

Evaluation Report  
2014-2

# **Ex-Post Evaluation on Indonesia Manado By-Pass Project I**

**The Export-Import Bank of Korea**  
(Government Agency for EDCF)

**EDCF Evaluation Team**  
(Evaluated by Inha University)

This evaluation was entrusted to *Inha University* by EDCF for the purpose of independent evaluation research.

The opinion, findings and conclusion or recommendations expressed in this report are those of the external evaluator and do not necessarily reflect the view of EDCF.

## Executive Summary

### **I. Introduction**

This evaluation aims to examine the performance of the Manado By-Pass Project and to draw lessons and recommendations. In order to achieve these goals, the evaluators assessed the overall process of project implementation and its intended and unintended outcomes. Moreover, this evaluation was carried out in partnership with the government of Indonesia in order to enhance the partner country's ownership. The evaluation focused particularly on the appropriateness of the project in responding to the demands of the partner country. By examining and drawing lessons together, both donor and recipient countries could identify the strengths and weaknesses of the project and its results.

Manado is the capital city of the North Sulawesi province in Indonesia. The city has well-connected air and marine transportation systems as it serves as the center of commerce, education and culture. The city center suffered severe traffic congestions as the vast majority of land traffic passed through the city center of Manado. In order to address this problem, the Indonesian government, the North Sulawesi state government and the government of Manado city proposed to EDCF to construct a by-pass, connecting key points in surrounding areas without going through the city center.

The project was evaluated using the DAC's five evaluation criteria (relevance, efficiency, effectiveness, impact and sustainability) as recommended in the EDCF evaluation guidelines. Furthermore, two cross-cutting issues (environmental impact and gender) were assessed.

The Manado By-Pass Project dispersed the traffic volume in the city center by constructing a new by-pass that leads to the outskirts of Manado. This project

appeared to have eased traffic congestion, enhanced the accessibility of land in the outer regions of the city, promoted the long-term balanced development of Manado and significantly contributed to the convenience of local residents and the development of the local community.

## **II. Evaluation Outline**

### **1. External Evaluator**

A team of Researchers from Inha University carried out this evaluation as the external evaluator.

### **2. Duration of Evaluation**

The evaluation was carried out from June 2014 to October 2014.

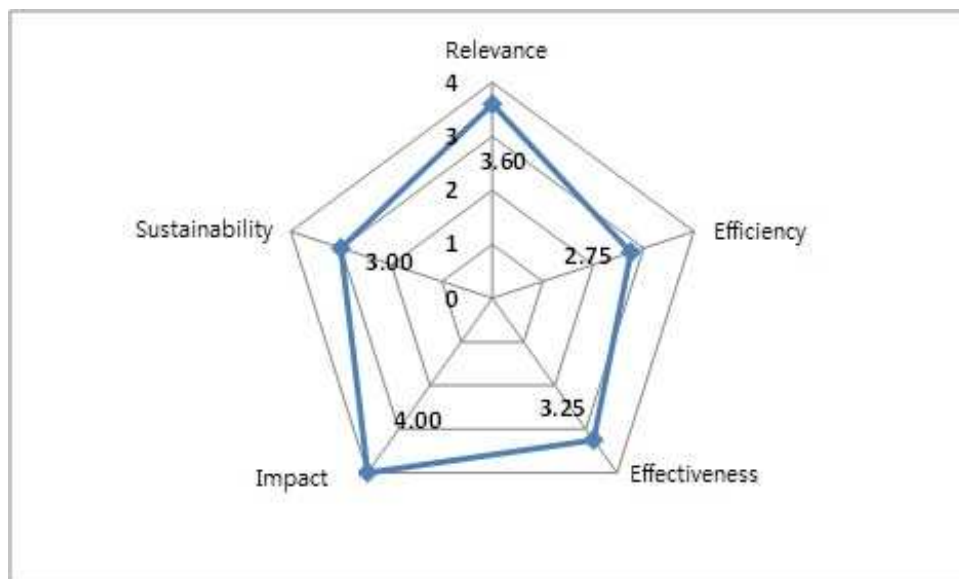
### **3. Data Collection and Analysis**

The project was evaluated according to the OECD DAC's five evaluation criteria (Relevance, Efficiency, Effectiveness, Impact, and Sustainability). For each criterion, required data were collected by literature review, stakeholder interviews and field visits.

### III. Evaluation Results

The evaluators concluded the Manado Bypass project as a "successful" project (3.32 out of 4.00) based on the ratings from the DAC's five evaluation criteria.

It scored highly in *relevance* and *impact* since the project was implemented as part of the national and regional development strategies of Indonesia. The scope and aim of the project also responded well to the needs of local and national stakeholders in a timely manner. The project, therefore, produced effective and high-impact results, contributing to the development of the local economy and improvement of the quality of life in the project area. The lowest rating was given in *efficiency* due to the delays and several adjustments made to the plan before and during its implementation.



However, the project was still rated as "efficient" as it was fairly successful in handling such delays and problems. The ratings for each criterion are presented in the following table.

<b>Evaluation Criterion</b>	<b>Weighted Value</b>	<b>Classification</b>	<b>Rating</b>
Relevance	20%	Relevant	3.60
Efficiency	20%	Efficient	2.75
Effectiveness	20%	Effective	3.25
Impact	20%	High impact	4.00
Sustainability	20%	Sustainable	3.00
<b>Total Evaluation Score</b>		<b>Very Successful</b>	<b>(3.32/4.0)</b>

## **1. Relevance**

The project was deemed to have an appropriate level of relevance because it was planned and implemented as part of the overall national development strategy (*6th Five Year Development Plan, Repelita VI, 1994-1998*). Moreover, the project was a timely response to the growing demand for better transport arising from economic and population growth of the area.

Repelita VI selected the development of the transportation sector as a high priority. Under this strategy the Indonesian government devised an investment plan for the road sector, the main mode of transportation in Indonesia, in order to achieve balanced development of all regions in Indonesia and ensure efficient traffic flows. The total budget of USD 11.5 billion, including about USD 3.2 billion in overseas loans were planned for construction and maintenance of road infrastructure. The Manado By-Pass project was implemented as part of Repelita VI, fulfilling the needs of the local population in addition to meeting the national development goals.

Similar to many parts of Indonesia, Manado experienced fast growth in population and economic development, resulting in the rapid expansion of traffic volumes. The construction of the Manado By-Pass responded successfully

to the demand for road infrastructure which was fast mounting with the area's growth.

## **2. Efficiency**

The project was efficient in its scope, cost, duration, quality control, and handling of complaints from the land holders and community members.

The project went through several changes due to the outbreak of the Asian financial crisis. Several components of the project were modified; one being the adjustment to the plan and shortening of the route. In addition, the pavement material and methods were changed. Among these changes, the most problematic adjustment was the omission of the Maumbi-Kairagi segment (1.2km) even though the omission was inevitable due to budgetary and time constraints.

The evaluation team found that changes in project cost were made for consulting, earth works, and the construction of drainage and bridges. However, the cost adjustment was deemed to be appropriate considering the duration of implementation and changes in routes.

There were delays in project implementation; the consultation period was extended by 11 months and construction took 8 months longer than expected. These delays were mainly caused by the difficulties in expropriation, frequent design changes, and the failure to take the monsoon season into account in the project planning process.

Several complaints from members of the land holders were brought up during the expropriation due to the single-valuation of the land. The government decided to pay the same price per unit of land regardless of the original value, and upset the community. In addition, there were complaints about the dust and waste generated during construction from the adjacent areas of the site.

The project site manager and supervisor were in charge of quality control. Experts from the Sam Ratulangi University, the Manado Polytechnic Institute and Indonesian University Institute were consulted in the process.

### **3. Effectiveness**

The project was rated as "effective" based on the reduction of traffic congestion in the downtown area, improvement of air pollution and increased value and utilization of land in the project area.

Traffic records showed that large vehicles traveling from Bitung port or the airport to Malayang or Tomohon used the Manado By-Pass (I) instead of entering downtown Manado, relieving traffic congestion in downtown Manado.

As the proportion that the Manado By-Pass (I) occupies in the traffic network of North Sulawesi province is relatively small, it is difficult to clearly determine the rate of traffic accidents within the project zone. However, concerns regarding night time accidents due to the lack of street lights were identified and expressed during the field interviews and the joint evaluation workshop.

The air pollution level in Manado has been constantly increasing since 2000. However, the rate of increase has slowed down since 2005 when the construction of the Manado By-Pass (I) was completed despite the continuous increase in traffic volume. The by-pass appeared to have contributed to the slowdown of air pollution by detouring large vehicles from the downtown areas of the Manado city.

The level of land use in suburban areas significantly improved. For instance, luxury housing complexes were under construction along the Manado By-Pass at the time of evaluation.



#### **4. Impact**

The evaluation team concluded that the project had a "high impact" after examining economic changes in Manado and neighboring cities, especially the tourism industry in Manado and neighboring cities.

Even though the Manado By-Pass project covered only a small portion of the road infrastructure in the region, it had significant impact on various aspects. Given the symbolic meaning of the Manado By-Pass in the development of the North Sulawesi province, this project contributed to the growth of the tourism industry. Furthermore, the project was an important initial step and a significant contributor to the development of the North Sulawesi province.

The North Sulawesi state government established a medium to long-term transportation strategy (the Economic Corridor Road Handling in Sulawesi, 2015-2019) in connection with the Manado By-Pass project, which included the completion of the Manado By-Pass and the construction of a toll expressway between Manado and Bitung. The Indonesian Ministry of Public Works evaluated this project to be an overall success.

#### **5. Sustainability**

The project was deemed to be "sustainable" based on repair and maintenance results, project follow-up and feedback.

The Indonesian government estimated the necessary cost for repair and maintenance at 500 million rupiah per km per year and most of this required budget would be provided by the Indonesian government to the local government.

Drainage appeared to be well constructed. However, there were concerns regarding flooding in the case of torrential downpours due to obstructions in

certain parts of the drainage system. Immediate action should be taken to address the leakage in the ceiling of the Koka tunnel and potholes and concrete lumps at the end of the road.

Although this project was initially planned to build a four-lane road with two lanes each way, only one lane for each way was open for traffic due to the decrease in the loan amount and the increase in construction costs which resulted from the project delay. The Manado By-pass (I) is planned to be expanded to a four-lane road by 2019. The construction will be financed by the Indonesian government.

The knowledge and experience learned from the Manado By-Pass project were shared among relevant officials of the Indonesian government and employees of Road Design 2000 (RD 2000). Moreover, a three-week training program conducted by consultants was provided to students at Sam Ratulangi Manado University, the designated institution for human resources development in the area of road management.

## **6. Cross-cutting Issues**

The project's impact on the environment and protection of vulnerable groups were examined in this evaluation.

The main environmental concern arises from the noise level. The noise level of the Manado By-Pass (I) was 62.3dB, which exceeds the environmental standard of 55dB. However, noise control measures such as soundproofed walls are not considered cost effective and deemed unnecessary, since the local population was not affected thanks to the remote location of the road.

The project did not have a negative impact on vulnerable groups. According to an interview with villagers from near the Koka tunnel, the opening of a small roadside shop helped improve residents' livelihood after the road construction.

## **IV. Lessons Learned and Recommendations**

### **1. Lessons Learned**

#### **A. Success Factors**

There are several factors which contributed to the success of the project.

- 1) The project was highly relevant to development needs, responding effectively to economic and social demands from the community thanks to its alignment with the national strategy. This high relevance induced strong support from the partner country and enhanced the ownership and participation of the country.
- 2) The project successfully adapted to the changing environment and appropriately dealt with risks. The project scope was changed for cost reduction purposes and efficient land expropriation while remaining aligned with the long-term road construction plan of the North Sulawesi state government.
- 3) Necessary changes were made in a well-organized manner. As described above, there were some unavoidable changes made to the project during its implementation. The changes, however, did not seriously affect the budget and the duration of the by-pass construction. Changes to the structure were made in order to accommodate changes in route and budget. In addition, the financial plan was adapted quickly and efficiently to these adjustments. Such coordinated responses contributed significantly to the efficient implementation of the project.
- 4) The Manado By-Pass relieved traffic congestions in downtown Manado and also reduced air pollution in the city. The project also appears to have enhanced the level of land use and contributed to the revitalization of the economy and tourism industry in neighboring cities.

## **B. Improvement Required**

- 1) There were two main reasons for delays both related to land expropriation: acquiring consensus and solving civil complaints from the community regarding compensation. By law, the government of Indonesia is required to obtain the consensus of residents in order to expropriate land for road construction. This process took quite long and became even more complicated due to a dispute over land value; the government valued each unit of land equally without taking the original value into consideration, which resulted in several complaints from the landholders.
- 2) The effect of the by-pass did not reach full potential due to the exclusion of some sections of the road. The decision to exclude the sections was made as it was unavoidable under the given financial constraints, and the excluded sections are included in the subsequent project. However, construction has not yet been completed.
- 3) There were concerns raised regarding increasing traffic accidents and crimes due to the lack of street light installations in many sections of the by-pass.
- 4) There are rising concerns over reckless unplanned developments due to the lack of a comprehensive city development plan.
- 5) Repair is needed in areas where problems have occurred (e.g. the Koka tunnel and the drainage system). The leakage in the Kota tunnel is a serious problem. Furthermore, recent flooding in the area left parts of the drainage system blocked. In order to avoid further damage, the government (either national or local) should designate necessary resources for repair and maintenance of the road.

## **2. Recommendations**

### **A. Recommendations for the Indonesian government**

- 1) Reinforcement of legal procedures to ensure an efficient land expropriation process is necessary. In order to carry out the land expropriation process more efficiently and reduce conflict, it is necessary that the compensation provided for expropriated land reflects the legitimate value of the land. Furthermore, legal measures should be developed, allowing for compulsory expropriation procedures in the public interest when the majority of the community consents to the plan instead of the current requirement of 100 percent consensus.
- 2) Necessary changes in project plans, if unavoidable, should be made before the initiation of construction in order to prevent significant delays and financial inefficiency.
- 3) It will be difficult to prevent unplanned and uncontrolled land development after the construction of the road without first establishing a relevant land use plan. The road construction plan should be a part of or at least coordinated with the land use plan.
- 4) Many segments of the road do not have street lights as they were not included in the project scope. Now with increased usage of the by-pass, this has become a pending task that requires urgent attention as the lack of adequate lighting may result in nighttime traffic accidents and crimes.

## **B. Recommendations for EDCF**

- 1) It is recommended that the feasibility study be updated when there is a significant time gap between the study and project implementation. Several important variables in the feasibility study such as inflation, land value, and local demand change with time. Therefore, these factors should be re-examined.
- 2) The procurement process for consultants and construction firms should be more open to the partner country in order to enhance the ownership of the partner country and enable mutual learning process.
- 3) It is necessary to align the project with the development policies and strategies formulated by the central and local governments. This, as was identified in the project evaluation, will enhance the ownership of the partner country and ensure the effectiveness and impact of the project results.