

Democratic Republic of the Congo

FY2024 Ex-Post Evaluation Report of Japanese Grant Aid Project

“The project for Improvement of Road Maintenance Equipment in Kinshasa City”

External Evaluator: Akemi Serizawa, International Development Center of Japan

## **0. Summary**

This project was implemented with the aim of improving road maintenance status in Kinshasa by providing road maintenance equipment to the Office of Roads and Drainage (Office des Voiries et Drainage. Hereinafter referred to as “OVD”) and the Office of Routes (Office des Routes. Hereinafter referred to as “OR”) in Kinshasa, thereby contributing to the improvement of the transportation networks and access to social services in the city. This project was in line with the policies of the Democratic Republic of the Congo prioritizing road network development and the development needs of the country and was consistent with Japan’s assistance policy. Although internal and external coherence was not confirmed, the relevance and coherence of this project are high. The output was produced as planned, and although the project cost slightly exceeded the plan, the project period was within the plan. Therefore, the efficiency of this project is high. “The improvement of the road maintenance status in Kinshasa,” expected as the effectiveness of the project, has been achieved as the indicator “pavement repair length” achieved the target and the road surface conditions of major roads in the city, including Boulevard Congo-Japon, are generally good. While many roads in the city other than major roads are not well maintained, this project procured the equipment that could be operated by existing personnel and facilities of OVD and OR, and assumed road maintenance work on a scale that could be handled by their equipment. Road maintenance work on such a scale has been carried out, focusing on the main roads with a high priority among the city’s enormous road maintenance needs. Therefore, the equipment procured by this project has been fulfilling its expected role. While the daily traffic volume and the number of passengers on Boulevard Congo-Japon achieved the targets, the increase in traffic volume has exceeded the capacity of the roads in the city, resulting in chronic traffic congestion. For the expected impacts of the project, such as the improved convenience of the transportation networks in the city and access to social services, and promotion of economic activities, comprehensive measures such as transportation policies and urban and road planning are necessary, and it is reasonable to understand that the role of road maintenance equipment is limited. Therefore, the implementation of this project has mostly achieved the planned effects, and its effectiveness and impact are high. Regarding the operation and maintenance of this project, the personnel and finances of OVD and OR are sufficient for the maintenance of major roads in the city, and there are no issues in terms of policy, organizational/institutional or technical aspects, and the equipment has also been utilized and is in good condition. Therefore, the sustainability of the project effects is high.

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

## 1. Project Description



Project Location  
(Source: JICA Library<sup>1</sup>)



Bulldozer procured by the project  
(Source: Evaluator)

### 1.1 Background

In Kinshasa, the capital of the Democratic Republic of the Congo, rapid population growth has led to significant uncontrolled urbanization and expansion of residential areas. As of 2018, the road paving rate in Kinshasa was relatively high at 65%,<sup>2</sup> but the budget execution rate for road maintenance in 2015 was less than 50% of the annual plan,<sup>3</sup> resulting in serious deterioration and damage of the roads. As a result, there were challenges such as increased travel time and costs, deteriorated access to social services such as hospitals, and traffic congestion due to the concentration of traffic on some paved roads.

At OVD, which is responsible for the maintenance of urban roads, many of their equipment were out of order and not repaired due to the difficulty in obtaining spare parts. Additionally, OR, which is responsible for the maintenance of the main road networks including national and provincial roads, there was a shortage of the equipment necessary for emergency repairs and small-scale repairs. As a result, routine maintenance and small-scale repairs were not adequately carried out, leading to further deterioration and the need for large-scale rehabilitation, which in turn increased maintenance costs.

### 1.2 Project Outline

The objective of this project is to improve road maintenance status in Kinshasa by providing

<sup>1</sup> <https://www.bbc.com/news/world-africa-13283212> (accessed date: 15 January 2026)

<sup>2</sup> *Project for Urban Transport Master Plan in Kinshasa City, Interim Report* (August 2018) which was cited in the project completion report of the Project for Capacity Development of Road Maintenance Management (April 2019)

<sup>3</sup> Information of the National Fund of Road Maintenance (Fonds National d'Entretien Routier: FONER) in 2015 which was cited in the ex-ante evaluation sheet of this project

road maintenance equipment to OVD and OR, thereby contributing to the improvement of the transportation networks and access to social services.

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Grant Limit / Actual Grant Amount                | 1,062 million yen / 1,016 million yen                                                                                                                                                                                                                                                                                                                                                                                        |
| Exchange of Notes Date /<br>Grant Agreement Date | August 2018 / August 2018                                                                                                                                                                                                                                                                                                                                                                                                    |
| Executing Agencies                               | Ministry of Infrastructure and Public Works (Ministère des Infrastructures et Travaux Publics) <sup>4</sup><br>Office des Voiries et Drainage (OVD)<br>Office des Routes (OR) <sup>5</sup>                                                                                                                                                                                                                                   |
| Project Completion                               | September 2021                                                                                                                                                                                                                                                                                                                                                                                                               |
| Target Area                                      | Kinshasa City                                                                                                                                                                                                                                                                                                                                                                                                                |
| Main Contractor(s)                               | Toyota Tsusho Corporation,<br>FutureBud International Co., Ltd.                                                                                                                                                                                                                                                                                                                                                              |
| Main Consultant(s)                               | INGEROSEC Corporation                                                                                                                                                                                                                                                                                                                                                                                                        |
| Preparatory Survey                               | July 2017-February 2018                                                                                                                                                                                                                                                                                                                                                                                                      |
| Related Projects                                 | [JICA technical cooperation]<br>The Project for Capacity Development of Road Maintenance Management (2016-2019)<br>Project for Urban Transport Master Plan in Kinshasa City (2017-2019)<br>Project for Capacity Development for the realization of the Urban Transport Master Plan in Kinshasa City / PDK (2021-2025)<br>[Other development partners]<br>French Development Agency (Agence Française de Développement: AFD): |

<sup>4</sup> At the time of ex-ante evaluation, it was the Ministry of Infrastructure, Public Works and Reconstruction (Ministère des Infrastructures, Travaux Publics et Reconstruction).

<sup>5</sup> In the ex-ante evaluation sheet, the Ministry of Infrastructure and Public Works was named as the executing agency, and OVD and OR were named as the operation and maintenance agencies. In this ex-post evaluation, these three organizations are treated as the executing agencies of this project.

|  |                                                                                                                                        |
|--|----------------------------------------------------------------------------------------------------------------------------------------|
|  | Strategic Orientation Plan for the Kinshasa Metropolitan Area (Schéma d’Orientation Stratégique de l’Agglomération de Kinshasa: SOSAK) |
|--|----------------------------------------------------------------------------------------------------------------------------------------|

## 2. Outline of the Evaluation Study

### 2.1 External Evaluator

Akemi Serizawa, International Development Center of Japan

### 2.2 Duration of Evaluation Study

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

Duration of the Study: September 2024-January 2026

Duration of the Field Study: 12-19 January 2025, 20-26 April 2025

## 3. Results of the Evaluation (Overall Rating: A<sup>6</sup>)

### 3.1 Relevance/Coherence (Rating: ③<sup>7</sup>)

#### 3.1.1. Relevance (Rating: ③)

##### 3.1.1.1 Consistency with the Development Plan of the Democratic Republic of the Congo

In *the National Strategic Development Plan (Plan National Stratégique de Développement: PNSD)* of the Democratic Republic of the Congo at the time of ex-ante evaluation (*PNSD 2017-2021*) and that at the time of ex-post evaluation (*PNSD 2024-2028*)<sup>8</sup>, infrastructure development was among the priorities. The objective of *the Three-year Road Maintenance Program (Programme d’Entretien Routier Triennal)* (2024-2026) at the time of ex-post evaluation is to ensure the safety of road users, smooth traffic flow, and the sustainability of infrastructure. In addition, *the Five-year Plan for the Road Infrastructure (Plan Quinquennal sur les Infrastructures Routières)* (2024-2028) aims at the national land development with maximum connectivity. Its specific goals include traffic safety, reduction of environmental impact, promotion of mobility and development of integrated transportation systems, ensuring regional connectivity, and improving access to services in cities.<sup>9</sup>

The urban planning program of Kinshasa is *the Strategic Orientation Plan for the Kinshasa Metropolitan Area (Schéma d’Orientation Stratégique de l’Agglomération de Kinshasa*: hereinafter referred to as “SOSAK”) which was supported by AFD in its

<sup>6</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>7</sup> ④: Very High, ③: High, ②: Moderately Low, ①: Low

<sup>8</sup> Website of Ministry of Planning (Ministère du Plan) of the Democratic Republic of the Congo <https://plan.gouv.cd/documents/pnsd/> (accessed date: 15 January 2026)

<sup>9</sup> Questionnaire responses from the Ministry of Infrastructure and Public Works

preparation and approved in 2014. In addition, there is the transportation planning program titled *Urban Transport Master Plan in Kinshasa City (Plan Directeur des Transports Urbains de la Ville de Kinshasa*: hereinafter referred to as “PDTK”) which was supported by JICA in its preparation and approved in 2019. PDTK proposes 78 road projects with a medium-term perspective until 2030, aiming to develop road networks that can cope with rapid urbanization. OVD is involved in all 78 projects, while OR is involved in eight projects targeting national and provincial roads.<sup>10</sup> Furthermore, the total length of roads managed by OVD and OR in Kinshasa City is 3,621 km. Out of which, 251 km (7%) is the national and provincial roads managed by OR and the remaining 3,370 km (93%) are managed by OVD<sup>11</sup>. *The Action Programme of Kinshasa Provincial Government (Programme d’Actions du Gouvernement Provincial de Kinshasa)* (2024-2028) outlines plans to rehabilitate the urban road networks and develop integrated transportation systems (roads, railways, and rivers). Road maintenance equipment is essential for the implementation of these road development policies.

From the above, this project is relevant with the development policies at the time of ex-ante and ex-post evaluations.

### 3.1.1.2 Consistency with the Development Needs of the Democratic Republic of the Congo

As mentioned in “1.1 Background,” at the time of ex-ante evaluation, Kinshasa was experiencing rapid population growth, which led to disorderly urbanization and significant expansion of residential areas. The deterioration and damage of roads were severe, leading to issues such as increased travel time and costs, worsened access to social services, and traffic congestion. OVD and OR could not carry out necessary road repairs due to breakdown of equipment, unavailability of spare parts, and shortage of equipment.

At the time of ex-post evaluation, the roads in Kinshasa were unable to absorb the increase in traffic volume,<sup>12</sup> resulting in chronic severe congestion. This was due to structural problems at intersections, insufficient traffic signals, a lack of public transportation forcing many citizens to use private vehicles, and non-compliance with traffic rules.<sup>13</sup> The main roads in Kinshasa are generally in good condition, and it is necessary to maintain this state. Many minor roads in the city are not adequately maintained such as remaining unpaved. There was a significant need for road maintenance to facilitate smooth traffic flow in the city, even at the time of ex-post evaluation.

<sup>10</sup> PDTK website: <https://pdtk-kinshasa.com/> (accessed date: 15 January 2026)

<sup>11</sup> *Final report of the Project for Urban Transport Master Plan in Kinshasa City (PDTK)* (April 2019)

<sup>12</sup> The number of vehicles owned was estimated to be approximately 500,000 in 2024 and approximately 342,000 in 2017. For motorcycles, it was approximately 75,000 in 2024 and approximately 54,000 in 2017. (Source: Ministry of Economy, Trade and Industry, *FY2023 Feasibility Study for Overseas Expansion of High-Quality Infrastructure: Study for Mobility Improvement in Kinshasa, Democratic Republic of the Congo* (Oriental Consultants Global and Nippon Steel Corporation, February 2024)

<sup>13</sup> Same as above (Report of Ministry of Economy, Trade and Industry)

Based on the above, this project meets the road maintenance needs of Kinshasa at the time of the ex-ante and ex-post evaluations.

#### 3.1.1.3 Appropriateness of the Project Plan and Approach

Based on lessons learned from similar projects in the past, this project selected equipment manufactured in Japan or other countries with equivalent quality standards. The tender documents stipulated that equipment suppliers must have local distributors and guarantee the supply of spare parts for ten years.<sup>14</sup> According to OVD and OR, spare parts and consumables were readily available for several years after the project was completed. However, due to the economic downturn following the spread of Coronavirus Disease-2019 (hereinafter referred to as “COVID-19”), distributors began closing one after another, and OVD and OR had to identify the distributors and purchase spare parts on their own. Spare parts have been available to date, and no equipment has become irreparable. The closure of distributors was unforeseeable, and it can be concluded that appropriate measures were taken in this project to secure spare parts.

#### 3.1.2 Coherence (Rating: ②)

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

At the time of ex-ante evaluation, *Japan’s Country Development Assistance Policy for the Democratic Republic of the Congo* (December 2012) placed infrastructure development support as its basic policy and identified the improvement of roads in Kinshasa as an urgent issue. Therefore, this project was consistent with Japan’s development assistance policy.

##### 3.1.2.2 Internal Coherence

JICA technical cooperation project “The Project for Capacity Development of Road Maintenance Management” (2016-2019), with OVD and OR as the implementing agencies, established a maintenance cycle for paved roads in Kinshasa, formulated technical guidelines for maintenance, and provided guidance on pavement repair techniques. The grant aid project was planned during the implementation of this technical cooperation project and aimed to further strengthen the maintenance system by procuring road maintenance equipment. At the time of ex-post evaluation, OVD and OR have been planning and implementing the paving of unpaved roads and the rehabilitation of paved roads on their own. JICA project “Project for Urban Transport Master Plan in Kinshasa City” (2017-2019) was implemented in the same period as the grant aid project and the successor technical cooperation project “Project for Capacity Development for the realization of the Urban Transport Master Plan in Kinshasa City / PDTK” (2021-2025) has

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<sup>14</sup> Project monitoring report (project completion report) of this project (December 2021)

used the equipment procured by the grant aid project for the pilot activities for the promotion of traffic safety such as installation of pedestrian crossings and other objectives. However, these two projects did not have specific coordination or collaboration with the grant aid project. Therefore, there was no internal coherence.

For reference information, while the road maintenance database developed by the Project for Urban Transport Master Plan in Kinshasa City functioned without any problems in OVD until 2023, its operation was suspended in 2024 due to the problems of hardware and software. As of April 2025, OVD purchased a new computer and decided to purchase new software from the same Japanese manufacturer as before. On the other hand, the Kinshasa Provincial Office of OR, where the equipment was placed by the grant aid project, was not aware of this database at the time of ex-post evaluation. The database might have been installed in another department, and its status is unknown.

### 3.1.2.3 External Coherence

Under the urban planning program of Kinshasa called SOSAK (supported by AFD), there is a transportation planning program called PDTK (supported by JICA), and road construction and maintenance are carried out under these two plans. In addition to the road projects managed by Kinshasa Provincial Government and the National Road Maintenance Fund (Fonds National d'Entretien Routier: FONER),<sup>15</sup> the Ministry of Infrastructure and Public Works oversees and coordinates support from the World Bank, China, and other development partners for the construction and maintenance of roads in Kinshasa, and the equipment procured by this grant aid project is also being used. However, as there was no specific coordination or collaboration with this project, external coherence is not identified.

This project was in line with the policy of the Democratic Republic of the Congo prioritizing road network development and its development needs, and was also consistent with Japan's assistance policy, but there was no internal or external coherence. Therefore, its relevance and coherence are high.

## 3.2 Efficiency (Rating: ③)

### 3.2.1 Project Outputs

The equipment was procured and allocated as planned, as shown in Table 1. According to the preparatory survey report for this project (2018), the number of equipment was determined based on the assumption that the equipment procured by this project would replace others that would

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<sup>15</sup> FONER was established in July 2008. It collects and centrally manages funds for road maintenance from fuel taxes. (Source: *Project completion report of Project for Capacity Development of Road Maintenance Management (2019)*, *Final report of the Project for Urban Transport Master Plan in Kinshasa City (PDTK) (2019)*)

need to be updated several years after the planning of this project. It was also assumed that the equipment should be operated appropriately by the existing number of personnel and facility size. Therefore, the number of equipment owned by OVD and OR did not change significantly before and after this project. The equipment is divided into regular maintenance equipment used for large-scale repairs, daily maintenance equipment used for works such as pothole repairs, and utility equipment such as road maintenance trucks. Since OR outsources regular maintenance work to other companies, this project decided not to procure regular maintenance equipment for OR. As a result, fewer pieces of equipment were allocated to OR than to OVD.

Table 1. Equipment allocation

|     | Equipment                              | Planned<br>number | Actual<br>number | (Unit)<br>Allocation |    |
|-----|----------------------------------------|-------------------|------------------|----------------------|----|
|     |                                        |                   |                  | OVD                  | OR |
| 1   | Soil stabilizer                        | 2                 | 2                | 2                    | -  |
| 2   | Bulldozer                              | 3                 | 3                | 3                    | -  |
| 3   | Grader                                 | 3                 | 3                | 3                    | -  |
| 4-1 | Combined roller                        | 3                 | 3                | 3                    | -  |
| 4-2 | Tandem roller                          | 3                 | 3                | 3                    | -  |
| 5   | Crawler excavator                      | 3                 | 3                | 3                    | -  |
| 6   | Wheeled excavator                      | 3                 | 3                | 3                    | -  |
| 7   | Water tank truck                       | 3                 | 3                | 3                    | -  |
| 8   | Asphalt paver                          | 2                 | 2                | 2                    | -  |
| 9   | Spreader truck                         | 3                 | 3                | 3                    | -  |
| 10  | Tire roller                            | 3                 | 3                | 3                    | -  |
| 11  | Dump truck                             | 9                 | 9                | 9                    | -  |
| 12  | Pickup truck                           | 4                 | 4                | 3                    | 1  |
| 13  | Asphalt cutter                         | 5                 | 5                | 4                    | 1  |
| 14  | Vibratory compactor                    | 5                 | 5                | 4                    | 1  |
| 15  | Manual rock breaker                    | 5                 | 5                | 4                    | 1  |
| 16  | Air compressor                         | 5                 | 5                | 4                    | 1  |
| 17  | Bitumen spreader                       | 5                 | 5                | 4                    | 1  |
| 18  | Hand-guided and controlled steamroller | 5                 | 5                | 4                    | 1  |
| 19  | Mobile asphalt plant                   | 2                 | 2                | 1                    | 1  |
| 20  | Low loader trailer                     | 1                 | 1                | 1                    | -  |
| 21  | Road maintenance truck                 | 2                 | 2                | 1                    | 1  |
| 22  | Marking machine                        | 2                 | 2                | 1                    | 1  |
| 23  | Truck crane                            | 2                 | 2                | 1                    | 1  |

|      | Equipment                   | Planned<br>number | Actual<br>number | Allocation |    |
|------|-----------------------------|-------------------|------------------|------------|----|
|      |                             |                   |                  | OVD        | OR |
| 24   | Itinerant workshop          | 1                 | 1                | 1          | -  |
| 25   | Excavator loader            | 1                 | 1                | 1          | -  |
| 26   | Backhoe loader              | 1                 | 1                | 1          | -  |
| 27-1 | Hydrovide                   | 1                 | 1                | 1          | -  |
| 27-2 | High pressure washing truck | 1                 | 1                | 1          | -  |
| 28   | Maintenance workshop tools  | 1                 | 1                | -          | 1  |

Source: Project completion report, documents from OVD and OR

### 3.2.2 Project Inputs

#### 3.2.2.1 Project Cost

The project cost of the Japanese side was 1,016 million yen and it was within the planned 1,062 million yen (96% of the plan). The cost of equipment, which accounted for most of the project cost of the Japanese side, was reduced from the original plan due to the result of cost estimates and fluctuation of exchange rates that were reflected in the detailed design, as well as competition during the bidding process. The project cost of the Democratic Republic of the Congo side significantly exceeded the plan, reaching US\$1,181,750 (approximately 128 million yen)<sup>16</sup> compared to the planned US\$417,850 (approximately 45 million yen)<sup>17</sup>, which was 284% of the plan. The cost was increased mainly because the original space designated for equipment parking was too small, and it became necessary to prepare another space and construct an access road. The total project cost of both countries was 1,144 million yen, compared to the planned cost of 1,107 million yen. It slightly exceeded the plan (103% of the plan).

#### 3.2.2.2 Project Period

The project period of the initial plan was 32 months, from August 2018 (signing of the Grant Agreement) to March 2021 (commencement of use of the equipment). Due to the impact of COVID-19 and other factors, the contracts with the project consultant and equipment suppliers, as well as the equipment delivery deadlines, were extended multiple times, and the Grant Agreement was revised once. The actual project period was the same as the revised Grant Agreement (August 2018 to September 2021, totalling 38 months), which was within the plan (100% of the plan). The history of the revision of the Grant Agreement and the extensions of the contracts is shown in Table 2.

<sup>16</sup> 1US\$=JPY108.62 (the average rate during the project period according to IMF statistics)

<sup>17</sup> Same as above

Table 2. History of the revisions of the Grant Agreement and extensions of the contracts

| Times of revision | Details of revisions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| November 2019     | Due to the presidential election in December 2018, the tender of the equipment was rescheduled from January 2019 to April 2019, and the deadline of equipment delivery was set for December 2020. At the same time, the end of the contract with the consultant was extended from 30 April 2020 to 31 December 2020.                                                                                                                                                                                                                                                                          |
| July 2020         | Considering the above circumstances, the end of the contracts with the equipment suppliers was extended from 31 July 2020 to 31 December 2020.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| December 2020     | The end of the contract with the consultant and those with the equipment suppliers were extended from 31 December 2020 to 31 March 2021. This is due to delays in customs clearance procedures for the equipment, changes in equipment parking spaces, and procedural delays caused by COVID-19.                                                                                                                                                                                                                                                                                              |
| March 2021        | Amended Grant Agreement was signed. The Grant period was extended from 31 March 2021 to 31 March 2022. Initial equipment operation training and delivery inspections were scheduled in June 2020, and the delivery of equipment was scheduled in July 2020. However, as they fell in the lockdown period by COVID-19 (March to October 2020), the persons concerned could not travel to the Democratic Republic of the Congo. These tasks were postponed to March 2021, and the Grant period was extended to 31 March 2022 to prepare for subsequent procedures and unforeseen circumstances. |
| April 2021        | The end of the contract with the consultant and those of the equipment suppliers were extended from 31 March 2021 to 30 June 2021. There was a delay in obtaining tax exemption approval and one of the initial operation instructors could not travel due to COVID-19 infection. The initial operation training and delivery inspection were not completed in March.                                                                                                                                                                                                                         |
| September 2021    | The end of the contract with the consultant and those of the equipment suppliers were extended from 30 June 2021 to 30 September 2021.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

Source: Documents from JICA

In light of the above, the output of this project was produced as planned, the project cost slightly exceeded the plan, and the project period was within the plan. Therefore, efficiency of the project is high.

### 3.3 Effectiveness and Impacts<sup>18</sup> (Rating: ③)

#### 3.3.1 Effectiveness

##### 3.3.1.1 Quantitative Effects (Operation and Effect Indicators)

Among the three indicators set at the time of ex-ante evaluation, Indicator 1 “Pavement repair length” was examined for the improvement of road maintenance status in Kinshasa. Indicator 2 “Traffic volumes” and Indicator 3 “Number of passengers” of Boulevard Congo-Japon were examined as the impact indicators. The evaluator proposed Indicator 4

<sup>18</sup> When providing the sub-rating, Effectiveness and Impacts are to be considered together.

“Percentage of road repair plans implemented” and Indicator 5 “Percentage of roads (key locations) in Kinshasa that need repair but have not been repaired)” as supplementary indicators of effectiveness and asked OVD and OR to provide such data.

Table 3. Quantitative effect indicators

|                                          | Baseline value | Target value             | Actual values   |                         |                          |                          |
|------------------------------------------|----------------|--------------------------|-----------------|-------------------------|--------------------------|--------------------------|
|                                          | 2016           | 2023                     | 2021            | 2022                    | 2023                     | 2024                     |
|                                          |                | 3 years after completion | Completion year | 1 year after completion | 2 years after completion | 3 years after completion |
| Indicator 1. Pavement repair length (km) | 253.5          | 441.0                    | 521.4           | 601.6                   | 678.1                    | 712.8                    |

Source: Ex-ante evaluation sheet for the baseline and target values. Questionnaire responses from OVD and OR for the actual values.

Table 4. Quantitative effects: Supplementary indicators

|                                                                                                          | Actual values |                 |                         |                          |                          |
|----------------------------------------------------------------------------------------------------------|---------------|-----------------|-------------------------|--------------------------|--------------------------|
|                                                                                                          | 2018          | 2021            | 2022                    | 2023                     | 2024                     |
|                                                                                                          | Start year    | Completion year | 1 year after completion | 2 years after completion | 3 years after completion |
| Indicator 4. Percentage of road repair plans implemented                                                 | OVD: No data  |                 |                         |                          |                          |
|                                                                                                          | OR: 20%       | 20%             | 30%                     | 40%                      | 40%                      |
| Indicator 5. Percentage of roads (key locations).in Kinshasa that need repair but have not been repaired | OVD: No data  |                 |                         |                          |                          |
|                                                                                                          | OR: 90%       | 80%             | 80%                     | 80%                      | 80%                      |

Source: Questionnaire response from OR

The actual value of Indicator 1 “Pavement repair length” significantly exceeded the target value. Pavement repair length was the figure not only by the equipment procured by this project, but also by all equipment owned by OVD and OR. According to OVD and OR, the percentage of equipment procured by this project among the road maintenance equipment owned by them was 44% for OVD and 10% for OR. As indicated in the section of Project Output, the equipment procured by this project was diverse, and it has been used for road maintenance by combining the individual performance of each item. Therefore, the equipment procured by this project, together with other equipment owned by OVD and OR, has achieved the target value of Indicator 1.

Only OR was able to provide the data for Indicator 4 “Percentage of road repair plans implemented” and Indicator 5 “Percentage of roads in Kinshasa that need repair but have not been repaired” that were proposed as supplementary indicators. The OR data shows that the implementation rate of the road rehabilitation is low and the percentage of the roads that need repair but are not repaired is high. This confirms that implementation of road maintenance has not been keeping pace with the enormous needs in Kinshasa.

### 3.3.1.2 Qualitative Effects (Other Effects)

According to observations during the site visit, the surface of major roads in the city, including Boulevard Congo-Japon where the data for the impact indicators described below was to be collected, was generally in good condition. In interviews with residents working along Boulevard Congo-Japon,<sup>19</sup> eight out of the 11 respondents said that road conditions had improved, but others pointed out that there were problems such as collapsed shoulders, flooding, and waste accumulation in certain areas. These issues were also confirmed by the evaluator during the site visit. Minor roads in the city have many problems, such as collapsed shoulders, potholes and cracks in the road surface, flooding, muddy conditions, and waste accumulation. However, as mentioned above, this project was designed to manage road maintenance within the scope of personnel, facilities, and equipment available at OVD and OR, rather than covering all roads in Kinshasa. Actual maintenance work has been focused on main roads with priorities, and the equipment procured by the project is deemed to be fulfilling its intended role. Therefore, improvement of road maintenance status as the effectiveness of the project has been mostly achieved as planned.

### 3.3.2 Impacts

#### 3.3.2.1 Intended Impacts

##### 1) Improved convenience of transport networks in Kinshasa

To measure the improved convenience of transport networks in Kinshasa, two indicators set by the ex-ante evaluation, Indicator 2 “Traffic volumes” and Indicator 3 “Number of passengers” of Boulevard Congo-Japon were examined.

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<sup>19</sup> On 16 January 2025 (Thursday), road user interviews were conducted at several locations along Boulevard Congo-Japon. It was a public holiday and there were lower traffic volumes than usual, and some businesses were closed. A total of 11 persons (6 men and 5 women) were surveyed, including 2 taxi and bus drivers (both men), 5 merchants (street vendors and small shop owners, 3 men and 2 women), and 4 petrol station shop employees (1 man and 3 women) from two different shops.

A limitation of the survey was that respondents did not distinguish between changes before and after the rehabilitation of Boulevard Congo-Japon (completed in 2014) and the effects of this project (whether road conditions improved after 2022 thanks to the use of equipment).

Table 5. Improved convenience of transport networks in Kinshasa: Quantitative indicators

|                                                                             | Baseline value | Target value             | Actual values   |                         |                          |                          |
|-----------------------------------------------------------------------------|----------------|--------------------------|-----------------|-------------------------|--------------------------|--------------------------|
|                                                                             | 2016           | 2023                     | 2021            | 2022                    | 2023                     | 2024                     |
|                                                                             |                | 3 years after completion | Completion year | 1 year after completion | 2 years after completion | 3 years after completion |
| Indicator 2. Traffic volumes (vehicles/day) (Boulevard Congo-Japon)         | 27,576         | 34,896                   | 31,423          | 34,004                  | 36,763                   | 37,845                   |
| Indicator 3. Number of passengers (passengers/year) (Boulevard Congo-Japon) | 51,989,355     | 65,849,000               | 59,242,149      | 64,108,515              | 69,309,336               | 71,349,432               |

Source: Ex-ante evaluation sheet for the baseline and target values. Questionnaire responses from OVD and OR for the actual values.

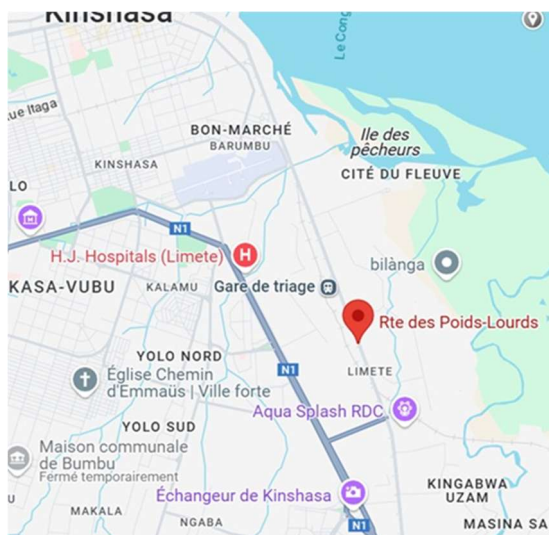


Figure 1. Boulevard Congo-Japon (former Route des Poids-Lourds)  
(Source: Google Maps)

The 12 km long Boulevard Congo-Japon (formerly known as Route des Poids-Lourds) is one of the main roads connecting N'Djili International Airport and Kinshasa city centre. It also serves as an industrial road for transportation and manufacturing industries located along the road. It was repaired and rehabilitated by JICA grant aid project titled “The Project for Road Rehabilitation of Poids-Lourds in Kinshasa (Phase 1 and 2)” (completed in June 2014)<sup>20</sup>. Given this background, Boulevard Congo-Japon might have been selected for Indicators 2 and 3 of this project as the representative of the roads in the city. In

setting these indicators, the assumption might have been that, if the executing agency (OVD in the case of Boulevard Congo-Japon)<sup>21</sup> implemented road maintenance using the equipment, the road would be kept in good condition, then the number of vehicles choosing and passing the road would increase, and the local economy would be revitalized, which would increase the number of vehicles heading for businesses along the road. Furthermore, it was assumed that the increase in vehicle speed would lead to an increase in the number of vehicles passing through the road.

Both Indicator 2 (traffic volume) and Indicator 3 (number of passengers) achieved the targets. Compared to the baselines in 2016, the actual values in 2024 were 128% higher for

<sup>20</sup> Report of FY2020 Ex-Post Evaluation of Japanese Grant Aid Project “The Project for Rehabilitation and Improvement of the Poids Lourds Avenue in Kinshasa (Phase 1 and Phase 2)”

<sup>21</sup> Boulevard Congo-Japon is maintained by OVD.

traffic volume and 137% higher for the number of passengers. At the same time, the population of Kinshasa City increased from 12.1 million in 2016 to 17 million in 2024 by 142%.<sup>22</sup> In addition, while combined data of owned vehicles and motorcycles in the city was not available for 2016, it increased from 396,000 in 2017 to 575,000 in 2024 by 145%.<sup>23</sup> Both exceeded the actual increase rates for the two indicators of the project above. This shows that the increase in traffic volume and number of passengers would be mainly due to the increase of population and vehicles in Kinshasa rather than good road maintenance.

At the time of ex-ante evaluation, it was planned to examine four aspects of improved convenience of transport networks: which were reduction in traffic congestion, improvement in drivability, reduction in travel time, and reduction in traffic accidents. Based on information from the executing agencies and the survey of road users, these four aspects were analysed as follows:

Traffic congestion is a serious problem throughout the city due to the increase of population and vehicles accompanying urbanization. In the interviews with road users along Boulevard Congo-Japon, four out of the 11 respondents said that traffic congestion had decreased. However, the possibility that the response was based on a comparison with the previous rehabilitation of Boulevard Congo-Japon (completed in 2014) cannot be ruled out, and the evaluator was not able to determine whether this was due to the impact of the equipment procured by the project (completed in 2021).

The drivability of the roads has improved in terms of the good condition of major roads, but it has deteriorated in terms of heavy traffic, severe congestion, and poor driving manners.

Travel time has not been reduced due to severe traffic congestion. During the evaluator's stay in the city, it was normal to take an hour to go a few kilometres in the city centre. It is also not unusual to take two to three hours to travel between the city and the airport, which is about 25 km and takes less than 40 minutes in normal traffic. While all 11 road users interviewed responded that their travel time had decreased, this could be due to a comparison with the situation before the rehabilitation of Boulevard Congo-Japon rather than the effect of the equipment procured by the project. or it could be influenced by the locations of the respondents' residence and place of work.

Although the effect of this project is not measurable due to lack of data to show the increase or decrease of traffic accidents, they are not considered decreased. With many vehicles, dangerous behaviours have become common such as reckless lane changes and merging in traffic congestion, driving in the wrong direction by small three-wheeled taxis and motorcycle taxis, reckless road crossing by pedestrians, and on-street parking. In

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<sup>22</sup> World Population Review <https://worldpopulationreview.com/cities/dr-congo/kinshasa> (accessed date: 15 January 2026)

<sup>23</sup> Report of the Ministry of Economy, Trade and Industry mentioned above

interviews with road users, five out of the 11 respondents answered that traffic accidents had decreased, citing improved road conditions as the reason, but six respondents answered that accidents had not decreased.

## 2) Improved access to social services

At the time of ex-ante evaluation, it was expected that access to social services such as schools, health facilities, and commercial centres would improve. However, according to the questionnaire responses from the executing agencies, access to these services has deteriorated due to traffic congestion and increased travel times. In interviews with road users, six out of the 11 respondents said that access to these services had improved, but this could be due to a comparison with the situation before the rehabilitation of Boulevard Congo-Japon (completed in 2014) and it cannot be judged whether this is the impact of the equipment procured by the project (completed in 2021).

According to the questionnaire responses from the executing agencies, the volume of logistics from the airport has been increasing, but transportation is not running smoothly due to traffic congestion. Regarding the promotion of economic activity, it was confirmed that companies and commercial facilities are moving into the area around the well-developed main roads of the city. Although there are no signs of land development being promoted at this stage, it was reported that this is the policy being pursued by the city of Kinshasa. There have been no visible changes in the promotion of transportation and trade with other regions of the country and neighbouring countries.

### 3.3.2.2 Other Positive and Negative Impacts

#### 1) Impacts on the Environment

This project was classified as Category C of *JICA Guidelines for Environmental and Social Considerations* (April 2010) as it was likely to have minimal adverse impact on the environment and society. According to the executing agencies, dust is suppressed by cleaning the roads during road maintenance work, and accident prevention efforts are made by displaying speed limits and signs. According to interviews with road users, about half of them reported dust, noise, and air pollution, which might reflect the surrounding environment of their workplaces. The evaluator also confirmed through the site visit the existence of dust, noise, air pollution, and waste accumulation on roads in the city, including Boulevard Congo-Japon.

#### 2) Resettlement and Land Acquisition: Not applicable

#### 3) Gender Equality, Marginalized People, Social Systems and Norms, People's Well-being

## and Human Rights

Upon inspecting Boulevard Congo-Japon, the evaluator confirmed that the sidewalks were wide and flat, making them easy to walk on for women, children, elderly, and people with disabilities. On the other hand, there are almost no road crossing facilities, such as pedestrian crossings or pedestrian bridges, making it difficult for children, elderly, and people with disabilities to cross the road, which is busy with cars and motorcycles driving recklessly. It was found that other major roads in the city are in a similar situation. In interviews with road users, six out of the 11 respondents said that Boulevard Congo-Japon is easy to use for these people, citing the sufficient width of the road and the presence of pedestrian crossings in some places as reasons. The remaining five respondents pointed out the absence of traffic lights or signs or their poor visibility, vehicles driving at high speeds, and too many motorcycles. The road is generally well maintained and has become more user-friendly for pedestrians, which is an effect of the project. However, due to increased traffic volume and poor traffic manners, safety in traffic has not been realized.



Boulevard Congo-Japon  
(Source: Evaluator)



Boulevard Congo-Japon  
(Source: Evaluator)

The improvement of road maintenance status in Kinshasa as the effectiveness of the project was realized because the indicator “Pavement repair length” achieved the target through the equipment procured by the project together with other equipment owned by OVD and OR, and the surface of the main roads in Kinshasa including Boulevard Congo-Japon is generally in good condition. While many minor roads in the city are in poor condition, this project was intended for road maintenance that could be handled by the personnel, facilities, and equipment of OVD and OR, rather than all roads in Kinshasa. In fact, major roads with high priority in the city have been maintained appropriately, and the equipment procured by this project has been fulfilling its expected roles. To properly maintain all roads in the city, it is necessary to strengthen the maintenance system by increasing the funds and personnel, enhancing facilities, and further improving equipment of OVD and OR. The daily traffic volume and passenger numbers on Boulevard Congo-Japon, which were set as the impact indicators, have achieved the targets. To

realize other expected impacts such as improved convenience of the city's transportation networks, access to social services, and promotion of economic activities, comprehensive efforts such as transportation policies and urban and road planning are necessary. It is reasonable to understand the role of road maintenance equipment as inherently limited for these impacts.

This project has mostly achieved its objectives. Therefore, effectiveness and impacts of the project are high.

### 3.4 Sustainability (Rating: ③)

#### 3.4.1 Policy and System

Current *National Strategic Development Plan (PNSD)* (2024-2028) of the Democratic Republic of the Congo prioritizes infrastructure development. The national *Three-year Road Maintenance Program (Programme d'Entretien Routier Triennal)* (2024-2026) and the *Five-year Plan for the Road Infrastructure (Plan Quinquennal sur les Infrastructures Routières)* (2024-2028) are also continued. The urban planning program of Kinshasa "SOSAK" and its transportation planning program "PDTK" have been planned in mid-to-long term perspectives. *The Action Programme of Kinshasa Provincial Government (Programme d'Actions du Gouvernement Provincial de Kinshasa)* (2024-2028) works on the improvement of transportation networks. From the above, the road maintenance policies of Kinshasa continue, and the sustainability of policy aspect is high.

#### 3.4.2 Institutional/Organizational Aspect

The Infrastructure Unit (Cellule Infrastructures) of the Ministry of Infrastructure and Public Works was established in 2004 and is responsible for management and donor coordination in planning, implementation and monitoring of infrastructure projects. Under the Coordinator and Deputy Coordinator as the chiefs of the unit, there are five operation sections (roads, highways, public buildings, institutional support, administration and finance) and five specialized service sections (procurement, financial management, internal audit, environmental and social management, geographic information system).<sup>24</sup>

OVD is responsible for urban road maintenance. OVD Kinshasa Provincial Office (OVD-DPK: Direction Provinciale Kinshasa) consists of the technical department (113 employees), the equipment management department (78 employees), and the general affairs and finance department (18 employees). In the technical department, there are four construction work groups called "brigades".<sup>25</sup> OR is responsible for maintaining main roads such as national and provincial roads. OR Kinshasa Provincial Office (OR-DPK) has a road infrastructure

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<sup>24</sup> Website of Cellule Infrastructures <https://www.celluleinfra.org/articles/presentation-de-la-cellule-infrastructures> (accessed date: 15 January 2026)

<sup>25</sup> Interviews and questionnaire responses of OVD

management section in its technical department, which includes two brigades and the equipment management centre. As technical staff, there are nine managers, nine brigade members, and 18 staff in the equipment management centre.<sup>26</sup>

Based on the above, the roles and organizations of the Infrastructure Unit, OVD, and OR have been established, and the number of personnel is sufficient for the operation and maintenance of the equipment procured by this project, ensuring the sustainability of the project.

### 3.4.3 Technical Aspect

OVD and OR conduct small-scale regular inspections and repairs of roads in accordance with the maintenance manual developed by the JICA technical cooperation project “The Project for Capacity Development of Road Maintenance Management” (2016-2019), following the steps of strategic planning, road condition analysis, financing, and implementation of maintenance work. They carry out large-scale road repairs involving the closure of certain sections of road for a fixed period at five to six locations each year, mainly on major roads. OR outsources large-scale repairs to other companies, and OVD also does so for some repairs.

Regarding the use and management of equipment, both OVD and OR received operation training at the time of delivery of the equipment by this project. They always refer to the users’ manuals that came with the equipment, as well as maintenance manuals, spare parts manuals, and workshop manuals, perform regular inspections, keep repair records for each piece of equipment, and compile statistics on breakdowns and their frequency. They had established a communication with equipment repair companies and distributors, but as some of them have recently closed, they have identified the distributors and obtained the spare parts on their own. Although they experience minor breakdowns of the equipment from time to time, none of the equipment is unrepairable to date, and all equipment is in use. A work management sheet is prepared for each road maintenance work, detailing the location, work schedule, equipment to use, and other information. In addition, the equipment management logbook contains information such as the round-trip route from the parking space to the work site, departure date, mileage, operating hours, refuelling frequency, and official approval.

From the above, OVD and OR have sufficient technical capabilities for both the operation and maintenance of equipment and the maintenance of roads using such equipment, as evidenced by the generally good condition of the city’s main roads. While the number of personnel may not be sufficient compared to the overall road maintenance needs of the city, as mentioned in the section on effectiveness, it is reasonable to assume that the equipment procured by this project was designed to implement road maintenance within the scope of what could be managed by OVD and OR’s existing personnel and facilities. Therefore, within this scope, the technical sustainability is considered high.

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<sup>26</sup> Interviews and questionnaire responses of OR

### 3.4.4 Financial Aspect

The financial status of OVD and OR is shown in Tables 6 and 7 respectively. While information on each revenue source was obtained from OVD, only total revenue and expenditure were obtained from OR. OR's revenue and expenditure matched, which was explained that the budgets are requested based on needs, and it is standard practice to use the entire budget. Both OVD and OR analyse road maintenance needs, develop work plans based on their capacity, and prepare budget plans and request budget. Both OVD and OR expect to secure budgets of a similar level for the next few years. The sharp increase in OVD's budget for 2023 was due to an increase in the number of work sites.

Table 6. Road maintenance budget of OVD Kinshasa Provincial Office  
(Unit: US dollars)

| Year                 | 2021       | 2022       | 2023        |
|----------------------|------------|------------|-------------|
| Budget               | 23,120,481 | 17,149,939 | 108,737,440 |
| (Out of which)       |            |            |             |
| National treasury    | 15,540,546 | 11,291,719 | 6,505,668   |
| FONER                | 1,543,417  | 1,543,417  | 20,679,676  |
| Development partners | 258,520    | 0          | 0           |
| Expenditure          | 15,727,515 | 14,965,301 | 19,178,869  |

Source: Documents from OVD

Table 7. Road maintenance budget of OR Kinshasa Provincial Office  
(Unit: US dollars)

| Year                                 | 2022      | 2023      | 2024      | 2025      |
|--------------------------------------|-----------|-----------|-----------|-----------|
| Budget and expenditure (same amount) | 2,229,238 | 2,709,123 | 2,286,027 | 2,064,903 |

Source: Documents from OR

The main sources of funding for OVD and OR are the national treasury and FONER. FONER's expenditure is shown in Table 8. Expenditure from FONER to OVD does not match the figures in Table 6 for OVD and Table 7 for OR, and this might be because FONER's table shows figures for the whole country, while the OVD and OR tables show figures for their Kinshasa Provincial Offices. No provincial figures were available from FONER's data.

Table 8. Expenditure of FONER

(Unit: million Congolese francs)

| Recipients                                                                                                             | 2020                                      | 2021                                       | 2022                                       |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------|--------------------------------------------|
| OVD                                                                                                                    | 81,618<br>(Approx. 28 million US dollars) | 113,563<br>(Approx. 39 million US dollars) | 193,877<br>(Approx. 67 million US dollars) |
| OR                                                                                                                     | 53,048<br>(Approx. 18 million US dollars) | 90,493<br>(Approx. 31 million US dollars)  | 69,862<br>(Approx. 24 million US dollars)  |
| Office des Voies de Desserte Agricole (OVDA)<br>(Agriculture Road Office)                                              | 5,785                                     | 22,747                                     | 20,346                                     |
| Backup for the World Bank project “Project of reopening and maintenance of high-priority roads” by Infrastructure Unit | 9,013                                     | 12,853                                     | 11,681                                     |
| Bureau Technique de Contrôle<br>(Technical Control Bureau)                                                             | 0                                         | 0                                          | 4,668                                      |
| Protection of road heritage                                                                                            | 964                                       | 0                                          | 0                                          |
| FONER contribution to tax revenue                                                                                      | 1,928                                     | 0                                          | 0                                          |
| Total                                                                                                                  | 152,356                                   | 239,656                                    | 300,434                                    |

Source: *FONER Rapport annuel d'activités 2022* (published in June 2024)

Reference information: US\$1=approx. 2,900 Congolese francs (April 2025)

The equipment has been maintained without any problems by OVD and OR, and since the condition of major roads in the city is generally good, it is considered that the budget for equipment maintenance and road maintenance is sufficient. However, there are many minor roads that are not well maintained, and the budget is not sufficient for the overall road maintenance needs in the city. Nevertheless, regarding road maintenance within the scope envisaged by this project, financial sustainability is considered high.

#### 3.4.5 Environmental and Social Aspect

Not applicable

#### 3.4.6 Preventative Measures to Risks

As a risk mitigation measure, this project prepared a list of repair companies and spare parts distributors to ensure the availability of repairs and spare parts in the event of equipment failure. In fact, spare parts continued to be available without issue for some time after the project was completed. However, due to the economic downturn following COVID-19, many distributors have closed, and OVD and OR have been obtaining spare parts on their own. At the time of ex-post evaluation, no equipment had become irreparable. The closure of distributors was unforeseeable, and it is considered that all possible measures were taken under this project.

#### 3.4.7 Status of Operation and Maintenance

The equipment is parked at OVD or and transported to the site whenever work is required.



equipment procured by this project without any problems, and they also have the technical skills to maintain roads. As the overall road maintenance needs of Kinshasa are very large, personnel and budget are insufficient. However, this project procured equipment in quantities that could be operated by the existing personnel and facilities of OVD and OR, and technical and financial sustainability is ensured for road maintenance works within the scope envisaged by this project. The equipment has been appropriately utilized to date and is generally in good condition, while there have been occasional minor breakdowns that have been repaired without issue.

Based on the above, regarding operation and maintenance of this project, the road maintenance works within the scope as envisaged by this project have been handled with the current personnel and financial situation of the executing agencies. There are no issues in terms of policy, institutional/organizational, or technical aspects of sustainability, and the equipment has been utilized and is in good condition. Therefore, sustainability of the project effects is high.

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

##### **4.1 Conclusion**

This project was implemented with the aim of improving road maintenance status in Kinshasa by providing road maintenance equipment to OVD and OR in Kinshasa, thereby contributing to the improvement of the transportation networks and access to social services in the city. This project was in line with the policies of the Democratic Republic of the Congo prioritizing road network development and the development needs of the country and was consistent with Japan's assistance policy. Although internal and external coherence was not confirmed, the relevance and coherence of this project are high. The output was produced as planned, and although the project cost slightly exceeded the plan, the project period was within the plan. Therefore, the efficiency of this project is high. "The improvement of the road maintenance status in Kinshasa," expected as the effectiveness of the project, has been achieved as the indicator "pavement repair length" achieved the target and the road surface conditions of major roads in the city, including Boulevard Congo-Japon, are generally good. While many roads in the city other than major roads are not well maintained, this project procured the equipment that could be operated by existing personnel and facilities of OVD and OR, and assumed road maintenance work on a scale that could be handled by their equipment. Road maintenance work on such a scale has been carried out, focusing on the main roads with a high priority among the city's enormous road maintenance needs. Therefore, the equipment procured by this project has been fulfilling its expected role. While the daily traffic volume and the number of passengers on Boulevard Congo-Japon achieved the targets, the increase in traffic volume has exceeded the capacity of the roads in the city, resulting in chronic traffic congestion. For the expected impacts of the project, such as the improved convenience of the transportation networks in the city and access to social services, and promotion of economic activities, comprehensive measures such as transportation policies and

urban and road planning are necessary, and it is reasonable to understand that the role of road maintenance equipment is limited. Therefore, the implementation of this project has mostly achieved the planned effects, and its effectiveness and impact are high. Regarding the operation and maintenance of this project, the personnel and finances of OVD and OR are sufficient for the maintenance of major roads in the city, and there are no issues in terms of policy, organizational/institutional, technical aspects, and the equipment has also been utilized and is in good condition. Therefore, the sustainability of the project effects is high.

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

## 4.2 Recommendations

4.2.1 Recommendations to the Executing Agency: None

4.2.2 Recommendations to JICA: None

## 4.3 Lessons Learned

### Measures to facilitate the acquisition of spare parts

To facilitate repairs and the acquisition of spare parts, this project selected Japanese-made equipment and that of equivalent quality manufactured in other countries, and the tender documents stipulated that equipment suppliers must have local distributors and guarantee the supply of spare parts for ten years. The contact details of local distributors were also provided. Before the successive closures of distributors after the project was completed, it was easy to obtain spare parts. In similar projects to provide road maintenance equipment, the implementing consultants should consider repairs and acquisition of spare parts when selecting equipment and should provide a list of local distributors.

### The need for more appropriate indicators

Among the indicators listed in the ex-ante evaluation sheet, the pavement repairs length was appropriate for measuring the effectiveness of road maintenance equipment, but there were issues with the appropriateness of other indicators and the availability of data regarding daily traffic volume and the number of passengers on Boulevard Congo-Japon. The logic assumed might have been that the improvement of road conditions using the road maintenance equipment would increase traffic volume. However, the actual increase in traffic volume was primarily due to increase of population and the number of vehicles in the city, and the correlation to maintenance equipment is weak. Furthermore, if the executing agencies do not have traffic volume data, it is technically and economically difficult to measure them during the ex-post evaluation. It is necessary to select indicators that are easy for the executing agencies to measure and collect, such as the implementation rate of road repair plans or the proportion of roads in the city that require repair but have not been repaired as suggested as supplementary indicators in this ex-post

evaluation, and to agree on data collection methods and frequencies during the project implementation.

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

### **5.1 Performance**

#### **5.1.1 Objective Perspective: None**

### **5.2 Additionality**

The Project for Capacity Development of Road Maintenance Management (2016-2019) transferred road maintenance technology to OVD and OR, and after that, this grant aid project procured road maintenance equipment. In accordance with the road maintenance manual developed in the technical cooperation project, OVD and OR are conducting road maintenance using equipment procured by the grant aid project, following the steps of strategic planning, road condition analysis, financing, and implementation of maintenance work. Regarding “improved road maintenance status in Kinshasa” as the effectiveness of the project as envisaged in the ex-ante evaluation sheet, it was achieved because maintenance status of major roads was generally good. However, “improved convenience of the transportation networks in the city and access to social services” which was expected as the impact of the project is the goal to be achieved by Kinshasa’s urban planning (SOSAK) and transportation plan (PDTK), and a multifaceted approach is necessary, including road policy, road design, and improvement of traffic manners. Project for Urban Transport Master Plan in Kinshasa City (2017-2019) and Project for Capacity Development for the realization of the Urban Transport Master Plan in Kinshasa City / PDTK (2021-2025) of JICA support comprehensive efforts to improve the convenience of transportation networks.

(End)