

JBIC ODA Loan Project Mid-Term Review

Time of Mid-Term Review Field Survey: June 2006

Project Title: Thailand: Second Mekong International Bridge Construction Project (L/A No. T - GMS-1)

[Loan Outline] Thailand

Loan Amount/Contract Approved Amount/Disbursed Amount: 4,079 million yen/2,690 million yen/1,966 million yen (as of end June 2006)

Loan Agreement: Entered December 2001

Loan Completion: April 2008

Executing Agency: Department of Highways (DOH) in the Ministry of Transport and Communications

[Project Objective]

The objective of this project is to connect an East-West corridor that stretches from Vietnam and Laos to Thailand and Myanmar by connect an East-West corridor that stretches from Vietnam and Laos to Thailand and Myanmar, and thereby contribute to expanding trade between Laos and Thailand and promoting economic development in the roadside area of the East-West corridor.

Consulting: A joint venture including Nippon Koei Co., Ltd. with Oriental Consultants Co., Ltd. as leader

Contractor: Bridge construction: a joint venture including Vichitbahan Construction Co., Ltd. (Thailand) with Sumitomo Mitsui Construction Co., Ltd. serving as nucleus.

Road construction (Thailand): a joint venture between Leighton Contractors (Asia) Ltd. (Thailand), Thongma Contractor Co., Ltd. (Thailand)

Item	Results of ex-ante evaluation (March 2001)	Ex-post evaluation results as estimated at time of mid-term review
[Relevance] (1) National policy level (regional planning level)	The Greater Mekong Subregion (GMS) defines an area in the Mekong region in which participating countries provide economic cooperation and financial support. The GMS program aims to foster trade between countries, promote investment, and resolve cross-border problems. The participating countries have agreed to conduct regional cooperation projects in seven areas, including transportation and energy. Among those, the field of transportation has been a particularly high priority.	There have been no changes to the initial policy. The Association of Southeast Asian Nations (ASEAN) has been working to develop the entire Mekong region. Japan has consistently demonstrated support for its development at Japan-ASEAN summit meetings and other such venues. The Asian Development Bank (ADB) has been a center and supported the overall strategy for GMS development, and individual projects are set as prioritizing projects in the country. The captioned project contributes to the economic development in the northeastern region, where poverty is extensive. The project has yet to be completed.
(2) Policy level	Within the transportation sector, roadwork is particularly highly	In Thailand, roads constitute the most basic and critical form of

(3) Planning level	valued, and ten projects were authorized in this area. Of these, National Highway No. 9 forms the nucleus of the East-West corridor project to connect Myanmar, Thailand, Laos, and Vietnam. Connecting Mukdahan in northeast Thailand, Savannakhet in central Laos, and Dong Ha/Da Nang in central Vietnam, the route has a huge effect on the distribution of goods among these regions, and as such is considered a high priority for its ability to impact regional economic development. Furthermore, the national plans of both Thailand and Laos, the target countries of the present project, highlighted the importance of the road sector that connects the East-West corridor. Because the only way to cross the Thai-Laos border when crossing at National Highway No. 9 was by ferry, the road formed a bottleneck at that point. Given that the present project aimed to connect this point by a bridge, it was a matter of high priority.	infrastructure for transportation. That the provision of roads continues to be an important national policy is evidenced by the nation's Master Plan on Inter-City Motorway Construction. Targeting the years 1997-2016, this massive project is still in progress. Moreover, the corridor runs from Mawlamyine in Myanmar through Thailand and Laos (this project's target countries) and on to Da Nang in Vietnam, and roughly half of the 1500km East-West corridor—770 km, to be exact—lies within the borders of Thailand. The Thai government has already been making this section of road into a four-lane highway. In Laos, assistance from Japan and ADB are helping to build National Highway No. 9. In Vietnam, the Hai Van tunnel was completed in June 2005. All in all, the East-West corridor is steadily making headway in all the participating countries. Construction is progressing, with completion already expected for December, 2006. There was some concern that accidents might delay the construction work, but thanks to the efforts of those working for this project, the bridge is expected to open as planned.
[Effectiveness]	(1) Operation and Effect indicators Quantitative effects Initially no indicators were set. (Reference) JBIC's 1998 Special Assistance for Project Formation made separate project estimations for high growth and low growth scenarios. The former assumed that the liberalization of trade and investment in the Mekong region. The latter assumed stagnant bridge usage due to time lost as participating countries resolve their conflicts of interest. With opening of the bridge slated for 2004, estimates are as shown below.	(1) Operation and Effect indicators Quantitative effects In March 2004, JBIC conducted a Special Assistance for Project Implementation (SAPI) study in which it revised the previous SAPROF figures. The new figures are shown below. The setting of 2009 as the target year assumes the target is reached by the time of the ex-post evaluation. In the figures, the initial year (2002) truck figures are based on an average of real figures transported by the operating ferry between 2000 and 2002. In addition, passenger values are based on an average of real figures for both Thailand and Laos in 2002.

	Low Growth Scenario (Daily Traffic Volume from One Side: Vehicles)					
	Year	Trucks		Buses	Passenger Vehicles	Total
		Long Distance	Short Distance			
	2005	126	21	73	80	300
	2010	175	28	101	112	416
	2020	343	52	188	209	792
	High Growth Scenario (Daily Traffic Volume from One Side: Vehicles)					
	Year	Trucks		Buses	Passenger Vehicles	Total
		Long Distance	Short Distance			
	2005	210	34	119	132	495
	2010	385	63	222	247	917
	2020	1,300	206	735	816	3,057
	The above figures represent estimations made for traffic volume in one direction only. The 2004 Special Assistance for Project Implementation (SAPI) points out that these figures are too high if one considers the traffic from both sides.					
	Indicator	Initial Year (2002)	Target Year (2009)	Present (Note 1) (2006)		
	1. Daily traffic volume (in both directions)			(Thai side only)		
	(1) Trucks (vehicles)	120	517	85		
	6-wheel		103	2		
	10-wheel		155	40		
	Greater than 10-wheel		259	43		
	(2) General passenger vehicles (vehicles)	N/A	342			
Automobiles and pickup trucks		225	N/A			
Small buses		25	5			
Large buses		4				
Regular buses		88				
(3) Passengers (people)	580	2,501	On the order of 400 people on average. However, there may be as many as 1,000 passengers on national holidays and festivals.			
2. Hours of operation						
Immigration offices	8:30-17:00	24 hours				
Ferry boat operation	9:00-16:30		General: 9:00-16:30 Vehicles: 8:00-16:00 The ferry service is mostly operated by a private			

				organization. As for vehicles, permission must be obtained in advance to cross the river on weekends and holidays.
		3. Average border transmit time General passengers: 1 hour Ferry for vehicles: 4-5 hours (Note 2)	Single window: (Note 3) General vehicles and buses: 15-25 minutes. Trucks: 1.5 hours. Windows on both sides: General vehicles and buses: 20 - 30 minutes. Trucks: 3 hours	No significant change from the 2002 study figures
		Note 1: Current figures represent those for the Thai side only. Figures for both directions have not been confirmed. Moreover, the number of passengers was based on on-site oral inquiries. Note 2: Transit time breaks down as follows: General passengers: 30 minutes for transit time/30 minutes for customs, immigration, and quarantine Ferry for vehicles: 45 minutes for transit time/3.5-4.0 hours for customs, immigration, and quarantine Note 3: A single window is the one provided on either one of the countries to undertake one-stop inspection at their internal border facilities for either leaving or entering the country. Windows on both sides are the ones provided for both countries to manage emigration and immigration in separate locations. Traffic Demand The target figures set in 2004 are based on the prerequisite that the bridge will open at the start of 2007, and things are moving largely		

	as predicted by the SAPI study. Traffic demand as measured during the midterm review shows an increase over the base figure of 2002. In spite of the increased demand for the traffic, investment for the new ferry has been restrained in anticipation of the bridge's opening, and so the bridge's opening should increase demand. Regarding short-term demand, a rapid increase in cross-border cargo transport is forecast between the northeast of Thailand and central Laos. In addition, crossings by residents of the border region are expected to accelerate thanks to improved border crossing procedures. Mid- to long-term demand is expected to change depending on development in the border region and vicinity, development of central and northern regions of Vietnam, trade between Myanmar and Vietnam, conclusion of free trade agreements (FTAs) in the GMS subregion, and increases in tourism demand. 2) Qualitative effects Promotion of trade between Thailand and Laos, economic development in regions where construction was to be done; and regional economic development and promotion of the exchange of agricultural produce and processed agricultural goods through the provision of roads that cross east and west in Indochina.	Promotion of exchanges (especially trade and tourism) between Thailand, Laos, and Vietnam. Stimulation of the regional economy centering on the outskirts of the bridge. (2) Factors which may influence the effectiveness and impact In order to achieve smoother cross-border traffic and transit transport, there is a need to cope adequately with the issues below, as was pointed out in the SAPI study. Joint management institutions must play a key role in liberalizing cross-border and transit traffic and accelerating the traffic volume. • Establishment of an organizational structure that operates at the policy level to smooth traffic flow between Laos and Thailand or within the GMS subregion • The promotion of the mutual exchange of commercial transport rights for transport companies or vehicles to be operated in the other country
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		• Establishment and carrying out of a customs transit system to encourage transit traffic along the East-West corridor. • Establishment of a smooth-running operation and maintenance system for the bridge • Initiatives to establish an infrastructure that facilitates smooth traffic flow along the East-West corridor and to handle related issues Moreover, the project coordinating committee (PCC) and bridge management committee (BMC) established to carry out this project by Thailand and Laos are expected to be transferred to a joint management structure. (3) Factors which may influence the sustainability While the items in (2) above affect project efficacy or impact, they also have a direct or indirect effect on sustainability. Currently the Department of Highways under the Ministry of Transport is expected to take charge of operation and maintenance on the Thai side of the bridge, and no urgent problems are seen with regards to organization, technical capability or operation and maintenance. Further, organizations in both countries have begun to discuss the procedures for operation and maintenance as well as the setting of fees. (4) Environmental Social consideration Some 8.5ha of land are targeted for acquisition in the plan, but there will be no displacement of residents. The relevant parties are considering the impact on residents and conforming to relevant laws for land acquisition.. Regarding environmental aspect, environmental monitoring has been made for concerning 6items such as water quality, atmosphere and noise covering whole project site, thus far, no significant issue came to their attention. (5) Other: AIDS measures At the beginning, AIDS measure was not included to the plan. However, as they recognize the HIV infection risk, they executed
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		several measures since this project hires large number of employees from outside area, and promote the movement between the areas where HIV infection ratio differ. They utilized external fund for the project in corporation with executing agency, contractor, NGO and regional health department, promoted by monitoring by Japanese NGO group and project management by JBIC.
Information for reference	Results of ex-ante evaluation (March 2001)	Ex-post evaluation results as estimated at time of mid-term review
[Efficiency] (1) Outputs	(1) Outputs • Main bridge portion : total length 1,600m (2 lanes) • Elevated approach section: total length 250m (Thai side) total length 200 m (Laotian side) • Highway approach section: total length 79m (Thai side) total length 178m (Laotian side) • Lane change section: total length 395m (Thai side) • Border control facilities: one site each for Thai side and Laotian side • Connecting road portion and intersection portion: total length 520m (Thai side) total length 1,864m (Laotian side)	(1) Outputs As initially planned. The roof design of the border control facilities was changed on the Thai side to give it a traditional feel.
(2) Project period	(2) Project period October 2001-June 2006 (57 months) This represents the time from the selection of consultants to the completion of construction. The building period is expected to last 36 months.	(2) Project period December 2001- December 2006 (61 months) The construction period will be 36 months(as planned). The construction method is changed and measures for safety are confirmed though the accident occurred in July, 2005. The delay of construction is almost retrieved by the person's related to contractor and others cooperation.
Lessons Learned and Recommendations	• The establishment of an appropriate organization structure for bridge management, the exchange of traffic rights for commercial purposes, the establishment and implementation of a customs house transit system, and efforts towards infrastructure and related issues are all keys to the success of this project. • When conducting measures to combat AIDS, it is important to examine issues from the planning stage, providing activity funds including outside resources, and conducting activists not just through the executing agency, but in coordination with related businesses and those conducting direct countermeasure activities (such as NGOs and regional health bureaus).	
Indicators set for use at time of ex-post	N/A	(1) Daily traffic volume (2) Hours of operation

evaluation		(3) Average border transit time
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