Ex-post Evaluation of the Hanoi-Hai Phong Expressway Construction Project

(Section 10)

- Executive Summary –

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한국수출입은행 THE EXPORT-IMPORT BANK OF KOREA

EDCF KOREA 대외경제협력기금 Economic Development Cooperation Fund

1. Project Overview

☐ This evaluation is an ex-post evaluation of the Hanoi-Hai Phong Expressway (Section 10) in Vietnam, which aims to analyze the performance, effectiveness, and improvement of the project through an objective and scientific ex-post evaluation of the project, and to derive feasible recommendations and implications that can be applied to the design of similar projects in the future.

☐ The construction project for Section 10 of the Hanoi-Haiphong Highway is a development initiative under EDCF, focusing on the northwest segment of the Hanoi-Haiphong Highway (with a total length of 105.5km) that connects Hanoi to Haiphong in the eastern metropolitan area of Vietnam. This project specifically involves the construction of Section 10 in Haiphong, spanning 9.117km.

☐ This project aims to: i) establish an economic development belt connecting Haiphong City with the southeast region of China, ii) promote economic development in the northern region of Vietnam to foster balanced regional growth, and iii) alleviate traffic congestion exacerbated by the development of the Haiphong New Port and other regional development initiatives.

- This project is comparable to Korea's Seoul-Incheon Highway as it directly connects the capital, Hanoi, with the major port city of Haiphong.

☐ The project project executing agency is the Vietnam Infrastructure Development Investment and Finance JVC (VIDIFI), and the project operation is carried out by two subsidiaries of VIDIFI, Hai Phong Highway Operation and Management One Member Co. and VIDIFI Highway Construction and Maintenance Enterprises, which are responsible for operation, management and maintenance, respectively.

☐ The project period was expected to take 40 months from the execution of the loan agreement, but it took 37 months longer than planned due to construction delays caused by delays in compensation for the project site, relocation of residents, and approval procedures, resulting in a total of 76 months.

☐ At the time of the evaluation, the planned EDCF-supported project cost was USD 100,000,000 including a contingency, and the actual expenditure was USD 88,371,000, which was 88.3% of the amount of the loan.

2. Evaluation Overview

☐ Background and Purpose of Evaluation

- Transportation is a key sector for EDCF financing, accounting for the largest share of EDCF projects in terms of approvals. Vietnam is also one of South Korea's key strategic partners, with cumulative EDCF approvals totaling approximately USD 2,594 million as of December 2022, making it the largest EDCF partner country in terms of cumulative approvals.
- The purpose of this evaluation is to objectively and professionally assess the performance of the Hanoi-Hai Phong Expressway Section 10 construction project in order to draw recommendations and strategic lessons for similar projects in the future.

☐ Method of Evaluation

- The ex-post evaluation of this project was organized into detailed evaluation items based on four evaluation criteria and categories: relevance, efficiency, effectiveness, and sustainability, in accordance with the "Guidelines for Preparation of EDCF Post-Evaluation Reports (October 2011)" and the task order of this evaluation project.
  - (Impact) Impact is excluded as an evaluation item as there are limitations in measuring mid- to long-term performance due to the limited period of operation after the end of the project.
  - (Coherence) As there is a significant overlap with the detailed evaluation factors of relevance, it is excluded from the ex-post evaluation.
- In addition, cross-cutting issues (gender, vulnerable groups, environment, etc.) recommended by the OECD/DAC to be considered in ODA projects ex-post evaluation are set as an additional evaluation criterion and qualitatively analyzed.

3. Results of Evaluation

☐ The project is evaluated as a 'successful' with an overall score of 3.42/4.0.

Evaluation Criteria	Value (%)	Evaluation Score	Evaluation Grade
Relevancy	25%	4.00	Highly relevant
Efficiency	25%	3.33	Efficient
Effectiveness	25%	3.33	Effective
Sustainability	25%	3.00	Sustainable
Cross-cutting	-	-	-
Overall	100%	3.42	Successful

☐ **(Relevance)** Based on a comprehensive assessment of the relevance criteria, the project is rated as "highly relevant" with a score of 4.00/4.00.

- The project is highly aligned with the Vietnamese government's national development policy and EDCF assistance strategy. In addition, interviews with project stakeholders during the fieldwork confirmed the host government's ownership of the project, its recognition of the significance of the project, and its strong interest in ensuring the project's sustainability.
- The construction method and design, such as asphalt concrete pavement type and concrete barriers, guardrail installation, and signage, are appropriate.

☐ **(Efficiency)** Based on a comprehensive evaluation of the efficiency criteria, the project was rated as "efficient" with a score of 3.33/4.00.

- The project took 37 months longer than planned due to delays in compensation for the project site, relocation of residents, and approval procedures, but was completed within the planned budget.
- EDCF's actual project costs were 88.3% (actual/planned) of plan, indicating a high degree of efficiency in project cost execution.
- In terms of outputs, the actual project completion was in line with the plan, although

there were some deviations from the project plan, which was modified to reflect technical and local conditions.

☐ **(Effectiveness)** Based on the comprehensive evaluation of the effectiveness criteria, the project was rated as "effective" with a score of 3.33/4.00.

- The increase in road traffic was found to have exceeded the target, but the reduction in travel time and the reduction in operating costs were evaluated as somewhat lower than the target. User convenience was not evaluated.
- A survey of local businesses, the primary users of the highway, showed a high level of satisfaction for road users.

☐ **(Sustainability)** Based on a comprehensive evaluation of the sustainability criteria, the project was rated as "sustainable" with a score of 3.00/4.00.

- Technical sustainability, maintenance capacity, etc. are generally in good standing.
- Institutional sustainability is also assessed as favorable, but financial sustainability appears to be somewhat insufficient and may require budgetary support from the central and local governments.

☐ **(Cross-cutting issues)** This project's negative impacts on the environment, gender, and vulnerable groups appear to be insignificant, and the following additional impacts were analyzed as a result of the highway's construction.

- **(Environment)** It was found that some negative impacts on local residents, such as increased noise and dust, have occurred since the construction and opening of the expressway.
- **(Vulnerable groups)** It was found that the surrounding residents and vulnerable groups had to relocate when the expressway was built, although they do not directly use the road. However, they expect the highway to contribute to economic development in the long run and positively affect employment for the future generations. They expressed regret over the separation of their villages due to the construction of the highway, and noted that many of the inconveniences of relocation continue, including delays in land compensation. No particular impact on residents with disabilities was identified.
- **(Gender equality)** The project was found to have facilitated women's access to primary hospitals and enabled their right to mobility.

4. Lessons Learned and Recommendations

A. Lessons Learned

☐ Despite some limitations, the overall evaluation of this project indicates that it has achieved its project goals (partial achievement of some objectives). While there are are some areas for improvement in terms of the financial sustainability, the project was found to be successful with no significant concerns raised.

☐ **Success Factors**

- **(Alignment with the Partner Country's Development Policy and Strong Ownership)** The high alignment with the development policies of the Vietnamese government, especially in supporting the establishment of an economic development belt connecting Hai Phong City and the southeastern region of China under the overarching national development strategy, is identified as a crucial success factor. The high level of ownership by the executing agency also contributed to the success of the project. Specifically, the project, conducted with the purpose of building transportation infrastructure, aligns with Vietnam's macro-level national development strategy, supporting the creation of an economic development belt connecting Hai Phong City and the southeastern region of China. This alignment is highly evaluated for its compatibility with the development policies of the Vietnamese government.
- **(Efficient Operational Management Organization of the Partner Country)** The Ministry of Finance of Vietnam, established a corporate entity named the Vietnam Infrastructure Development and Finance Investment Joint Stock Company (VIDIFI) for the construction and operation of the highway. Under VIDIFI, two subsidiaries (Hai Phong Highway Operation and Management One Member Co., Ltd and VIDIFI Highway Construction Maintenance Enterprises) have been set up, actively contributing to the ongoing operation and maintenance of the project.
- **(Meeting User Needs in Project Design)** The users of the Hanoi-Hai Phong Highway, as assessed in the survey, expressed overwhelmingly positive feedback across various aspects. Specifically, respondents highlighted reductions in travel time, decreased fatigue, and cost savings in logistics. This positive feedback is attributed to 1) the relevance of selecting the highway route that connects Hanoi and Haiphong, 2) maintaining road conditions above satisfactory levels through suitable pavement

methods and maintenance, 3) providing road inspection services through a 24-hour traffic control center, and 4) ensuring safe driving through road safety facilities such as guardrails, signs, lane markings, and other safety features.

- (**Strong Policy Alignment and Project Management Capability of EDCF))** This project was designed with careful consideration of key elements, including Vietnam's designation as a Country Partnership Strategy (CPS) country, sectoral areas of development assistance for Vietnam, and the state of Korea-Vietnam cooperation relationship during the project design phase. Although the overall project duration extended beyond the initially anticipated period, the actual expenditure, compared to the total project cost, remained at a level of 99.4%. This demonstrates effective contingency planning to address budgetary concerns arising from the project timeline delays. In conclusion, due to adept preparation for potential project period delays and the subsequent reduction in costs compared to the originally planned budget, this project serves as a successful exemplar of efficient infrastructure project management, particularly in the domain of road construction.

☐ **Improvement Factors**

- **(Efforts Needed for Financial Sustainability Improvement)** Financial sustainability is less robust compared to institutional and technical sustainability. According to the interview with the project executing agency, it has been difficult to maintain and operate the highway with only highway tolls, and the city of Hai Phong has been providing financial support. Since a stable revenue structure of the highway is a significant issue linked to future repayments to loan and the maintenance of road quality, various follow-up management measures need to be prepared, such as the provision of consulting by the EDCF.
- Given that the stable revenue structure of the highway is a significant issue linked to future repayments to loan and the maintenance of road quality, it is worth exploring subsequent management strategies, such as seeking consultation from EDCF on this matter.
- **(Enhanced Monitoring of Local Resident Issues)** Strengthening the monitoring of concerns among the local residents is significant for the project's timely and successful implementation. These concerns are identified not only during land acquisition, compensation, and residents' resettlement but also after the project's completion. For instance, issues such as traffic congestion, road damage, environmental discomfort

(e.g. dust and noise), village separation, and disruptions in agricultural productivity due to land movements were raised during resident interviews. This highlights the crucial need to thoroughly consider these factors. To effectively address these issues, it is strongly recommended that the project executing agency actively monitors and manages local resident concerns raised due to highway construction, including the preparation of the Environmental Impact Assessment report for submission to EDCF. It is also important to proactively monitor and manage resettlement plans in alignment with guidelines, such as the 'Resettlement Issue Inspection Criteria for EDCF Projects.'

- **(Development of Cross-Sectoral (Gender) Evaluation Guide Line**) To ensure scrutiny of the impact of EDCF support on vulnerable groups such as children, persons with disabilities, ethnic minorities, and women within the partner country's project areas during project evaluations, it is proposed to establish cross-sectoral EDCF evaluation guidelines. These guidelines aim to provide performance indicators applicable to different project areas and types, collect disaggregated statistics by gender/disability/age, and offer utilization methods for each stage of the project. This systematic approach is crucial to mainstream cross-sectoral considerations and avoid them being treated as incidental processes.

B. Recommendations

☐ EDCF

- **(Application of Key Success Factors, including Road Quality and Safety Management System)** The key success factors of this project include maintaining and managing excellent road quality and achieving high user satisfaction through the introduction of an advanced safety management system. Therefore, there is a need to expand the application of these successful factors to similar highway projects. Specifically, the excellence in pavement maintenance, ensuring safety through the installation of high-quality median barriers, and the implementation of advanced Intelligent Transportation Systems (ITS), as well as the continuous operation of traffic control centers, can be applied to future projects with similar characteristics.
- **(Enhancement of Operational and Maintenance Capacities in the Partner Country)** Following discussions with Vietnamese government officials, the Vietnamese side expresses a desire for South Korea to share its policy experiences on effective highway

operation and management methods after the completion of the highway. It is considered that enhancing institutional and technical sustainability of the project can be achieved through various measures, such as capacity-building and training collaboration with the Vietnamese government in this sector during highway construction, or conducting education through a program that integrates both grants and loans related to highway maintenance at the completion stage. Furthermore, organizing policy seminars and exploring diverse approaches may contribute to reinforcing the project's sustainability. Additionally, consideration can be given to a Policy Consultation (KSP) project focusing on highway maintenance and repair.

- **(Monitoring for Vulnerable Groups Living Nearby the Highway)** Residents around the highway area experience various social and environmental negative impacts such as dust, noise, damage to agricultural land, and damage to side roads due to highway construction. Attending to their concerns, accommodating their demands, and providing direct support for land compensation and relocation are essential tasks for the partner country's government. However, EDCF also needs to actively support the partner country in addressing these issues and proceeding with the resolution, ensuring that the partner country recognizes the importance of these matters.
- **(Development of Cross-Sectoral (Gender) Evaluation Guide Line)** To ensure scrutiny of the impact of EDCF support on vulnerable groups such as children, persons with disabilities, ethnic minorities, and women within the recipient country's project areas during project evaluations, it is proposed to establish cross-sectoral EDCF evaluation guidelines. These guidelines aim to provide performance indicators applicable to different project areas and types, collect disaggregated statistics by gender/disability/age, and offer utilization methods for each stage of the project. This systematic approach is crucial to mainstream cross-sectoral considerations and avoid them being treated as incidental processes.
- **(Enhancing Capacity in Designing Logical Framework)** During the project planning phase, it is crucial to consider potential limitations in the monitoring and evaluation process if the definitions of performance indicators are not specific and clear. To address such issues, there is a proposal to strengthen internal and external capabilities related to establishing a logical framework, including the project design matrix, through training. Specifically, training sessions for entities participating in feasibility studies (F/S) are suggested to enhance their understanding of this matter as well.

☐ **Partner Country**

- **(Efforts Needed to Improve Financial Sustainability)** Highway tolls are currently used for loan repayments and the maintenance and operation of the highway. Therefore, to ensure the effective utilization of tolls for these dual purposes, it is recommended that relevant authorities actively focus on increasing traffic volume and modernizing toll collection methods. Moreover, in the event of a shortfall in the budget for maintenance and operation, collaboration with the Haiphong City local government may be necessary to devise measures for stabilizing financial sustainability.
- **(Consideration of Comprehensive Development for Surrounding Roads Nearby the Highway)** During the local investigation, some local businesses and residents emphasized the importance of surrounding roads connected to the highway. There was a consensus that smooth access to the main highway and high-quality surrounding roads are essential to sustain the targeted socio-economic benefits. Therefore, it is suggested that the Vietnamese government systematically plans and promotes the development of all regions traversed by the highway. This integrated approach is considered necessary and is expected to be linked to the financial sustainability of the Hanoi-Haiphong highway.
- **(Adequate Time Allocation for Resettlement and Land Compensation)** Resettlement and land compensation are predictable issues during the project assessment phase, and therefore proactive support and intervention from the partner country are required to mitigate these challenges. Proper budget planning is crucial for resettlement and compensation, and a schedule should be developed to ensure that compensation and resident relocation commence at least 6 months to 1 year before the start of construction.
- **(Incorporating Suggestions from Highway Users)** Survey results, primarily conducted among local businesses, revealed suggestions regarding the highway's safety facilities, traffic safety awareness, and rest areas. Specifically, enhancing drivers' awareness of traffic safety was recommended, along with further considerations such as expanding highway sections and improving connectivity with local roads.
- **(Efforts to Maintain Highway Quality and Improve Sustainability)** A highway is an infrastructure that demands constant and proper maintenance to ensure smooth traffic and safety of drivers. To maintain the quality of the road and improve its sustainability, VIDIFI's comprehensive efforts and rational decision making regarding finances,

manpower, equipment, and technology are considered important. As part of this effort, establishing a long-term vision and plan for highway maintenance is necessary to provide safe and efficient highway driving conditions.