

Evaluation Report

2017-08

**Ex-post Evaluation of Provincial Administration
Information System & National Information
Infrastructure Project in Cambodia**

The Export-Import Bank of Korea

Government Agency for EDCF

Evaluated by

Sangmyung University, Cheonan Council for Industry Academic Cooperation

The evaluation was entrusted to Cheonan Council for Industry Academic Cooperation of Sangmyung University by EDCF for the purpose of an independent evaluation. The opinions, findings and conclusion or recommendations expressed in this report are those of the external evaluator and do not necessarily reflect the views of EDCF.

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I. Project Overview

1. Project Details

- Name of Project: Provincial Administration Information System & National Information Infrastructure Project in Cambodia (KHM-005-2006)
- Name of Borrower: Ministry of Economy and Finance (Cambodia)
- Project Executing Agency: National Information Communications Technology Development Authority (NiDA)
- Requested Loan Amount: USD 30,973 thousand

2. Project Purpose

- The purpose of the project is to expand the Provincial Administration Information System (PAIS) and the National Information Infrastructure (NII) in 24 provincial cities, including Phnom Penh, Siem Reap and Sihanoukville. In addition, IT centers built in three major cities are meant to promote efficiency and transparency as well as regional cooperation in the public administration sector.

3. Project Scope

- The project covered a number of operations, detailed information of which is found in Table 1 below.

Table 1. Project Scope

Type	Outcome
Development and Expansion of Provincial Administration Information System (PAIS)	<ul style="list-style-type: none"> - Upgrade of the existing administrative data processing network and installation of this service in major provincial cities <ul style="list-style-type: none"> •Residence registration system •Real estate registration system •Vehicle registration system - Installation of servers, computers and peripherals
Establishment of National Information Infrastructure (NII)	<ul style="list-style-type: none"> - Establishment of online networks among 10 major cities with leased lines - Establishment of independent LANs in 14 other cities
Construction of IT Centers	<ul style="list-style-type: none"> - 3 IT centers in Phnom Penh, Siem Reap and Sihanoukville for the operation and management of PAIS and NII - Each IT center includes a data center, a network operation center, a technical support center and an ICT training center

II. Purpose of Evaluation

1. Purpose of Evaluation

- The ex-post evaluation of the Provincial Administration Information System & National Information Infrastructure Project in Cambodia was initiated by the Export-Import Bank of Korea to review the project and identify sustainability, with a view to examining policy implications in the future. Cheonan Council for Industry Academic Cooperation of Sangmyung University was tasked with the ex-post evaluation for an independent research by EDCF, i.e. Economic Development Co-operation Fund of Korea, in April 2017. Evaluation methods consist of literature review, field visit and interview and evaluation was conducted over the 8-month period.

2. Methods of Evaluation

- The evaluation team developed questions based on the five OECD DAC evaluation criteria—(i) relevance, (ii) efficiency, (iii) effectiveness, (iv) impact and (v) sustainability—as well as cross-cutting issues such as gender inequality.
- In order to understand the background of Cambodian e-government policies, the evaluation team reviewed the relevant publications from EDCF, World Bank and the government of Cambodia.
- To get a grasp on the current situation in three different cities, i.e. Sihanoukville, Siem Reap and Phnom Penh, two-stage field visits were carried out in the relevant organizations, such as the Ministry of Post and Telecommunication (MPTC), the City Hall, the vehicle registration office and the National Institute of Post, Telecom & ICT (NIPTICT). Additionally, the evaluation team interviewed several stakeholders to find out to what extent their use of the program is affecting their work.

III. Evaluation Results

- Table 2 below describes the overall results of the project along with the scores provided by the evaluation team. The project’s overall score, 2.6 out of 4.0, is satisfactory and constitutes a partially successful completion of the project.

Table 2. Evaluation Results

Evaluation Criteria	Relevance	Efficiency	Effectiveness	Impact	Sustainability	Total Score
Score (Max: 4.0)	3.5	2.5	2	2	3	2.6

1. Relevance

- The project’s intention to introduce the Government Administration Information System (GAIS) on the regional level greatly contributed to its relevance. The project was conducted in accordance with the Cambodian government’s policies, one of which is the National Strategic Development Plan focused on good governance.
- The Export-Import Bank of Korea evaluated the suitability of NiDA, i.e. a Cambodian institution tasked with the implementation of the project. Due to NiDa’s past involvement in an EDCF project to establish the data processing network for GAIS in Cambodia, NiDA was well-prepared to deal with a follow-up to the system’s operation and therefore considered to be a very suitable implementer of the project. Furthermore, NiDA officials have been actively involved in the feasibility review of the project and were aware of all of the details and technicalities needed for a successful expansion of GAIS.
- However, GAIS was developed by NiDA and then actually used by other

departments.¹ This indicates shortcomings in terms of the demand studies conducted during the design stage of the project, affecting the efficiency of the technology and evidencing a lack of cooperation in the course of the implementation of the project.

2. Efficiency

- During the implementation of the project, project-related activities were put on hold for about 13 months. This was attributable to issues with contract approval, discussions over the pre-existing real estate registration system that interfered with the efficiency of the new system, and delayed construction of the Siem Reap IT Center. However, these delays are deemed to have been necessary to resolve essential problems pertaining to the project and therefore do not detract from its validity.
- Table 3 shows some inefficiency in the residence registration system and the real estate registration system due to the short use periods.

Table 3. Evaluation Results of Use Periods

Service		Use Period	Degree of Appropriateness
PAIS	Residence registration	Used by 4 regions only during the pilot period and then only in Phnom Penh afterwards. The duration of use is uncertain.	Partially appropriate
	Vehicle registration	Used continuously over a 6- to 7-year period until replacement by a new system.	Very appropriate
	Real estate registration	Unused after development	Not appropriate

¹ For instance, the residence registration system is run by the Ministry of Interior, the real estate registration system, by the Ministry of Land Management, and the vehicle registration system, by the Ministry of Public Works and Transportation.

NII	Unused to transmit data collected by PAIS after installation.	Not appropriate (owing to external factors)
IT Center	Used for 1 to 2 years after its establishment for IT education purposes. Collection, storage and transmission functions not properly used.	Not appropriate (owing to external factors)

3. Effectiveness

- (PAIS/Residence Registration) It is understood that after the implementation of PAIS and the residence registration system, as many as 50% of citizens were registered in the provinces of Siem Reap, Sihanoukville, Takeo and Phnom Penh as part of the pilot project. But these systems were no longer used for residence registration thereafter. In Phnom Penh, despite the efforts to update the pre-existing systems since 2016, a lack of government budget is an impediment to such efforts.
- (PAIS/Vehicle Registration) The vehicle registration system has been constantly utilized right after it was handed over to the authority responsible, i.e. Ministry of Public Works & Transportation, and thus is deemed to be very effective. According to the relevant statistic data, 1.39 million vehicles were registered over 20 years prior to the implementation of the system in 2009 and 2.33 million vehicles were registered between 2010 and 2016.
- (PAIS/Real Estate Registration) It is understood that the real estate registration system has not been used after its launch. This is because the former system, i.e. the Land Management Administration Project (LMAP) developed by the World Bank, is functionally preferable to PAIS and the Ministry of Land Management made a decision to use LMAP. LMAP was preferable to PAIS as the former system used the Geographic Information System (GIS). Despite attempts to synchronize LMAP with PAIS, PAIS's database proved to be incompatible with GIS.

- (NII) The NII system, as a result of the negligible use of the residence registration system and the real estate registration system, also appears to have been largely unused. Instead of transmitting data from the vehicle registration system via NII, data was collected on removable storage devices on a weekly basis and then conveyed to Phnom Penh manually. Moreover, as electricity supplies were halted and cables had to be relocated for new buildings, data was not able to be transmitted normally.
- (IT Center) Due to a lack of funding from the Cambodian government, PAIS data input needed to run the IT Center did not take place normally, leading to less utilization of the data center. This is why the network administration center was not also properly used in most places, other than the Phnom Penh area.
- (Siem Reap) As the Provincial Office moved to the Apsara Authority in 2013, the IT Center was relocated accordingly. In 2014, the Provincial Office was removed to a different site once more, but the IT Center continues to be located in the Apsara Authority to this day. The system and equipment installed for the project continue to exist, and certain systems were utilized to collect and transmit residence registration data since the establishment of the IT Center to 2012. Today, 80% of the system is unused and approximately 20% is used for Internet access.
- It is found that the IT Center in Sihanoukville has maintained its form but has not been utilized at all.

4. Impact

- The purpose of the project was to build infrastructure needed for an administrative data processing system and to improve the efficiency of IT networks in the long term. The vehicle registration system was the only component of the project whose purposes were fully achieved.

Table 4. Evaluation Results of Each Output

Output		Results		
		Short-term (Introduction)	Medium-term (Development)	Long-term (Sustainable Use/Improvement)
PAIS	Residence registration	Achieved	Partially achieved	Partially achieved
	Vehicle registration	Achieved	Achieved	Achieved
	Real estate registration	Achieved	Not achieved	Not achieved
IT Center		Achieved	Achieved	Partially achieved

*Medium- to long-term results for the basic infrastructure of NII were not evaluated.

- As for the residence registration system, whose long-term purposes were partially achieved, the intended users of the technology, i.e. employees working in the commune offices, continue to work on a pen and paper basis, thereby missing out on the benefits of the system. Besides, the lack of a synchronization of the ID allotment system with the Ministry of the Interior is an impediment to the efficacy of the system.
- One of the medium-term results of the vehicle registration system is that the time needed for vehicle registration has been noticeably shortened. In the long term, not

least due to the recent addition of a mobile registration system, it is deemed that a large number of citizens will directly benefit from this service.

- After the dissolution of NiDA, the Phnom Penh IT Center's education facilities were moved to the NIPTICT education authority. NIPTICT is actively offering the IT education programs for civil servants and university students. Each year, 120 undergraduate students are enrolled, and on average, more than 300 students study in the IT education program. This will pave the way for the establishment of universities specializing in IT in Cambodia.

5. Sustainability

- Cambodia's laws pertaining to e-governance include the Telecommunication Law (2015), the ICT Development Policy 2020 (2016) and the ICT Master Plan. It is deemed that the laws and regulations needed for a sustainable implementation of e-governance in the future are in place.
- (MPTC) NII's budget is underfunded and not reliable, leading to the network equipment being damaged or outdated. As such, the budget for NII maintenance is not sustainable. Meanwhile, IT Centers established in Siem Reap and Sihanoukville are equipped with networks and hardware from the PAIS project, all of which become outdated and are not being used. But as the equipment provided by the regional government is being used alternatively, the project's lack of sustainability is slightly alleviated. NII, which is running the country's backbone network, is not receiving sufficient funds from the government, lowering sustainability. Increased budget for IT Centers and education are evaluated as contributing to sustainability.

- (Ministry of the Interior) Underfunding is another problem in connection with the efficient running of the residence registration system. The amount of data which is input now and under the former PAIS system is almost the same. The ID system developed in 2012 with the assistance of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), however, has led to ongoing international efforts to increase the budget in this area.
- (Road Traffic Authority) The vehicle registration system developed by KAMTRANSHIP in 2016 is being used efficiently. This private corporation is understood to be operating with the aid of funds generated by the sale of license plates and fee collections, in close cooperation with the Cambodian government. The system currently in use is going to be upgraded via a Japan International Cooperation Agency (JICA)-led project in the near future.

6. Cross-cutting Issues

- (Gender Equality) As the purpose of the project is to construct systems and networks, there do not appear to be any issues regarding discrimination based on gender.
- (Environment) There were no adverse effects on environment during the implementation of the project. There is one issue, however, regarding the disposal of discarded data processing equipment, which might pose a problem for environment in the future.

IV. Lessons and Recommendations

1. Lessons

- The vehicle registration system was by far the most efficiently used component of the project. This is due to the fact that the target beneficiary, i.e. the Ministry of Public Works and Transportation, had a demand for data processing systems that far exceeded those of other departments.
- Except for the vehicle registration system, the target beneficiaries of the system, i.e. Ministry of Land Management and Ministry of the Interior, failed to cooperate efficiently. This means that the developer of the system, MPTC, needed to ensure adequate cooperation with the system's future users.
- Also, in connected with the LMAP issue, the problem of insufficient budget provision was discovered during the preliminary research of the first project, GAIS, and then re-emerged during the planning stage of the second project, PAIS. Despite such budget constraint, no adjustments were made during the implementation of the project.

2. Recommendations

- (Recommendation for Similar Projects) In the development stage of these systems, the intended end user should serve as the main executing institution of the project. If costs are to be borne by the donor and the partner country, there needs to be an investigation prior to the project regarding cost-sharing. Funding needed for the implementation of data input should be included in the budget of the loan, or otherwise guarantees for the provision of such funds by the receiving country's government have to be obtained before the commencement of the project. Countries

with insufficient infrastructure may have a number of challenges pertaining to the smooth running of the system. As this project was an extension of the pre-existing GAIS project, it would have been preferable to incorporate the insights gained from GAIS during the F/S stage, contributing to a more efficient problem-solving capacity and design. In particular, the dissolution of the project's supervising body, NiDA, led to the absence of ownership and responsibility, something that has to be forestalled in future by a more diligent F/S.

- (Recommendation for Partner Countries for Efficiency) The Ministry of Post & Telecommunication should be more closely involved in the development of future applications so as to get a better understanding of demands from government departments.
- (Recommendation for Evaluation Process) The ex-post evaluation of the project started late. Data procurement was encumbered since the project's executing body, NiDA, was dissolved a long while ago. As such, a lack of data on the utilization of services led to a complete dependence on information obtained through interviews. Ex-post evaluation should take place no later than two to three years after the completion of the project.