

## Summary

Evaluation conducted by: Foundation for Advanced  
Studies on International Development (FASID)

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Country: Kingdom of Cambodia	Project Name: The Project for Flood Protection and Drainage Improvement in the Municipality of Phnom Penh
E/N Date of Signature: 27 August, 2002	Grant Limit (cost): 2.056 billion yen
Local Implementing Agency: Department of Public Works and Transport (DPWT), Municipality of Phnom Penh	Finish Date: 3 September, 2004
<p>Related Cooperation:</p> <p>1) Development Studies (1999) Part I: Master Plan for Drainage Improvement and Flood Control in the Municipality of Phnom Penh; Part II: Feasibility Studies on Reinforcement of Kop Srov and Tompun Dikes and Tompun Watershed Drainage Improvement</p> <p>2) Detailed Design (2001) The Project for Flood Protection and Drainage Improvement in the Municipality of Phnom Penh</p>	
1. Project objective (Goals and Expected Effect)	The project aims to protect and minimize the damage from floodwater and water immersion in the southern part of the Municipality of Phnom Penh by strengthening outer ring dikes and improving drainage channels and pumping station. Ultimately, the project aims to contribute to the citizen's living environment and the socio-economic development of the city and the country as well.
2. Project content	<p>This project aims to help reduce the effects of flood damage in the Municipality of Phnom Penh through;</p> <p>(1) Flood Protection</p> <ol style="list-style-type: none"> <li>1. Improvement of the Svay Pak Drainage Sluiceway (3 gates)</li> <li>2. Reinforcement of the Boeung Tompun Dike (4.340km); and</li> </ol> <p>(2) Drainage Improvement</p> <ol style="list-style-type: none"> <li>3. Improvement of the Boeung Salang Drainage Channel Downstream</li> <li>4. Construction of a Boeung Salang Drainage Sluiceway</li> <li>5. Improvement of the Stung Meanchey Drainage Channel Downstream</li> <li>6. Construction of a Tum Nup Toek Drainage Sluiceway</li> <li>7. Improvement of the Boeung Tompun Inlet Channel</li> <li>8. Construction of a new Boeung Tompun Pumping Station</li> </ol>
3. Relevance	<p>Overall evaluation: A+</p> <p>Evaluation detail:</p> <p>The project was highly relevant to the needs and development policies of Cambodia, as well as Japan's development assistance policy to Cambodia. Furthermore, the project has had a significant effect on the poor since they are the most vulnerable to damage caused by flood and inland water immersion.</p> <p>Drainage system facilities in the Municipality of Phnom Penh were developed in the French colonial days. Since then, two decades of civil conflict lead to the suspended maintenance and expansion of the facilities, lowering their functions. As a result, the area suffered from regular flooding</p>

	<p>and from the associated poor environmental conditions brought by stagnant wastewater in lowland areas. Thus, the project reflects these needs.</p> <p>This project is also consistent with Cambodia’s development policies including the Second Socio-Economic Development Plan (2001-2005) and the “Rectangular Strategy” for growth. These development policies are promoting infrastructural development as a priority issue to protect and mitigate the damage of the city from natural disasters including flooding. The current National Strategic Development Plan (2006-2010) also prioritizes on the issue of flood measures and improving the drainage system, hence the project objective remains relevant.</p> <p>Japan’s Country Assistance Program for Cambodia listed the development of disaster-proof infrastructure as a priority area for the improvement of socio-economic infrastructure and economic reconstruction in Cambodia, especially for the rapid growth of Phnom Penh city. Therefore, the project is consistent with Japan’s development policy.</p>
<p>4. Appropriateness /Efficiency of Facilities/ Equipments</p>	<p>Overall evaluation: A</p> <p>Evaluation detail:</p> <p>Facilities and equipments were appropriately installed and have been efficiently used. The rioting incidence of January 2003, in which protesters set fire to the Thai Embassy in Phnom Penh hindered procurement from Thailand, and measures were taken to extend E/N for one year. Apart from this external factor, construction was finished according to the plan. Newly constructed drainage pumping station and the improved drainage channels are maintained well, based on manuals developed by the project. The total cost of the project was lower than planned while the targeted outputs were achieved, which means this project had efficiently and appropriately provided facilities and equipment.</p>
<p>5. Effectiveness</p>	<p>Overall evaluation: A+</p> <p>Evaluation detail:</p> <p>The project demonstrates a remarkable effect for flood control and an improvement in the drainage system. After the project, there was not single incidence of flooding in the target areas, whereas before, regular flooding caused constraint interruption of socio-economic activities. Even in areas situated far from the improved channels which often suffered from immersion, flood damage has been reduced. There is an increase in traffic by the improved road on the levee, and they have become a part of the outer ring road of the city.</p> <p>The drainage channels receive not only rain water but also wastewater (sewage), so they function as sewerage to push out the wastewater into the river. Before the project, due to the low capacity of the old pumping station, the surrounding areas of the channel suffered from an ill sanitary environment such as bad odors and water-borne diseases. The areas were flooded by the wastewater in the rainy season, while the water in the channel became stagnant in the dry season which made water smell. Given this situation, the project produced the remarkable improvements in the sanitary environment along the channel.</p>

<p>6. Impact (Impact on Overall Goal etc.)</p>	<p>Overall evaluation: A</p> <p>Evaluation detail:</p> <p>The project highly contributed to the improvement of the lives of the people in Phnom Penh as an overall goal. It prevented interrupted economic and commercial activities, and social activities such as school closure. As an indirect impact, it alleviated health damages caused by water-borne diseases such as diarrhea and dengue fever, and bad odors.</p> <p>There were no negative impacts caused by the project. Even the resettlement issue, which was a precondition for the project, did not affect the project negatively. Instead, it was reported that the relocated people had better living conditions after the project, hence they also became beneficiaries of the project.</p> <p>Furthermore, local firms which the Japanese construction company contracted as subcontractors improved their skills and safety management abilities. Consequently, they became major local construction companies. Land price of the area around improved drainage channels have quintupled after the project, demonstrating the improvement of the living environment.</p>
<p>7. Sustainability (Further scope for improvement is entered below)</p>	<p>Overall evaluation: A-</p> <p>Operation and maintenance (O&amp;M) of the improved drainage channels and the newly constructed pumping station is well controlled. There has not been any particular damage of the facilities reported except for some delays in the procurement of a spare part of the pumping station and the restoration of a part of the administrative road along the channel. However, the capacity of DPWT was sufficient resolving these issues. DPWT has deployed enough staff for O&amp;M of the facilities. An adequate budget for O&amp;M is allocated to DPWT and sub-districts which administer their own drainage channels. The budget of the DPWT is allocated through the Ministry of Public Works and Transport and the Municipality of the Phnom Penh (MPP). MPP also allocates 10% of water bills for the O&amp;M of drainage facilities. Thus, the sustainability of project effectiveness has been ensured from the institutional, technical and financial aspects.</p> <p>Meanwhile, illegal dumping of waste into the drainage channels is forcing administrative bodies to implement frequent clean-up operations. Illegal dumping is caused by the low environmental awareness and the immoral behavior of the people living in the vicinity, along with an insufficient waste collection service. Since this problem could be a factor that disturbs the sustainability of the project effectiveness, urgent countermeasures are expected.</p>
<p>8. Publicity Effect (visibility)</p>	<p>Overall evaluation: A-</p> <p>Recognition of the project is high among beneficiaries and stakeholders. The project held groundbreaking and inauguration ceremonies inviting high ranking officials from the government of Cambodia and diplomatic missions. In both occasions, the Ambassador of Japan attended and gave a speech. The project also developed and distributed pamphlets on the project at both ceremonies. Prime Minister Hun Sen and Mayor of the Municipality of Phnom Penh attended the inauguration ceremony which attracted attention</p>

	<p>from the media. During the construction period, three local newspapers wrote articles about the project and the local radio also interviewed the Japanese contractors. Signing board and plates which indicate in both English and Khmer that the project was accomplished through Japanese ODA were installed in the pumping station and on the bridges renovated over the channels. These measures were appropriate in raising the recognition of the project.</p> <p>However, further efforts may be required to gain visibility to the general public. For example, a beautiful ODA plate installed in the pumping station hardly catches the eyes of local residents since the general public rarely visits the pumping station. Since the effects of the project are already known among the general public, to increase the project's visibility highlighting Japan's cooperation, a more creative PR strategy such as changing the location and design of the information plates, and the timing of PR activities.</p>
<p>9. Evaluations by the recipient country (The diplomatic effect is entered here, too)</p>	<p>The project is highly commended among the government officials including DPWT, MPP and other related ministries; its impacts have highly contributed to the improvement of the city's environment that used to suffer from flooding and water immersion. The project also received appreciation from beneficiaries including relocated people.</p>
<p>10. Recommendations and Lessons Learned</p>	<p><b><u>Recommendation 1: Response to illegal dumping of waste (1): Awareness activities for the residents</u></b></p> <p>Illegal dumping of waste into the channels imposes a burden on administering bodies. Currently they are putting large efforts into cleaning the channels, but in fact they should make an effort to prevent residents from dumping waste into the channels through awareness raising activities or by imposing fines.</p> <p><b><u>Recommendation 2: Response to illegal dumping of waste (2): Response to presently accumulated waste</u></b></p> <p>Before conducting awareness raising activities, DPWT should dispose of all garbage and also repair the damaged administrative road.</p> <p><b><u>Recommendation 3: Establishment of a financial base for maintenance</u></b></p> <p>Currently, there are no financial constraints for O&amp;M, however, further O&amp;M cost are expected to arise due to the implementation of new projects. Financial issues should not only be handled by the DPWT but also by the Municipality of Phnom Penh.</p> <p><b><u>Recommendation 4: Carrying out PR activities</u></b></p> <p>Carrying out PR activities for residents and students, such as conducting an environment education tour to the channels and the pumping station, will be effective in raising the recognition of the project as well as providing the opportunity to think about illegal dumping. Furthermore, conducting this kind of a tour will lead organizers to improve their consciousness on the environment and ownership of the project.</p> <p><b><u>Lesson 1: Improved visibility by elaborate information activities</u></b></p> <p>The effects of the project have become widespread in the Municipality of Phnom Penh. In order to increase the project's visibility, highlighting Japan's</p>

	<p>cooperation, further elaborate information activities are needed to catch the eyes of the general public (e.g. the design/location of the ODA mark, signing board, etc).</p> <p><b><u>Lesson 2: Response to the factor that could affect the project negatively</u></b></p> <p>In this project, the waste disposal problem is the greatest cause of concern in sustaining the effects derived from the project. Although this is an external factor, if the project has such negative factors, possible countermeasures should be taken into accounting at the planning stage. The constructive linkage with other projects (i.e. technical assistance) or with activities conducted by other donor agencies and NGOs should be considered.</p>
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