementation across JABODETABEK. In addition, regulation integration regarding TOD was expected to soon be formulated by utilizing the reports of TOD within the scope of the project.

### 1.3.2 Recommendations from the Final Report

#### (1) Region-wide Administration

In terms of transportation issues of JABODETABEK, demarcation of authority, responsibility, and finance were not clear among central government agencies, local governments, or Kota/Kabupaten governments. Although the Government of Indonesia promoted autonomy of Kota/Kabupaten governments, urban transportation problems exceed the boundaries of Kota/Kabupaten and provinces. Actions, therefore, must be taken beyond administrative boundaries. On the other hand, financial resources for transportation and other policies were not transferred to Kota/Kabupaten governments. Although the Ministry of Home Affairs was examining the autonomy of local governments; authority, responsibility, and financial resources were recommended to be a package. Arguments on who must take the primary role in administration of urban transportation issues, the central government, or local governments must also be settled.

#### (2) Securing Human Resources for Transportation Planning

There was a quantitative shortage of human resources in charge of transportation planning in the Regional Development Planning Agency in local governments (Regional Development Planning Agency, *Badan Perencanaan Pembangunan Daerah*, hereinafter referred to as "BAPPEDA") of some Kota/Kabupaten. and as for the central government, some officials were busy with work in other regions and other departments, limiting their participation in the project. Therefore, it was recommended to secure human resources in the transportation sector, both in terms of quality and quantity.

#### (3) Financing Scheme

There was a lack in funding for the transportation sector in Indonesia compared to other countries. Investment in social capital, such as transportation infrastructure, was essential

to meet the demand to sustain economic growth of the nation. It was recommended that the private sector be involved through PPP schemes and other funding schemes such as PINA (nongovernmental budget equity financing), local government bond, and so on.

## **2. Outline of the Evaluation Study**

### 2.1 External Evaluator

Maki Hamaoka, Foundation for Advanced Studies on International Development

### 2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted with the following schedule.

Duration of the Study: August 2022-December 2023

Duration of the Field Study: February 19, 2023-March 3, 2023

## **3. Results of the Evaluation (Overall Rating: B<sup>14</sup>)**

### 3.1 Relevance/Coherence (Rating: ③<sup>15</sup>)

#### 3.1.1 Relevance (Rating: ③)

##### 3.1.1.1 Consistency with the Development Plan of Indonesia

At the time of ex-ante evaluation of JUTPI1, *the Medium-Term Development Plan 2004-2009 (Rencana Pembangunan Jangka Menengah, RPJM 2004-2009)* focused on eliminating traffic congestion that had been an obstacle to economic growth in the JABODETABEK.<sup>16</sup> At the time of the project completion of JUTPI1, *the Medium-Term Development Plan 2010-2014 (RPJM 2010-2014)* set a policy goal for infrastructure development to improve the functioning of the transportation network in the JABODETABEK through intermodal integration and coordination based on an integrated urban transportation plan.<sup>17</sup> Shortly after the start of JUTPI2, President Joko Widodo took office in October 2014, and *the Medium-term Development Plan 2015-2019 (RPJM 2015-2019)*, which included nine priorities, was announced in January 2015. *The RPJM 2015-2019* had as its policies to improve international competitiveness, promote infrastructure development, and reduce regional disparities.<sup>18</sup>

##### 3.1.1.2 Consistency with the Development Needs of Indonesia

From the time of ex-ante evaluation to the completion of the project, the population of the JABODETABEK accounted for approximately 10% of Indonesia's total population,

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<sup>14</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>15</sup> ④: Very High, ③: High, ②: Moderately Low, ①: Low

<sup>16</sup> Source: JUTPI Ex-ante evaluation sheet, p. 2.

<sup>17</sup> Source: JUTPI2 Ex-ante evaluation sheet, p. 1.

<sup>18</sup> Source: *Country Cooperation Policy to Indonesia*, September 2017.

and its economy accounted for approximately 30% of Indonesia’s total GDP. With Indonesia’s robust economic growth, the number of vehicle registrations (motorcycles and passenger cars) had approximately doubled between 2009 and 2019.<sup>19</sup>

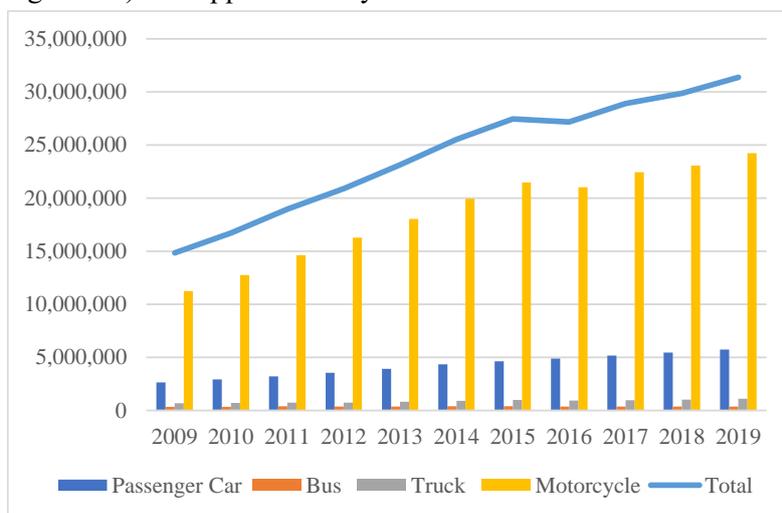


Figure 2 Number of Vehicles Registered in JABODETABEK  
Source: BPS DKI Jakarta, Barat BPS Jawa Barat.

At the start of JUTPI1, the share of bus users among commuters had declined from 50.1% to 16.1% between 2002 and 2010, with no modal shift to public transportation. At the completion of JUTPI2, the public transportation share was 29.9% (2018)<sup>20</sup> and 32% (2019),<sup>21</sup> a large gap from the 2029 target (60%). In view of the above, there was a high need to develop and implement an integrated regional and intermodal transportation policy that would promote the use of public transportation to address the chronic traffic congestion in JABODETABEK.

### 3.1.1.3 Appropriateness of the Project Plan and Approach

The parties concerned with the project responded appropriately to the “Lessons learned from similar projects in the past and their application to this project” in the ex-ante evaluation sheet as follows:

#### (1) JUTPI1

Because the establishment of a region-wide transportation administration organization was proposed in the previous phase, SITRAMP, the following three points were raised to support the formation of the system.

<sup>19</sup> Source: JUTPI2 Ex-ante evaluation sheet, p. 1.

<sup>20</sup> Source: Answers to questionnaire by BPTJ.

<sup>21</sup> Source: Answers to questionnaire by BPTJ.

### 1) Ensuring Transparency

The first of the three points raised in the ex-ante evaluation sheet was “The Joint Coordination Committee (hereinafter referred to as “JCC”) and the Urban Transport Policy Integration Action Board will share information on budget allocation and decision-making processes and ensure transparency to motivate the participation of all parties concerned and ensure fair and democratic organization management.” SITRAMP was conducted as a development study, and the Indonesian side was not actively involved in the process of developing a Master Plan. On the other hand, in JUTPI1, which was implemented as a technical cooperation project, Japanese experts provided a forum for exchanging views with their Indonesian counterparts through focus group discussions and technical working group activities to ensure transparency.<sup>22</sup>

### 2) Regular Coordination Meetings

Regarding the second point, “In order to have a common understanding of the issues, SITRAMP Master Plan is used as a common tool, and regular coordination meetings are held to promote communication between central government and local governments and among local governments”; in addition to the JCC, regular study meetings are held every Tuesday and Thursday to have a common understanding of the issues. In these meetings, Japanese experts provided technical guidance to their Indonesian counterparts, opinions were exchanged between the central government and local governments, and between local governments, and the meetings also served as coordination meetings.<sup>23</sup>

### 3) Cooperation System on the Japanese Side

In response to the third point, “In order to deal with various urban transportation issues, it is necessary to strengthen the support system on the Japanese side, and a daily on-site coordination and communication system will be established with long-term Japanese experts at the core, supported by short-term Japanese experts as needed,” the long- and short-term Japanese experts worked in the same office at all times, and a daily coordination and communication system was established.<sup>24</sup>

## (2) JUTPI2

In JUTPI1, the Japanese side had requested that local government officials be seconded and stationed in CMEA as counterparts, but this was not realized due to the lack of smooth personnel transfers among the organizations concerned. Learning from this, in JUTPI2, Japanese experts devised an implementation process through monthly

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<sup>22</sup> Source: Interview with JUTPI1 Japanese experts.

<sup>23</sup> Source: Interview with JUTPI2 Japanese experts.

<sup>24</sup> Source: Interview with JUTPI2 Japanese experts.

counterpart meetings, project working unit meetings, and email-based information sharing so that counterparts could be involved in project activities through task-based activities. For output 2, the capacity of local government counterparts involved in the urban transportation sector was enhanced through the planning, implementation, and evaluation of seven pilot projects.<sup>25</sup>

Based on the above, from the time of planification to the project completion, the relevance is judged to be high because the project was consistent with the development plan of the Government of Indonesia emphasizing the improvement of public transportation in JABODETABEK, and the development needs to improve the chronic traffic congestion in JABODETABEK. In addition, the approach was appropriate in that lessons from similar projects in the past were used in the project's implementation.

### 3.1.2 Coherence (Rating: ②)

#### 3.1.2.1 Consistency with Japan's ODA Policy

The “*Country Assistance Policy for Indonesia*” (2004) identified “private-sector-led sustainable growth” as one of the priority areas and positioned “development of economic infrastructure to improve the investment environment” as a specific area of assistance. The “*JICA Country Rolling Plan*” (2009) identified “improvement of business and investment environment” as a development issue for sustainable private sector-led growth and positioned the “Comprehensive Urban Transportation Improvement Program for Metropolitan Area” as a core project. In addition, the “*Country Assistance Policy of the Republic of Indonesia*” (2012) identified “Support for Further Economic Growth” as one of the priority areas, and this project was positioned in the cooperation program “Program for Improvement of the Transportation and Transport Environment in the Capital Region” and “Planning, Institutional Improvement, and Capacity Building.”

The project's objective of alleviating traffic congestion in JABODETABEK was therefore in line with Japan's ODA Policy for Indonesia.

#### 3.1.2.2 Internal Coherence

In the urban transportation sector in Indonesia, there were no cases in which the

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<sup>25</sup> (1) Installation of wayfinding board for the pedestrian in the Jatinegara area (nine locations) in DKI Jakarta, (2) Pedestrian way improvement in Pajajaran (Baranangsiang bus terminal area) in Kota Bogor, (3) Bus shelter in Jalan Raya Bogor near Cibinong Station in Kabupaten Bogor, (4) Installation of bus shelters and pelican crossing in Jalan Ir. H Juanda (Saminten side and Sugutamu side) in Kota Depok, (5) Provision of the pedestrian bridge over the canal in Jalan Benteng Betawi, pelican crossing and pedestrian path improvement near Tanah Tinggi station in Kota Tangerang, (6) Installation of Provision of shelter in Jalan Cendrawasih near Jurang Mangu Station Kota Tangerang Selatan, and (7) Installation of a bus shelter and road separator in front of Bekasi Timur Station in Kota Bekasi. (Source: JUTPI2 Final Report, p. 44)

implementing agencies and JICA discussed and agreed on the contents and expected outputs of the collaboration during the ex-ante evaluation or during the implementation. During the implementation of this project, information was exchanged, and discussions were held between the project and several other projects in the urban transportation sector, but no concrete effects were identified.

### 3.1.2.3 External Coherence

No linkage or synergistic effects between the project and other donors' projects were identified either in the planning stage or during implementation.<sup>26</sup> Regarding coherence with international frameworks, the project contributes to SDG's Goal 9, "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation," and SDG's Goal 11, "Make cities and human settlements inclusive, safe, resilient and sustainable." The project is coherent with the international framework.

Regarding coherence, although the objectives of the project were consistent with Japan's ODA Policy for Indonesia at the time of the ex-ante evaluation, coherence is judged to be low because discussions between the project and other JICA projects were confirmed, but no specific effects could be confirmed, and collaboration with other donors was not confirmed.

In light of the above, relevance and coherence are high.

## 3.2 Effectiveness and Impacts<sup>27</sup> (Rating: ③)

### 3.2.1 Effectiveness

#### 3.2.1.1 Achievement of Project Purpose

The achievement level of the project purpose of each of JUTPI1 and JUTPI2 is as follows:

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<sup>26</sup> Source: Answers to questionnaire by CMEA, answers to questionnaire by JUTPI2 Japanese experts.

<sup>27</sup> When providing the sub-rating, Effectiveness and Impacts are to be considered together.

Table 1 Achievement of Project Purpose (JUTPI1)

Project Purpose	Indicator	Actual
1. Enhancement of governance for implementing JABODETABEK urban transportation projects	Presidential decree (draft) on the establishment of JTA submitted to the Government of Indonesia <sup>28</sup>	[Achieved as planned] <ul style="list-style-type: none"> <li>To establish a cooperative framework among relevant agencies for the establishment of JTA, eight director general-level task forces on the transportation of JABODETABEK and 59 meetings with relevant agencies were held. Thus, communication among relevant ministries and local governments was improved. In addition, two focus group discussions and two director general-level meetings were held with participants like those in the JCC, and discussions regarding the establishment of JTA continued.</li> <li>The support for the establishment of JTA was carried out as planned through “Output 2, Substantial progress toward establishment of JTA.” Specifically, in December 2011, CMEA submitted a draft amendment to the Presidential Decree on the establishment of JTA to the Cabinet Secretariat, and in February 2012, the draft was in the process of being signed by relevant ministers.<sup>29</sup></li> </ul>

<sup>28</sup> The indicator for the project purpose was “Minutes of Understanding (MoU) among relevant agencies agreed upon implementation of the JABODETABEK urban transportation projects” at the beginning of the project. During the implementation of the project, the Indonesian side began to proactively promote the establishment of the JTA as the coordinating body for the implementation of the Master Plan based on the Presidential Decree, and the indicator was changed to “Presidential Decree (draft) on the establishment of JTA submitted to the Government of Indonesia,” including the demarcation of the jurisdiction of transportation-related organizations and the draft Standard Operational Procedures and Terms of Reference, and so on. Because this change in the indicator was not reflected in the PDM, the evaluation was conducted at the time of the ex-post evaluation using the changed indicator based on the answer to the questionnaire of Japanese experts and interviews with them.

<sup>29</sup> After the completion of the project, CMEA struggled for three years from 2012 to 2015 to make JTA a ministerial-level organization reporting directly to the President but was unable to obtain the consent of the Ministry of National Service Utilization and Bureaucratic Reform to establish it. Instead, BPTJ was established by Presidential Decree (2015, No. 103) and Ministry of Transportation Decree (2016, No. 3) as part of the Ministry of Transportation.

2. Improvement for capability and technical strength of target group on urban transportation planning	Approval of the revised SITRAMP by JCC.	<p>[Achieved as planned]</p> <ul style="list-style-type: none"> <li>• The SITRAMP database was updated through a traffic survey,<sup>30</sup> and based on the results of the analysis, the SITRAMP Master Plan was revised as a draft urban transportation Master Plan with the target year of 2030, which was approved by the JCC in March 2012.</li> <li>• Seven pilot projects<sup>31</sup> were conducted to study the feasibility of developing transportation management measures. These were developed by counterparts with an emphasis on the financial capacity of local governments and the possibility of developing soft measures that do not involve costs, such as effective use of existing facilities. The processes of planning, implementing, and evaluating pilot projects demonstrate the improvement of counterparts' knowledge and skills.</li> </ul>
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Source: Prepared by the evaluator based on the final report and interviews.

<sup>30</sup> A Large-Scale Commuting Surveys. 180,000 households, representing 3% of the population of JABODETABEK, were surveyed regarding commuting to and from work and compared to the results of the SITRAMP Person-Trip Survey. In addition, Person-Tracking Survey, Vehicle-Tracking Survey, and Mobility Constrained Persons Survey were conducted as Transportation Behavior Surveys. The Person-Tracking Survey was conducted on 600 households to determine their mobility characteristics, whereas the Vehicle-Tracking Survey was conducted on 300 cars and 300 motorcycles to determine vehicle usage and routes. (Source: JUTPII Final Report, pp. 29-34)

<sup>31</sup> (1) Road Traffic Information System (development of a simple system to monitor traffic flow between the city center and suburbs and inform drivers of congestion), (2) Bus Location System (development and operation of a system to inform drivers of location of a next bus and its waiting time), (3) Mobility Management (creation and distribution of bus route maps mainly for bus terminals in DKI Jakarta and Kota Bogor and Transjakarta), (4) Park and Ride (utilization of vacant spaces in the multi-story parking lot of a commercial complex adjacent to PD Cina Station in Kota Depok for commuter rail transfer parking), (5) Feeder service to the railway station (operation of feeder buses from residential areas to the station), (6) Car sharing campaign (publicity and awareness raising on car sharing and trial car sharing), and (7) *Angkot* (minibus) shift program (organizing three groups of minibus drivers on two bus routes in Kota Bogor, and allowing two of the three groups to operate the buses in turns to reduce the number of buses operating on the road and the number of operations, thereby avoiding excessive competition for passengers and eliminating traffic congestion). (Source: JUTPII Final Report, pp. 45-58)

Table 2 Achievement of Project Purpose (JUTPI2)

Project Purpose	Indicator	Actual
To enhance institutional arrangement and capacity for improvement of urban transport-based system in JABODETABEK	JUTPI2 Master Plan is approved by the JCC. <sup>32</sup>	<p>[Achieved as planned]</p> <ul style="list-style-type: none"> <li>The Master Plan, updated by JUTPI1, was subsequently updated by BPTJ with new projects, etc., and became the JABODETABEK Transportation Master Plan (<i>Rencana Transportasi JABODETABEK</i>, hereinafter “RITJ”), which was institutionalized as Presidential Regulation No. 55 in 2018.</li> <li>Subsequently, through JUTPI2 Output 1, “To develop a cross-ministerial and cross-boundary framework to promote integrated urban transportation policies in JABODETABEK.” Various transportation surveys<sup>33</sup> were conducted to forecast demand and examine future networks. As a result, the RITJ network alone was not sufficient to address future transportation demand, and an updated Master Plan capable of meeting key performance indicators (KPIs) and future transportation demand was required and the RITJ was detailed.</li> <li>The public transportation plan proposed a public transportation network that includes two MRT lines, MRT Line 1 (North-South) and Line 2 (East-West), plus eight new MRT lines. The JUTPI2 Master Plan was approved by the JCC in October 2019.<sup>34</sup></li> </ul>

Source: Prepared by the evaluator based on the final report and interviews.

The project achieved its purpose of approving the draft master plan as planned. The draft master plan was developed through capacity building of counterparts, analysis of the results of traffic surveys, updating of the database on traffic planning, and integration of knowledge and skills gained from the implementation of the pilot projects into the draft master plan. It can thus be said that the project purpose was achieved through the accomplishment of the outputs.

<sup>32</sup> The indicators for the project purpose in the PDM during project implementation were as follows: (1) Establishment of a sustainable framework for cross-sectoral and cross-regional coordination of transportation issues in JABODETABEK; and (2) More than half of planned projects and TOD model projects to be implemented. Because there was overlap between the project purpose indicators and the outputs indicators, at the time of the ex-post evaluation, the evaluator confirmed through questionnaires and interviews with Japanese experts that the goal to be achieved by the project completion was to have the draft JUTPI2 Master Plan approved by the JCC, which represented an integration of the three outputs.

<sup>33</sup> Activity-Travel Diary Survey, Screen Line Survey, Classified Vehicle Counting Surveys, and Cordon Line Survey were conducted. In the Activity-Travel Diary survey, socioeconomic and commute trip data were collected through paper-based home visit interview surveys on 5,000 people from 5,000 households and a smartphone-based survey using an open-source smartphone-based application for recording people’s trips or movement. The Screen Line Survey and Classified Vehicle-Counting Surveys were conducted at 91 locations (55 locations within Jakarta [16-hour survey] and 36 locations in other areas) to verify the present OD matrices estimated based on the Activity Diary Survey and to determine the annual growth rate by observing traffic volumes at the survey sites covered in previous projects. (Source: JUTPI2 Final Report, pp. 21-34)

<sup>34</sup> The JUTPI2 Master Plan is a plan for the implementation of policies in 10 sectors of developing road and railway networks, developing bus transport systems and facilities, ensuring safety and security of transportation, developing traffic control systems, improving financial and demand management, developing freight transport systems, taking measures in urban planning, improving the environment, and setting up and reforming the financial system to ensure the implementation of the program itself was prepared based on the proposals of the Indonesian government (Source: JUTPI2 Final Report, p. 36).

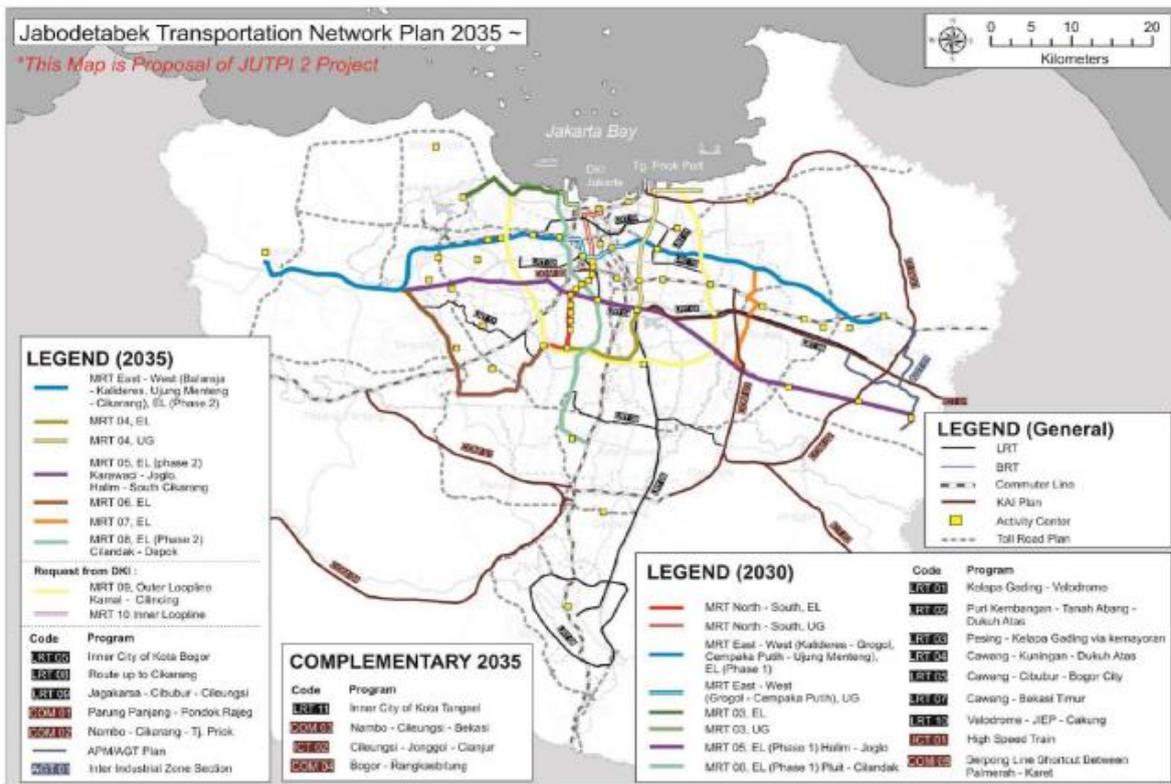


Figure 3 Public Transportation Network in JABODETABEK for 2035 proposed in the JUTPI2 Mater Plan

Source: Documents provided by JICA.

### 3.2.2 Impacts

#### 3.2.2.1 Achievement of Overall Goal

##### (1) Achievement of Overall Goal in the PDM (JUTPI1)

The achievement of the overall goal of JUTPI1 three years after the completion of the project is as follows:

Table 3 Achievement of Overall Goal (JUTPI1)

Overall Goal	Indicator	Actual
To improve the urban transportation system in JABODETABEK to ease traffic congestion and to develop urban economic activities. <sup>35</sup>	Implementation of revised SITRAMP recommendation proposed by the Project	[Generally achieved] During the implementation of JUTPI2, projects proposed for implementation by 2015 in JUTPI were classified into three ranks: Rank A: implemented on schedule; Rank B: partially implemented or delayed; and Rank C: not implemented. <sup>36</sup> As a result, 28% of the projects were implemented on schedule, 44% were partially implemented or delayed, and 27% were not implemented. The total of Rank A and B projects resulted in an implementation rate of 72%, which was judged as a medium level that was generally achieved with reference to the status of similar technical cooperation projects on master plan formulation. <sup>37</sup>

Source: Prepared by the evaluator based on the answers to the questionnaires and interviews.

## (2) Achievement of Overall Goal in the PDM (JUTPI2)

The level of achievement of the first indicator of the overall goal of JUTPI2, “Adoption of urban transportation policies” was verified separately at the central government and local government levels based on the means of verification<sup>38</sup> of the indicator in the PDM. For the central government level, based on the results of the questionnaire and interviews with Japanese experts during the ex-post evaluation, as an overall goal to which the project purpose “Approval of the JUTPI2 Master Plan” directly contributes, the indicator “Detailed RITJ legislation using the JUTPI2 Master Plan” was evaluated. The second indicator, “Implementation of projects in the JABODETABEK urban transportation Master Plan,” was not examined in the ex-post evaluation because the RITJ revision reflecting the JUTPI2 Master Plan is in the process of being institutionalized in 2024 and the proposed Master Plan projects are also under review.<sup>39</sup>

<sup>35</sup> Under JUTPI1, a Master Plan for urban transport in JABODETABEK was developed with a target year of 2030, and various transport policies were proposed. This Master Plan was not only about the development of transportation infrastructure, but also included an implementation coordination framework, financial mechanism, and legal system.

<sup>36</sup> Source: JUTPI2 Final Report, p. 3.

<sup>37</sup> In the ex-post evaluation for “The Project for Nacala Corridor Economic Development Strategies in Mozambique” (ex- post evaluation in FY2018) and “The Project on the Corridor Development for West Africa Growth Ring Master Plan” (ex-post evaluation in FY2020) implemented as Technical Cooperation for Development, the projects that proceeded to the feasibility study were implemented, the same perspective was used in this ex-post evaluation.

<sup>38</sup> In the PDM, the means of verification is described as urban transportation policies and regulations of the related agencies in JABODETABEK: (1) Presidential decrees, (2) Ministerial decrees, (3) Local government regulations, (4) Transportation-related policies, and (5) Spatial plans.

<sup>39</sup> There are many projects included in both the RITJ and the JUTPI2 Master Plan, but it was difficult to check their progress during the ex-post evaluation because the names of the projects in the JUTPI2 proposed project list and those in the BPTJ database were often different. The “Annual Monitoring Evaluation Report” (AMER) was prepared for JUTPI2 as a form for monitoring the progress of projects included in the JUTPI2 Master Plan,

Table 4 Achievement of Overall Goal (JUTPI2)

Overall Goal	Indicator	Actual
To promote urban development based on the public transport system in JABODETABEK	Adoption of urban transportation policies	<p>&lt;Mostly achieved&gt;</p> <p>(a) <u>At central government level (in progress)</u></p> <ul style="list-style-type: none"> <li>The updated RITJ is in progress toward institutionalization in 2024.</li> <li>Under Article 13, the RITJ is to be evaluated and revised by the Ministry of Transportation at least every five years. However, the RITJ may be evaluated and revised without waiting for a five-year period if there is a need to revise the RITJ due to environmental or technological changes surrounding the national strategy, such as national strategic projects defined by presidential decree or technological innovations in the transportation sector (e.g., the spread of electric vehicles or introduction of automated driving technology).</li> <li>The Japanese side expected that updating the RITJ utilizing the JUTPI2 Master Plan would undergo the process of evaluation and revision without waiting five years.<sup>40</sup> On the other hand, the Indonesian side recognized that the update of the RITJ was too early, as there was only one year between the institutionalization of the RITJ in 2018 and the JCC's approval of the JUTPI2 Master Plan in 2019.<sup>41</sup></li> <li>In 2020, the RITJ update did not progress due to the COVID-19 pandemic and travel restrictions on government employees; thus, the Indonesian government was busy with COVID-19 measures. In addition, since the completion of JUTPI2, the situation in JABODETABEK has changed with the progress of plans to relocate capital city functions, and the RITJ needs to be revised to take these changes into account.</li> <li>BPTJ started the review and evaluation of RITJ in 2021 and is working on the revision. RITJ is expected to complete its review and evaluation in 2023, after which it will be institutionalized.<sup>42</sup></li> </ul>

but BPTJ counterparts were not aware of its existence at the time of the ex-post evaluation. BPTJ monitors the implementation status of projects included in the RITJ using the SPIRIT software. Even if the RITJ had been updated to reflect the JUTPI2 Master Plan, it is possible that the AMER would not have been utilized, and this remains an issue.

<sup>40</sup> Source: Documents provided by JICA, interview with JUTPI2 Japanese experts.

<sup>41</sup> Source: Answers to questionnaire by BPTJ and interview with BPTJ.

<sup>42</sup> As of August 2023, a coordination meeting was scheduled for early October 2023 for the BPTJ to invite relevant local governments and ministries regarding the review and evaluation of the RITJ; the results of the RITJ evaluation will be reported to the minister of transportation by the end of 2023, depending on the results of the coordination meeting. Completion of the RITJ renewal will depend on subsequent ministerial approval, and the following three scenarios are assumed: (1) Completion by the end of 2023: If the minister of transportation accepts the results of the RITJ evaluation by the end of 2023 and the current president approves it by the end of 2023, the RITJ update will be completed by the end of 2023. (2) Completion in 2024: If the acceptance and approval of RITJ by the minister of transportation and the current president take longer, the RITJ update will be completed in 2024. (3) Completion after the new president takes office: If the current president requests for the new president to approve the review and evaluation of the RITJ, it will be completed after the new president takes office (Note: Indonesian presidential election is scheduled on February 14, 2024) (Source: Answers to questionnaire by BPTJ).

		<p>(b) <u>At the local government level (Achieved)</u></p> <ul style="list-style-type: none"> <li>• Spatial Plan of DKI Jakarta: “The 2022 Detail Spatial Plan of DKI Jakarta,” a plan focused on solving problems in DKI Jakarta such as citizens' activity patterns, traffic congestion and inefficient mobility, was developed.<sup>43</sup></li> <li>• Bekasi City Transportation Master Plan: “Kota Bekasi Transportation Master Plan 2021” was developed based on the findings from the preparation of the JUTPI2 Master Plan and the TOD Model Project in Outputs 3.<sup>44</sup></li> <li>• TOD Administration Regulation of Kota Bogor: “Regulation of the Mayor of the City of Bogor No. 187 of 2021 about Administration of Transit-Oriented Areas” was formulated with reference to the findings from the TOD model project implemented in the project and in accordance with the policies that Bogor city uses and confirmed in Regional Regulation Number 6 of 2021 about Spatial Plans (RTRW) which includes planning for city-scale TOD and sub-city-scale TOD development.</li> <li>• Utilization of JUTPI’s experience on spatial planning in 2022 in Kota Depok: Learning from the TOD model project of the JUTPI 2 that the walking distance from station is around 400-800 meters was used in formulating the Spatial Regulation No. 9 of 2022.</li> </ul>
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Source: Prepared by the evaluator based on the answers to the questionnaires and interviews.

Regarding the JUTPI2’s overall goal (i.e., that the detailed RITJ was not institutionalized as a presidential decree three years after the project completion), it was identified as an issue that the project team did not have a concrete plan for institutionalization, including a specific schedule and division of roles. One of the reasons is that JICA developed a new PCR format in FY2014, but the consultant in charge did not fully reflect the format in the Final Report for JUTPI2, and the “specific schedule to achieve the overall goal” included in the new format was not included in the Final Report. The fact that the project was completed without a concrete roadmap for achieving the overall goal having been worked out by the bilateral parties involved is an issue that will serve as a lesson for the future (see “4.3 Lessons Learned”).

### (3) Achievement of Overall Goal (Complementary Indicators)

Whereas the SITRAMP project’s objective was to formulate a Master Plan, this project also aimed to build the capacity of counterparts through project activities. Therefore, in addition to the PDM indicators, in the ex-post evaluation, the evaluator examined how the counterpart

<sup>43</sup> Source: Interview with JUTPI2 Japanese experts and answers to questionnaire by JUTPI2 Japanese experts, *the 2022 Detail Spatial Plan*.

<sup>44</sup> Source: Interview with JUTPI2 Japanese experts and answers to questionnaire by JUTPI2 Japanese experts.

agencies utilized the ideas introduced in the Master Plan and the knowledge and technology introduced in the pilot projects as complementary indicators. Table 5 shows the results.

Table 5 Achievement of Overall Goal (Complementary Indicators)

Local Government	Cases
DKI Jakarta	A JUTPI2 Japanese long-term expert organized a seminar for officials of Jakarta DKI on the effective use of building floor area ratio as a method of TOD. The DKI Jakarta subsequently used this method to improve the Semanggi interchange. Specifically, when two right-turn multilevel roads were constructed at the interchange of two major streets, which caused serious traffic congestion, a Japanese company engaged in real estate development in the neighborhood was allowed to increase the floor-area ratio in exchange for the company contributing to the road construction costs.
Kota Tangerang	Utilization of the model project of TOD in Output 3 of JUTPI2 (case study of TOD in the Poris Plawad area): Based on the case study, Kota Tangerang, in coordination with BPTJ, is developing a bus terminal in the Poris Plawad area connected to the Batu Ceper Station through the PPP method.
Kota Bogor	Integrated pedestrian development: Using the findings from the pedestrian path improvement in Pajajaran (Baranangsiang bus terminal area), a pilot project of JUTPI2, the Kota Bogor government included comprehensive pedestrian development as one of its priority programs in the “Medium-Term Development Plan 2019-2024 of Kota Bogor.” <sup>45</sup> Pedestrian way improvement in Pajajaran have succeeded in connecting Baranangsiang Bus Terminal with Suryakencana area, one of the economic sectors in Bogor city.
Kabupaten Bogor	Improvement of transportation nodes: Construction of a skybridge to connect Bojong Gede Station with a bus terminal located 400 meters northwest of the station via a sky bridge to enhance the continuity of travel. PT.KAI (state-owned railroad company) and Kabupaten Bogor bore community-owned land acquisition costs whereas the Ministry of Transportation bore the feasibility study, detailed design, and skybridge construction costs.
Kota Depok	<ul style="list-style-type: none"> <li>• Bus shelter construction: The bus shelters developed under the pilot projects in JUTPI2 were well received by users because they do not block traffic while buses are stopped and prevent traffic congestion, and two bus shelters were constructed in 2022.</li> <li>• Railway Masterplan of Kota Depok: When preparing Railway Masterplan of Kota Depok in 2022, the Kota Depok government referred the plans in the JUTPI 2 Master Plan.</li> </ul>
Kota Tangerang Seletan	Promotion of TOD plan: Utilization of the JUTPI2 TOD case study for designing TOD around the Jurang Mangu and Rawa Buntu stations.
Kota Bekasi	Utilization of findings from the JUTPI2 TOD case study in the following spatial planning for the kota: Skybridge development (LRT and West Bekasi Station integration). The skybridge development is being planned to connect the LRT station, West Bekasi station, shopping mall, park-and-ride, apartments, office buildings, and bus shelters to facilitate movement and transfers and allow for high-density use of space. In addition, the kota is promoting the integration of LRT and East Bekasi, LRT and Cikunir 1 station, LRT and Cikunir 2 station, and LRT and Jati Cempaka station.

Source: Prepared by the evaluator based on the answers to the questionnaires and interviews.

<sup>45</sup> Source: Answer to the questionnaire by Kota Bogor BAPPEDA and interview with Kota Bogor BAPPEDA.

In JUTPI2, the update of RITJ using the JUTPI2 Master Plan, one of the indicators of the overall goal, is progressing toward completion with BPTJ's efforts and the support of JUTPI3 at the time of the ex-post evaluation, and it is expected to be achieved next year. Almost all the local governments, as counterpart agencies, have reflected the project's findings in their local government medium-term development plans, transportation plans, and spatial plans, and a number of capacity-building outputs have been confirmed, including continued efforts to improve public transportation with reference to the pilot projects implemented in the project.

In light of the above, the project has mostly achieved its overall goal.



Bus Shelter in Kota Depok Developed Based on Pilot Project Findings (Source: Field survey)



Model of TOD Completion in the Poris Plawad Area of Kota Tangerang (Source: Field survey)

### 3.2.2.2 Other Positive and Negative Impacts

#### (1) Impacts on the Environment

The main activities of the project were institutional development and capacity building of Indonesian government officials, including the implementation of some pilot projects, but no large-scale works requiring land acquisition or resettlement were planned, and the project was considered to fall under Category C under the “JICA Environmental and Social Impact Guidelines” (April 2010). In fact, there were no negative environmental impacts from the implementation of the project.<sup>46</sup>

#### (2) Resettlement and Land Acquisition

The pilot projects implemented in JUTPI1 did not involve resettlement or land acquisition.<sup>47</sup> In addition, the target sites for the pilot projects in JUTPI2 were selected based on the criteria that they “must be located on land owned by the local government and not on land owned by residents or non-local government agencies” and that “pilot project activities should avoid land acquisition and resettlement,” so resettlement and land acquisition were not involved.<sup>48</sup>

<sup>46</sup> Source: Answers to questionnaire by JUTPI1 and JUTPI2 Japanese experts.

<sup>47</sup> Source: Answers to questionnaire by JUTPI1 Japanese experts.

<sup>48</sup> Source: Answers to questionnaire by JUTPI2 Japanese experts.

(3) Gender Equality/Marginalized People/Social Systems and Norms, Human Well-being, and Human Rights

The impact on vulnerable transportation groups (elderly, disabled, children, pregnant women, etc.), both positive and negative, was not confirmed from the field survey, questionnaires, or interviews.

(4) Unintended Positive/Negative Impacts

None.

With the implementation of this project, the approval of the draft master plan, which was set as the project purpose, was achieved as planned. As for the overall goal, although the legalization of the JUTPI2 master plan is still in progress, almost all the target local governments have reflected the findings from the master plan formulation process in their local government medium-term development plans, transportation plans, spatial plans, and so on, and are working on actual public transportation improvements. Therefore, effectiveness and impacts of the project are high.

### 3.3 Efficiency (Rating: ②)

#### 3.3.1 Inputs

##### (1) JUTPI1

Inputs	Plan	Actual
(1) Experts	<ul style="list-style-type: none"> <li>• 2 Long-Term (project leader/urban transportation policy advisor, transportation coordination advisor, MM not stated*)</li> <li>• Short-Term to be dispatched as needed for effective project implementation (about 65 MM)</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Long-Term (project leader/urban transportation policy advisor, transportation coordination advisor, 57 MM)</li> <li>• 14 Short-Term (65 MM)</li> </ul>
(2) Trainees received	In the field of urban transportation system (estimated 10 persons per year)	Four times, 29 participants in total
(3) Equipment	Hardware and software for urban transportation planning as needed	Geographic information systems, traffic planning software, digital satellite image, copiers, printers, plotters, etc.
(4) Local expenses for the project activities	Not stated	Approximately 12.539 billion rupiah
Japanese Side Total Project Cost	Total approx. 463 million yen	Total 484 million yen
Indonesian Side Total Project Cost	Not stated	Not stated

\* MM stands for man month.

Source: Ex-ante evaluation sheet for plan and documents provided by JICA for actual results.

Note: The total project cost for JUTPI1 is based on the following ex-post evaluation reference concept, which takes into account the addition of components and extension of the project period after the revision of the Record of Discussions (R/D): “When a change in project scope (increase or decrease in output) causes an increase or decrease in the project period or project cost, it is not evaluated simply by the actual increase or decrease. In the case where the component has been changed, the actual results shall be compared with the planned figures after the said change, if such change is deemed appropriate, based on the status of agreement between the counterpart government and JICA regarding this change, coherence with the project objectives, etc.”

(2) JUTPI2

Inputs	Plan	Actual
(1) Experts	<ul style="list-style-type: none"> <li>• 1 Long-Term (urban transportation policy advisor, 36 MM)</li> <li>• Short-Term (urban transportation planning, etc., including seminars and pilot projects, MM not stated)</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Long-Term (project leader/urban transportation policy advisor, 57 MM)</li> <li>• 11 Short-Term (56.1 MM)</li> </ul>
(2) Trainees received	Training in Japan, training in a third country, and local in-country training in the field of TOD (number of participants not stated)	Seven times, 106 participants in total
(3) Equipment	Project vehicles, office equipment, etc. (cost not stated)	Transportation planning software, geographic information systems, computer satellite imagery, copiers, printers, plotters, etc.
(4) Local expenses for the project activities	Including cost of hiring local consultants, etc. (cost not stated)	Approx. 1.6 billion rupiah
Japanese Side Total Project Cost	Total approx. 484 million yen	Total 677 million yen
Indonesian Side Total Project Cost	Not stated	Not stated

Source: Ex ante evaluation table for plan and documents provided by JICA for actual.

3.3.1.1 Elements of Inputs

No problems were identified in terms of the quality and quantity of inputs on the Japanese side, but the timing of short-term experts for JUTPI2 was delayed for about two years due to delays in contract conclusion with them, and the long-term expert covered project activities for them during their absence, which delayed the entire activity from Outputs 1 to 3 and caused the extension of the project period.

In terms of inputs from the Indonesian side, there were delays in the assignment of counterparts and insufficient quantity (number of persons, frequency of participation) in JUTPI1, which sometimes prevented sufficient technology transfer in collaborative work such as traffic surveys and Master Plan revision.<sup>49</sup> At the beginning of JUTPI1, the Indonesian side recognized this project as the same development study as the SITRAMP project, and it took time for them to understand that JUTPI1 was a technical cooperation project in which Japanese experts and their Indonesian counterparts would work together to formulate an urban transportation plan. In daily meetings with CMEA and other central government department head-level policymakers, JUTPI was able to increase its capacity by introducing Japanese institutional and policy examples, experience, and knowledge.

As mentioned above, JUTPI1 faced challenges in terms of the timing of counterpart

<sup>49</sup> Source: Documents provided by JICA.

assignment and the method of participation. However, lessons learned from JUTPI1 were utilized in JUTPI2 to make activities for the project task-based. The Indonesian side gradually showed more initiative, and there were improvements in the involvement of counterparts, and it was judged that there were generally no problems over the long span of 10 years from the start to the completion of the two projects.

### 3.3.1.2 Project Cost

Table 6 shows the planned and actual project costs for the two phases of the project. The actual project cost was 1,161 million yen against the planned total of 947 million yen for the two phases, exceeding the plan (123% of the plan).

The comparison of planned and actual project costs is based on the concept of reference for external evaluation of JICA: “When a change in project scope (increase or decrease in output) causes an increase or decrease in the duration or project cost, the project will not be evaluated simply on the basis of the actual increase or decrease. In the case of a change in a component, if the change is deemed appropriate based on the status of the agreement between the counterpart government and JICA regarding the change, coherence with the project objectives, etc., the actual results are compared with the planned results after the said change.” Because four components were added to JUTPI1 because of revision of R/D<sup>50</sup> in October 2011 and these additions were judged to be consistent with the project objectives, the project cost of JUTPI was compared with the actual results using the changed values as planned values, in line with the reference for external ex-post evaluation of JICA described above.

The main difference between the planned and actual project costs is due to an increase in project expenses (e.g., cost for Japanese experts) resulting from the extension of the JUTPI2 project period.

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<sup>50</sup> In September 2010, under the vice president’s initiative, the Indonesian government announced 20 priority policies to reduce traffic congestion. These included the preparation of a Master Plan for Urban Transportation in the Jakarta Metropolitan Area and the establishment of JTA. The Government of Indonesia asked JUTPI1 to respond to the above, and the R/D was revised with respect to the addition of four components and extension of the project period. The four additional components are (1) To formulate short-term action plans and to establish the monitoring system in cooperation with related urban transportation organizations in JABODETABEK, (2) To support development of Standard Operation Procedure (SOP) to define functions for each department of JTA and procedure for implementation of activities (3) To develop Operation Reference for sector wide policy in JTA and (4) To coordinate JUTPI-MP and MP for Establishing Metropolitan Priority Area (MPA) for Investment and Industry (Source: documents provided by JICA). The above four components are described in Japanese documents as follows: (1) Support for formulation of short-term action plans and establishment of project progress evaluation and supervision methods, (2) Support for development of detailing Standard Operation Procedure (SOP) of JTA, (3) Development of operation reference for new projects and (4) Coordination with Study for Master Plan for Establishing Metropolitan Priority Area (MPA) for Investment and Industry in JABODETABEK area.

Table 6 Project Costs

	Plan	Actual	Ratio to Plan (%)
JUTPI1	463	484	105%
JUTPI2	485	677	140%
Total	948	1,161	123%

Unit: Million yens

Source: Documents provided by JICA.

### 3.3.1.3 Project Period

The project period exceeded the plan (137% of the plan) with an actual project period of 97 months compared to the plan of 71 months. In comparing planned and actual results, as with the project cost, for JUTPI1, the addition of the four components at the time of the R/D revision was consistent with the project objectives, so the period after the change was used as the planned value and the planned and actual values were compared. For JUTPI2, the R/D was revised twice, but the components were not changed, so the original plan was compared with the actual period. In addition, whereas the final inspection of the pilot projects for Output 2 of JUTPI2 was planned to be conducted after the completion of project activities stated in the PDM, the planned project period in the R/D was based on project activities stated in the PDM. Therefore, for JUTPI2, the end of the project period in efficiency was defined as the time when the series of activities stated in the PDM was completed.

Table 7 Project Period

	Plan	Actual	Ratio to plan (%)
JUTPI1	34 months (June 2009-March 2012)	34 months (June 2009-March 2012)	100%
JUTPI2	37 months (May 2014-May 2017)	63 months (August 2014-October 2019)	170%
Total	71 months	97 months	137%

Source: Documents provided by JICA.

Note: Project period was calculated based on R/D.

This project exceeded the plan in both project cost and project duration. Therefore, efficiency of the project is moderately low.

## 3.4 Sustainability (Rating: ②)

### 3.4.1 Policy and System

The *Medium-Term National Development Plan 2020-2024 (RPJMN 2020-2024)* identified the development of urban mass transit systems in six metropolitan areas, including JABODETABEK, as a priority project, with the aim of reducing potential economic losses

due to traffic congestion in the metropolitan area. The government of Indonesia emphasizes the development of an urban mass public transportation system to alleviate traffic congestion in the metropolitan area, and policy and institutional sustainability is ensured.<sup>51</sup>

### 3.4.2 Institutional/Organizational Aspect

#### (1) Sufficiency of Personnel in the Relevant Organizations

Regarding the planning and implementation of urban transportation plans, the BAPPEDA is responsible for the overall regional development planning for annual, mid-term (5 years), long-term (20 years), and regional spatial (20 years) planning in every sector, whereas the Transportation Agency is responsible for the planning and the implementation of urban transportation.

The sufficiency of personnel was confirmed through questionnaires and interviews with nine counterpart local governments in JABODETABEK. Five local governments indicated that they were short-staffed, and four indicated that they were adequately staffed. The reasons for the shortage were that they were insufficient in quantity to perform a series of tasks, such as developing regional plans, including transportation plans, conducting surveys and analyses related to transportation policy planning, and evaluating the plans.<sup>52</sup> Shortage of personnel has been an issue that has been pointed out since the SITRAMP and was also pointed out in the detailed planning survey of JUTPI3. The Government of Indonesia was conducting a workload analysis to identify needs for human resources to make decisions on hiring new central or local government officials as of June 2023, but it appears that it will take time to resolve the issue.

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<sup>51</sup> Source: *Appendix Presidential Regulation No.18 of 2020 concerning the National Medium-Term Development Plan for 2020-2024.*

<sup>52</sup> Source: Answers to questionnaires by local governments.

Table 8 Sufficiency of Local Government Staff

	Local government	BAPPEDA		Transportation Agency		Answer	Reasons for staffing shortages
		Administrative staff	Technical staff	Administrative staff	Technical staff		
1	Jakarta DKI	1	4	n.a.	n.a.	No	BAPPEDA has many tasks. First, related to the preparation or drafting of the local government work plan for annual planning, regional medium-term development plan, regional long-term development plan, and regional spatial plan. Second, related to the coordination of transportation planning in national strategic projects. Both tasks require enough staff to function properly.
2	Kota Bogor	11	35	272	26	No	Kota Bogor still have insufficient number of employees with background of bachelor's degree in engineering with major focus in land transportation and mapping.
3	Kabupaten Bogor	1	5	10	27	No	Lack of quantity.
4	Kota Depok	1	3	150	11	No	11 technical staff is not sufficient to carry out the work of three departments and three technical implementation units. The scope of work includes planning, evaluation, traffic analysis, traffic engineering, and management.
5	Kota Tangerang	1	2	5	69	Yes	
6	Kota Tangerang Selatan	1	3	1	3	Yes	
7	Kota Bekasi	2	3	164	26	Yes	
8	Kabupaten Bekasi	2	2	40	16	No	Collecting data, location survey and coordination with related agencies are difficult due to insufficient staffing.
9	Tangerang District	1	2	1	2	Yes	

Source: Prepared by evaluator based on answers to questionnaires and interviews.

## (2) Authority in Implementation of Urban Transportation Plans

The Ministry of Transportation has the authority to implement transportation plans. As for highways, the Highway Department of the Ministry of Public Works has the authority for licensing and approval. As a result of decentralization, various functions have been

transferred to local governments, and there are no problems.<sup>53</sup>

### (3) Progress in Establishing Coordination Mechanisms among Stakeholders

It is important to establish a cross-ministerial and cross-boundary framework in the implementation of urban transportation policies in a wide area; although the establishment of a JTA to centrally coordinate transportation policies in JABODETABEK, as envisioned in JUTPI1, did not materialize, efforts have been made in JUTPI2 to establish a cross-ministry and cross-boundary framework. In JUTPI3, which is currently being implemented, subtasks have been created to determine how to respond to various issues; pilot projects for TOD, the main component of JUTPI3, are being implemented while information on urban transportation is being centralized with the BPTJ as the core; and coordination mechanisms are being strengthened to enable consultation among relevant agencies.<sup>54</sup> Regarding the framework with the BPTJ as its core, regular communication between the BPTJ and local governments and support from the BPTJ to local governments have been observed, and progress has been made in establishing a coordination mechanism.

The coordination framework of the transportation sector in JABODETABEK, with BPTJ at its core, is improving through the support of JUTPI3, is a positive aspect. However, securing human resources to engage in transportation planning has been pointed out since the time of SITRAMP and was identified as an issue to be addressed by the government of Indonesia as of completion of JUTPI2. The prospects for immediate improvement in securing human resources are low, and the sustainability in terms of institutional/organizational aspect is judged to be somewhat low.

#### 3.4.3 Technical Aspect

As mentioned in “3.2.2.1 Achievement of Overall Goal,” the preparation of the Master Plan for Urban Transport Planning in JABODETABEK, namely the detailing of the RITJ, utilization of the JUTPI2 Master Plan is expected to be completed in 2024 with the support of JUTPI3. In addition, BPTJ and local governments are utilizing the transportation database developed under the project and reflecting it in their own regional development plans and transportation plans.<sup>55</sup> The Indonesian counterpart organizations have a certain level of technical knowledge and skills, and the technical sustainability is judged to be high.

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<sup>53</sup> Source: Answers to questionnaire by JUTPI2 and JUTPI3 Japanese experts and interviews with JUTPI2 and JUTPI3 Japanese experts.

<sup>54</sup> Source: Interview with JUTPI3 Japanese experts.

<sup>55</sup> In the questionnaire, all nine local governments indicated that they use the transportation database developed through the project for local government planning.

#### 3.4.4 Financial Aspect

Indonesia's fiscal laws regulate the national and local fiscal system, subsidies, and taxation. The national budget consists of revenues, expenditures, and annual finances and is financed by tax revenues, nontax revenues, and loans. The budget is allocated to the central government, local governments, and villages, but most of it is allocated to the various central ministries and agencies. Local government revenues include local government revenue, government grants, and loans.

In the list of "Medium-Term Foreign Loan Plans 2020-2024 (revised 2023)," the Government of Indonesia has secured US\$5,079 million (approximately ¥716.2 billion) in loans in the urban transportation sector. These loans include the construction of the MRT East-West Line and the MRT North-South Line, which are currently being implemented through these Japanese loans.<sup>56</sup>

Although some large-scale projects are being undertaken through loans and PPPs, the chronic lack of budget for transportation-related sectors in Indonesia has been pointed out since the time of SITRAMP and in the JUTPI3 detailed planning study. In the JUTPI2 Final Report, it was stated that investment in social infrastructure, such as transportation infrastructure, is essential to meet the demand to sustain the nation's economic growth and that funding resources for this could be created by reducing the fuel subsidy and earmarking of fuel tax to infrastructures as well as involvement of private sectors through PPP scheme and other funding schemes, such as PINA (nongovernment budget equity financing) and a local government bond.

With limited public budgets, the BPTJ has made efforts to promote the use of alternative funding sources, such as PPPs, and to hold seminars and workshops on PPPs for local governments, but challenges remain in finding a scheme that guarantees economic and financial benefits that will attract investors. Pilot projects for TOD, which include the development of a funding plan, are underway in JUTPI3. The funding approach is expected to be improved through this activity; however, because the pilot projects are still under implementation, it is too early to make a judgment regarding the prospects for securing funding sources.

The budgets for public transportation infrastructure in the seven local governments<sup>57</sup> that provided responses to the question on their budget have increased every year from FY2018 to FY2022, except for FY2020, when the emphasis was on the measures for COVID-19. However, measures for COVID-19 also increased the Public Service Obligation (PSO) or

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<sup>56</sup> Source: Documents provided by the implementing agency.

<sup>57</sup> Information on the budget was obtained from seven of the nine local governments: DKI Jakarta, Kabupaten Bogor, Kota Bogor, Kota Depok, Kota Bekasi, Kota Tangerang, and Kota Tangerang Selatan.

Public Transportation Subsidy given to public transportation operators. In addition, BPTJ and the six local governments<sup>58</sup> indicated that their budgets are expected to be secured to a certain extent, given the policy emphasis on public transportation and the increasing trend in government budgets. On the other hand, regarding budget sufficiency, seven local governments<sup>59</sup> indicated that the budget for public transportation infrastructure is not sufficient, indicating that the public budget alone is not sufficient for infrastructure development, which requires a huge amount of funds.

Although the budget for the public transportation sector has been increasing over time, the PPP scheme the Government of Indonesia promoted has yet to improve its financing methods, so the financial sustainability is judged to be somewhat low.

#### 3.4.5 Environmental and Social Aspect

No negative impacts in terms of environmental and social considerations were identified, as stated in “3.2.2.2 Other, Positive and Negative Impacts.”

#### 3.4.6 Preventative Measures to Risks

No risks were assumed at the time of planning, nor were any risks encountered during the implementation of the project.

Some minor issues have been observed in institutional/organizational and financial aspects. The prospects for improvement and resolution are uncertain currently. Therefore, sustainability of the project effects is moderately low.

## **4. Conclusion, Lessons Learned and Recommendations**

### 4.1 Conclusion

JUTPI1 was implemented to support the revision of the Master Plan for urban transport infrastructure development and the establishment of the necessary framework in order to coordinate the implementation of wide-area urban transport projects through the capacity building of central and local government officials involved in urban transport infrastructure planning in JABODETABEK, thereby contributing to urban development based on public transport systems in the area. JUTPI2 was implemented to improve the administrative functions of the urban transportation system by enhancing coordination and project implementation capacity among urban transportation agencies and organizations, thereby

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<sup>58</sup> DKI Jakarta, Kota Bogor, Kota Depok, Kabupaten Bekasi, Kota Bekasi and Kabupaten Tangerang.

<sup>59</sup> DKI Jakarta, Kabupaten Bogor, Kota Bogor, Kota Depok, Kota Bekasi, Kota Tangerang, and Kota Tangerang Selatan.

contributing to urban development based on public transportation systems in the area. From the time of planning to the completion of the project, the contents of this project were consistent with the development policy of the Government of Indonesia, which emphasized the development of public transportation in JABODETABEK and with the development needs to promote public transportation. In addition, lessons learned from similar projects in the past were utilized in project implementation, and the approach was appropriate. Although the content of the project was consistent with the assistance policy of the Government of Japan for Indonesia at the time of ex-ante evaluation, no specific collaborative effects between the project and other JICA projects or linkages with other donors were identified. Based on the above, relevance and coherence of the project are high. With the implementation of this project, the approval of the draft Master Plan, which was set as the project purpose, was achieved as planned. As for the overall goal of the project, “to improve urban transportation comprehensively,” although the legalization for the JUTPI2 Master Plan is still in progress, almost all the target local governments have reflected the findings from the Master Plan preparation process in their medium-term development plans, transportation plans, spatial plans, and so on. In addition, many cases of actual public transportation improvement efforts were confirmed. Therefore, the effectiveness and impacts of the project are high. Since both the project cost and project period exceeded the plan, the efficiency of the project is moderately low. Regarding the sustainability of the project effect, some minor issues have been observed in terms of the institutional/organizational and financial aspects. The prospects for improvement and resolution are currently uncertain. Therefore, sustainability of the project effects is moderately low.

In light of the above, this project is evaluated to be satisfactory.

## 4.2 Recommendations

### 4.2.1 Recommendations to the Implementing Agency

It is recommended that BPTJ, with the support of JUTPI3, complete the review and evaluation of the RITJ while utilizing the JUTPI2 Master Plan by December 2023, the end of Indonesia’s fiscal year, and institutionalize the updated RITJ in 2024.

### 4.2.2 Recommendations to JICA

None.

## 4.3 Lessons Learned

### Sharing the Path to Achieving the Overall Goal at the Time of Project Completion

In JUTPI2, a new format of Project Completion Report of JICA introduced in 2015 was not fully utilized at the time of project completion, and the Project Completion Report

(Japanese report name is Final Report) did not include a description of the specific plan to achieve the overall goal, which is included in the new format. Specific plans for achieving the overall goal were expected to be discussed between the two countries and included in the report, but the project was completed without this discussion. As a result, the Japanese and Indonesian parties understood differently the process of detailing and formally approving the RITJ using the JUTPI2 Master Plan. In addition, there was no monitoring or follow-up by the JICA Indonesia office until the overall goal was achieved.

If the project involves a plan that will require formal approval by the counterpart country after the project is completed (e.g., a master plan, etc.), it is desirable that the counterpart organization and the Japanese expert prepare a plan that includes specific activities, schedule, and division of roles to achieve the overall goal, and that the JICA overseas office monitor the plan on a regular basis.

## **5. Non-Score Criteria**

### 5.1 Performance

#### 5.1.1 Objective Perspective

None.