

Socialist Republic of Viet Nam

Ex-Post Evaluation of Japanese ODA Loan Project  
“Small-scale Pro Poor Infrastructure Development Project (II)”

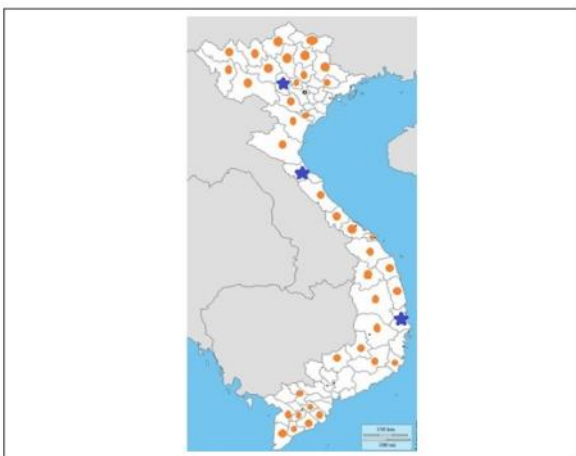
External Evaluator: Kenichi Inazawa, Octavia Japan Co, Ltd.

## **0. Summary**

This project developed small-scale infrastructures in provinces and districts that require poverty reduction, with the aim of improving traffic accessibility, public services and increasing agricultural productivity. Since this project is in line with Vietnam’s poverty alleviation policies, such as the “Five-year Socio-Economic Development Plan” and the “Ten-Year Strategy for Socio-Economic Development Plan”, as well as the need to develop roads, water supply, irrigation and electricity distribution facilities in rural and mountainous areas and Japan’s assistance policy, its relevance is high. The project cost and project period slightly exceeded the plan (while the utilized ODA loan amount was less than the plan) because the number of sub projects was increased when the change in the exchange rates was expected to leave some of the approved ODA loan amount unused. Thus, its efficiency is fair. The initial targets of this project were generally achieved. It was confirmed that through the road project, smooth traffic was realized; through the electricity distribution project, the power supply was stabilized and the hours of power cuts were reduced; through the water supply project, the water supply and service population increased and through the irrigation project, agricultural production increased. Additionally, results from the beneficiary survey indicate that the level of satisfaction among residents and living conditions has improved; thus, the project’s effectiveness and impact is high. On the other hand, with regard to the operation and maintenance of this project, the allocated maintenance budget for the road project is not necessarily sufficient and thus, its sustainability is fair.

In light of the above, this project is evaluated satisfactory.

## 1. Project Description



Project Locations<sup>1</sup>



Constructed Water Supply Facility  
(Nghia Dan District in the Nghe An Province)

### 1.1 Background

In Vietnam, the economic gaps between rural and urban areas were widening. While the urban poverty rate greatly improved from 25.1% in 1993 to 5.7% in 2004, the rural poverty rate remained high, despite its decline from 66.5% to 30.5%. In addition, many of the people categorized as not poor were close to the poverty line and farmers, in particular, relied on unstable agricultural incomes. Furthermore, poor households that were residing in rural and mountainous areas faced limited traffic access and natural disasters due to their geographical situations. They also lived in difficult conditions due to the aging of existing electricity distribution networks and the unstable power supply. Their access to safe water (water supply service) was also limited. Therefore, it was an urgent task to develop infrastructures such as irrigation facilities, road networks, electricity distribution and water supply facilities.

### 1.2 Project Outline

The objective of this project is to improve the traffic access and public services and to increase the agricultural productivity in districts of rural provinces where poverty reduction is required, by developing small-scale infrastructures, such as roads, electricity distribution, water supply and irrigation facilities, thereby contributing to the poverty reduction of Vietnam.

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<sup>1</sup> Orange-colored circles indicate targeted provinces, while blue-colored stars indicate provinces that were targeted for the pilot projects.

Loan Approved Amount/ Disbursed Amount	14,788 million yen / 13,668 million yen	
Exchange of Notes Date/ Loan Agreement Signing Date	March 2006 / March 2006	
Terms and Conditions	Interest Rate	1.3% (road, electricity distribution and irrigation) 0.75% (water supply) 1.3% (consultant services)
	Repayment Period (Grace Period)	Road, electricity distribution and irrigation: 30 years (10 years) Water supply: 40 years (10 years) Consulting services: 30 years (10 years)
	Conditions for Procurement	General untied
Borrower / Executing Agency	The Government of Socialist Republic of Viet Nam / Ministry of Planning and Investment (MPI)	
Final Disbursement Date	August 2012	
Main Contractor (Over one billion yen)	—	
Main Consultant (Over 100 million yen)	Nippon Koei Co., Ltd. (Japan) / OPMAC (Japan) / POYRY Infra Ltd. (Switzerland) (JV).	
Feasibility Studies, etc.	JICA Pilot Study for the Special Assistance for Project Formation (SAPROF), “Small-scale Infrastructure Development Project for Promoting Diversification of Productive Activities in Rural Areas”, JICA (February-September 2005)	
Related Projects	(Japanese ODA Loan) <ul style="list-style-type: none"> <li>• Rehabilitation Loan I (1993)</li> <li>• Rehabilitation Loan II (1994)</li> <li>• Rural Infrastructure Development and Living Standard Improvement I (1995)</li> <li>• Rural Infrastructure Development and Living Standard Improvement II (1996)</li> <li>• Rural Infrastructure Development and Living Standard Improvement III (1998)</li> <li>• Small-scale Pro Poor Infrastructure Development Project I<sup>2</sup> (2002)</li> <li>• Small-scale Pro Poor Infrastructure Development Project III (2009)</li> </ul> (Financed by the World Bank) <ul style="list-style-type: none"> <li>• Community Based Rural Infrastructure (2001)</li> </ul>	

<sup>2</sup> Small-scale Pro Poor Infrastructure Development Project I (The first phase: Sector Program Loan IV) was implemented as a proceeding project of this project (its ex-post evaluation was implemented in 2012). With regard to the related projects listed above, “Rural Infrastructure Development and Living Standard Improvement I” is SPL I, which makes this project SPL V. At present, the third project (SPL VI) is ongoing as a subsequent project of this project.

	<ul style="list-style-type: none"> <li>• Northern Mountains Poverty Reduction Project (2001)</li> <li>• Second Rural Finance Project (2002)</li> <li>• Forest Sector Development Project (2004)</li> <li>• Second Rural Energy Project (2004)</li> </ul> <p>(Financed by the Asian Development Bank)</p> <ul style="list-style-type: none"> <li>• Provincial Roads Improvement (2001)</li> <li>• Second Red River Basin Sector Project (2001)</li> <li>• Central Region Livelihood Improvement (2001)</li> <li>• Third Provincial Towns Water Supply and Sanitations (2001)</li> <li>• Support to Implementation of Poverty Reduction Program (2004)</li> <li>• Central Region Transport Networks Improvement Sector Project (2005)</li> </ul> <p><i>Note: The years indicated above represent the timings of the loan agreement signings.</i></p>
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## **2. Outline of the Evaluation Study**

### **2.1 External Evaluator**

Kenichi Inazawa (Octavia Japan Co, Ltd.)

### **2.2 Duration of Evaluation Study**

Duration of the Study: August 2014-December 2015

Duration of the Field Study: October 18-31, 2014 and January 18-24, 2015

### **2.3 Constraints During the Evaluation Study**

The areas targeted by this project were spread all over Vietnam. The sub projects for road, electricity distribution, water supply and irrigation were implemented in 140 districts and 41 provinces. Due to budget and time constraints, it was impossible to conduct a field survey in all of the project areas. For the field survey, five provinces were visited (Phu Tho, Ha Tinh, Phu Yen, Nghe An and Hoa Binh) and a beneficiary survey targeted one province (Phu Tho). Data at the central, provincial and sub project levels were collected through questionnaires and interviews with the Ministry of Planning and Investment, the Departments of Planning and Investment (DPI) and People Committees in the regions that were responsible for the operation and maintenance of the sub projects.

### **3. Results of the Evaluation (Overall Rating: B<sup>3</sup>)**

#### **3.1 Relevance (Rating: ③<sup>4</sup>)**

##### **3.1.1 Relevance to the Development Plan of Vietnam**

At the time of appraisal, the government of Vietnam formulated the “Ten-Year Strategy for Socio-Economic Development” (2001-2010) as principles of the nation’s development, in which reducing regional gaps and poverty were stipulated. The government also formulated the “Five-year Socio-Economic Development Plan” (2006-2010), which set more concrete target figures. These included the proportion of poor households to be reduced to 10%, job creation for 7.5 million people and safe water supply for 75% of the rural population. In addition, the government launched “Program 135”, which is an infrastructure development program for poverty alleviation and living condition improvement in mountainous and remote areas. By the time this project commenced, the first phase of the program (1998-2005) was completed and the second phase (2006-2010) was under preparation.

At the time of the ex-post evaluation, the government of Vietnam stipulated the importance of reducing economic gaps and poverty, as well as developing rural infrastructures in its “Ten-Year Strategy for Socio-Economic Development” (2011-2020) and the “Five-year Socio-Economic Development Plan” (2011-2015), subsequent to the above-mentioned plan. The government continues to implement the above-mentioned “Program 135” (the third phase: 2011-2015). This program places importance on encouraging investments in infrastructures, developing road networks, securing the power supply and water necessary for people’s living, as well as increasing agricultural productivity.

Based on the above, at the time of the project appraisal and at the current ex-post evaluation, poverty reduction in Vietnam continues to be viewed as an important policy. Therefore, the project is consistent with policies like the national and sectoral plans.

##### **3.1.2 Relevance to the Development Needs of Vietnam**

Before the project commenced, the economic gaps between rural and urban areas were widening in Vietnam. While the poverty rate in urban areas had greatly improved from 25.1% in 1993 to 5.7% in 2004, the poverty rate in rural areas, where 90% of the nation’s poor population concentrates, remained high - it only declined from 66.5% to 30.5%. In addition, many of the people categorized as not poor were right above the poverty line. Looking at regional figures,

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<sup>3</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory and D: Unsatisfactory.

<sup>4</sup> ③: High, ② Fair, ① Low.

the poverty rate of the northern mountainous region was 54%, the north central coast region was 41% and the central highland was 33%. These three regions had relatively high poverty rates, compared to other regions. This was because they faced constraints, such as limited traffic accessibility due to geographical factors<sup>5</sup> and vulnerability to natural disasters, resulting in limited agricultural production. Additionally, there were many villages without electricity or with old existing electricity distribution networks and unstable power supply. People also had limited access to safe water (the water supply service).

At the time of the ex-post evaluation, the poverty rate of Vietnam is 9.6% (national average). In the north central and central coast regions the poverty rates vary from 12 to 15%, which is slightly higher than the national average. In the northwest mountainous region and the northeast mountainous region the rate is 28.55% and 17.39% accordingly<sup>6</sup>, which remains high compared to the national average. In mountainous regions, the population is scattered and road networks and water supply facilities are not fully developed. In some cases, electricity is not available and agricultural productivity is low due to underdeveloped irrigation facilities. It is presumably for these reasons that many households continue to face economic difficulty. At the current time of the ex-post evaluation, JICA continues its support for the development of road, water supply, irrigation and electricity distribution facilities through the “Small-Scale Pro Poor Infrastructure Development Project III”, which followed this project. In addition, the World Bank and the Asian Development Bank assist these regions through poverty reduction programs.

Based on the above, the need to develop roads, water supply, irrigation and electrification facilities in poor regions is high in Vietnam. Therefore, the project was considered to be in line with the development needs, both at before the project commencement and at the time of the ex-post evaluation.

### 3.1.3 Relevance to Japan’s ODA Policy

“The Country Assistance Program for Vietnam”, formulated before the project’s commencement in 2004, states that assistance to poor regions, water supply, rural roads, electrification/rural electricity distribution network and agricultural irrigation are among its priorities. Therefore, it can be said that this project was consistent with the assistance policy of Japan.

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<sup>5</sup> This refers to the mountainous or remote areas that are far from cities.

<sup>6</sup> This is based on 2012 data released by the Ministry of Labour, Invalids, and Social Affairs (MOLISA). The definition of poverty is a household income of 400,000 VND (approximately 2000 JPY, based on the exchange rate at the time of the ex-post evaluation) or less monthly.

This project has been highly relevant to the development plan and development needs of Vietnam, as well as Japan's ODA policy. Therefore, its relevance is high.

### **3.2 Efficiency (Rating: ②)**

#### **3.2.1 Project Outputs**

In this project, construction works were carried out in four sectors: roads (concrete pavement, bridge construction, etc.); electricity distribution (installation/extension/repair of medium/low transmission lines, installation of distribution transformers, etc.); water supply (intake facilities, pump facilities, treatment/filtration facilities, construction of water distribution networks, etc.) and irrigation (enforcement of irrigation canals, reservoir protection works). The sub projects covering these four sectors were selected and implemented at 168 sites in 140 districts and 41 provinces<sup>7</sup>. As will be discussed in "3.3.1 Quantitative Effects" under the effectiveness section below, nine districts in three provinces were selected from these as "pilot districts/provinces". The District Development Board (hereafter referred to as "DDB") was established with the aim of encouraging resident participation, achieving project objectives and sustaining such effects. A total of 10 projects<sup>8</sup> were monitored. In addition, taking network and marketing into consideration, "pilot project sites" (three road projects and one water supply project) were selected in order to develop the local industries and improve traffic access to the neighboring areas. Table 1 shows the planned and actual outputs of this project.

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<sup>7</sup> In principle, the selection criteria for all of the sectors were: (1) Its implementation was approved by the provincial people's committees and requested to the Ministry of Planning and Investment (MPI), (2) documents on socio-economic aspects necessary for the selection are readily available and (3) it does not require non-voluntary resettlement (of 50 or more households). Regarding the road sector, the extension work - either for provincial or district road - should not exceed 20km per project and the cost should be two billion VND or less per 1km. With respect to the electricity sector, it has to have an installation or extension/repair of a medium/low voltage distribution line or installation or rehabilitation of distribution transformers, the network has to be owned by the Electricity of Vietnam (hereafter referred to as "EVN") and the project cost should not exceed 25 billion VND per project. As for the water supply sector, the project has to have beneficiaries of more than 4,000 people, the designed water quantity should be 1,000 tons or more and the project cost should not exceed 25 billion VND. Concerning the irrigation sector, the project cost should not exceed 25 billion VND and the irrigated area should be 50ha or more.

<sup>8</sup> The initial plan was to select 22 districts in five provinces; however, it was changed to nine districts in three provinces. The reasons for this will be explained in "3.1.1 Quantitative Effects" under the effectiveness section.

Table 1: Planned and Actual Outputs of This Project

Sector	Plan (Before Project Commencement)			Actual (At Ex-post Evaluation)		
	No. of Sub Projects	Targeted Province	Targeted Districts	No. of Sub Projects	Targeted Province	Targeted Districts
Road	40	40	40	70	40	68
Electricity Distribution	29	29	29	29	28	35
Water Supply	28	28	28	31	28	31
Irrigation	37	37	37	38	34	39
Total	134	41*	128*	168	41*	140*
Pilot Project Sites	Three road projects and one water supply project (Phu Tho, Phu Yen and Ha Tinh provinces)			As planned		
Consulting Services	(TOR) <ul style="list-style-type: none"> <li>• Assistance in the detailed design and bid tendering/contracting of the sub projects.</li> <li>• Construction supervision (including environmental monitoring) and evaluations.</li> <li>• Institutional enforcement for the project's implementation.</li> <li>• Institutional enforcement for maintenance.</li> <li>• Operation and management of the NGO components (NGO partnership fund).<sup>9</sup></li> </ul> (Planned M/M) 262.5M/M (out of which, 125M/M were international and 137.5M/M were local).			(TOR) The assignments on the left-hand column were executed as planned.  (Actual M/M) 267.5M/M (out of which, 145M/M were international and 122.5M/M were local).		

Source: JICA document (plan) and answers to the questionnaires (actual).

\*Note: The number of targeted districts/provinces represents a total number for each of the sectors and does not add up to the overall total.

At the time of the appraisal, the project planned to have 134 sub projects but, in reality, this increased to 168. This was because the change in the exchange rates was expected to leave some of the approved funds unused. In March 2010, during the project's implementation, MPI, the executing agency of this project, officially requested JICA to approve the utilization of the unutilized budget, which JICA approved. As a result, additional sub projects were implemented

<sup>9</sup> This was established using part of the consulting service budget of no more than 10 million yen in order to encourage collaborations with other projects funded by NGOs in the targeted areas (e.g., agricultural extension works, health and hygiene education and participatory capacity building).



at 34 sites. Considering that the implementation of these sub projects was consistent with the project's objectives (poverty alleviation through small-scale infrastructures), it can be judged that the change made to the outputs owing to the unutilized budget (implementation of additional sub projects) was appropriate.



Photo 1: Developed Irrigation/Drainage Facility. (Cam Khe District in the Phu Tho province)



Photo 2: Developed Road (Da Bac District in the Hoa Binh province).

### 3.2.2 Project Inputs

#### 3.2.2.1 Project Cost

The planned total project cost was 17,398 million yen (out of which, 14,788 million yen was to be financed by the ODA loan). However, the actual project cost was 22,467 million yen (out of which, 13,668 million yen was financed by the ODA loan), which was higher than planned (129% of the plan). As explained earlier, the exchange rate fluctuation was expected to leave some of the approved ODA loan amount unutilized and thus, the outputs were modified (implementation of sub projects were added) using the balance. On the other hand, however, the unit prices of labor, construction materials and fuels dramatically increased<sup>10</sup> in Vietnam during the project's implementation, which inevitably increased the construction cost. In other words, the project cost that was borne by the Vietnamese side increased and, as a result, the actual total project cost exceeded the plan<sup>11</sup>. The number of sub projects increased by 34, which is 25%

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<sup>10</sup> For example, looking at prices before and after the peak of implementing the sub projects (Jan 2007 and June 2008), the labor cost increased by 70%, the fuel cost by 46% and the steel price by 36% (source: data provided by the Ministry of Construction of Vietnam). Although data from June 2008 to the project's completion could not be obtained, the unit prices continued to rise after June 2008, according to MPI.

<sup>11</sup> In other words, while it was anticipated that the approved ODA loan amount would not be fully utilized and implementation of additional outputs using the unutilized balance was considered appropriate and approved by the Japanese and Vietnamese sides, the construction cost ended up exceeding the initial plan due to inflation caused by the economic growth of Vietnam at that time.

more than the initial plan. Considering that the project cost increased by 29% from the initial plan, it can be judged that the exceeded amount was generally fair and that the increase in the project outputs (increase in project cost) was in accordance with the increase in the project outputs.

#### 3.2.2.2 Project Period

At the time of the project's appraisal, the project period was planned to be four years and three months (51 months) from March 2006 to May 2010. However, the actual project period was six years and six months (78 months) from March 2006 to August 2012, which was longer than planned (153% of the plan). This was mainly because the additional outputs were implemented. The additional sub projects were commenced in 2010 and took a little less than two years. The implementation itself did not encounter major delays and was mostly completed without problems. Considering the implementation of additional sub projects which was as planned, it is thought that the project period can be judged as relevant, with the completion's delay of originally planned project scope (as of 112%, completed in December 2010). Therefore, it can be judged that the efficiency in terms of the project period is fair.

#### 3.2.2.3 Results of Calculations of Internal Rates of Return (Reference only)

For this project, the Internal Rates of Return (IRR) was not calculated at the time of the appraisal. In addition, the data necessary for the calculation of benefits and costs could not be obtained and thus, the IRR was not calculated or analyzed.

Although the project cost was mostly as planned, the project period exceeded the plan. Therefore, efficiency of the project is fair.

### **3.3 Effectiveness<sup>12</sup> (Rating: ③)**

#### 3.3.1 Quantitative Effects (Operation and Effect Indicators)

This project constructed and rehabilitated small-scale infrastructures, such as roads, electricity distribution, water supply and irrigation, in the selected priority districts and provinces. These were selected according to the following criteria: the poverty indicator at district and provincial levels, the Human Development Indicator and whether or not the poverty program of the Vietnamese government exists. Table 2 shows the pilot provinces, the districts in

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<sup>12</sup> Sub-rating for Effectiveness is to be put with consideration of Impact.

which sub projects are located and the three areas in which the pilot projects were implemented. Table 3 shows the baselines for the pilot provinces/districts, the pilot project sites and all of the provinces before the project's commencement, as well as the targets set for after the project's completion and the actual at the time of the ex-post evaluation.

Table 2: Pilot Provinces (Three Provinces), Districts Where Sub Projects Are Located (ten Projects in nine Districts), and Three Pilot Project Sites (Three Road Projects and One Water Supply Project) of This Project

Pilot Province	Districts in Which Sub Projects Are Located	Pilot Project Site
Phu Tho Province (Northeast Region)	Thanh Son district (road and water supply), Cam Khe district (irrigation), Yen Lap district (electricity distribution)	Ngo Xa village (road)
Ha Tinh Province (North Central Coast Region)	Huong Son district (road), Huong Khe (irrigation), Thach Ha district (electricity distribution), Ky Anh district (water supply)	Hoa An village (road and water supply)
Phu Yen Province (South Central Coast Region)	Son Hoa district (bridge), Song Hinh district (irrigation)	Trung Luong village (road)

Source: JICA document, answers to the questionnaire.

Table 3: Baselines, Targets and Actuals at the Time of Ex-post Evaluation of the Operation and Effect Indicators of This Project

Indicator	Before Project Commencement		After Project Completion
	Baseline 2004 Appraisal Year	Target 2012 Two Years After Completion	Actual 2013 One Year After Completion
<b>1) Pilot Province/District</b>			
<b>【Road】</b> Travel time saving	It was to be set for each sub project.	It was not set for each sub project.	It was confirmed that the travel time has generally reduced, although detailed data is not available.
<b>【Power Distribution】</b> Connection Rate (%)	83* 576,000	96* 780,000	98.5* N/A
Sales Volume (MWh)	35*	18*	13.11*
Distribution Loss (%)			
<b>【Water Supply】</b> Water Supply <sup>13</sup> (m <sup>3</sup> /day)	5,600	11,000	10,500
	40*	90*	82*

<sup>13</sup> This indicates the daily average water quantity supplied.

Rate of Facility Utilization (%) House Connection Rate (%)	12.5*			95*			N/A		
【Irrigation】 Cultivated Area by Crop (ha)		Rice	Other than rice		Rice	Other than rice		Rice	Other than rice
	Spring	1,121	2,683	Spring	1,500	3,190	Spring	1,440	2,226
	Summer	7,869	308	Summer	8,369	400	Summer	8,900	323
	Winter	4,430	308	Winter	5,171	400	Winter	3,774	471
Irrigation Fee Collection Rate (%)	53*			82*			N/A		
<b>2) Pilot Project Sites</b>									
• Rural Industrial Production (million VND/year)	23,536			33,582			103,700		
• Transportation Cost (VND/ton)	N/A			39% reduction**			No change or slightly increased from the appraisal time.		
<b>3) All Provinces</b>									
【Road】 Annual Average of Daily Traffic Volume (Vehicle/Day) <sup>14</sup>	183*			574*			769*		
【Power Distribution】 System Average Interruption Duration Index (Minutes/ Year /Household )	1,092*			272*			206*		
【Water Supply】 Service Population (People)	17,281***			255,384***			363,495***		
【Irrigation】 Benefited Area (ha)	15,427***			56,914***			57,228***		
<b>4) Others</b>									
• No. of Established DDB That Are	6			22			9		

<sup>14</sup> According to JICA's appraisal document, the target was set as "7.7% increase after completion". However, taking a deeper look at the document, the actual expected target was for the figure to "increase to 334% on average after completion". It seems that there was a miscalculation in the indicator setting at the stage of the project design. On the other hand, 183 vehicles/day, 574 vehicles/day and 769 vehicles/day, shown in Table 2, were taken from the questionnaires that were answered by the targeted provinces and districts for this ex-post evaluation. In other words, the shown figures represent the data provided by the respondents at the time of the ex-post evaluation.

Effectively Functioning			
• Access to Public Facilities	N/A	Improved	Improved
• Diarrhea and Skin Disease Occurrence	N/A	Improved	Improved

Source: JICA document (baselines and targets) and answers to the questionnaire and interview results (actuals).

Note: \*Average of all of the sub projects, \*\*Average rate of increase of all of the sub projects and \*\*\*Total of all of the sub projects.

#### 1) Pilot Provinces/Districts

With regard to roads, the targets for travel time saving were not set and the actual time saving was also not measured. According to the interviewed staff members, who operate and maintain each of the road projects, “The travel time has reduced as a result of the road pavement. Vehicles used to face obstacles in passing unpaved roads. Today, however, accessibility to nearby areas has greatly improved.” Therefore, it is thought that travel time has mostly reduced, thanks to the road development.

With regard to electricity distribution, data on sales volume could not be obtained. However, it was confirmed that the connection rate and the distribution loss both outperformed the targets. Thus, it can be judged that the situation surrounding power supply has improved.

With respect to water supply, data on house connection rate could not be obtained. However, as shown in Table 3, the daily average water supply and the rate of facility utilization generally achieved the targets<sup>15</sup>. Thus, it can be judged that this project, through the development of water supply facilities, has contributed to stable water supply.

Regarding the cultivated area by crops, there are gaps between the targets and the actual total, depending on the season and crop. However, looking at the total cropped area of the year, the targets have generally been achieved (the target total was 19,030ha compared to the actual total of 17,134ha, which means approximately 90% was achieved). Concerning the irrigation fee collection rate, the central government abolished the irrigation fee collection system by declaring Decree 115 in 2008, with the aim of further promoting agriculture. As a result, the facilities that are targeted by this project (pump stations, main canals, drainage canals, etc.) are being maintained using the funds allocated by the central government at the time of the ex-post evaluation. In other words, although, at the time of appraisal (2006), the fee collection rate was

<sup>15</sup> The target for the daily average water quantity supplied was 11,000 m<sup>3</sup>/day, whereas the actual water supplied was 10,500 m<sup>3</sup>/day (approximately 95% achieved). As for the facility utilization rate, the target was 90%, whereas the actual rate was 82% (91% achieved).

expected to improve as a result of the implementation of this project, no fees have been collected since 2008<sup>16</sup>.

## 2) Pilot Project Sites

In this project, targets were set for changes in the rural industrial production and the transportation cost in the pilot project sites (hereafter referred to as “project sites”). Regarding the rural industrial production, the target was greatly outperformed. This can be attributed to the road development. According to people residing in the project sites, who were interviewed during the field survey, “Before, we faced difficulties in marketing and transporting our products because the roads were in bad conditions and we could not access the markets so easily. Now that the roads are developed, the markets have become more accessible, enabling us to sell our products more easily. In some cases, buyers even come to our doors or workshops and we can efficiently gain profits.” Based on such a comment, it can be presumed that this project contributes to the vitalization of local economies through the development of roads. On the other hand, accurate figures concerning actual transportation costs could not be obtained. However, residents of the project sites responded by stating either that “No change from the appraisal time” or “Slightly improved”. This is because the costs of fuel, labor and construction materials greatly increased during the project implementation, in accordance with the economic growth. While the road development and improvement in traffic networks that connect neighboring areas facilitate smooth traffic flow, inflation, which is associated with economic growth, affects the increase in fuel cost and others. It is presumed that the transportation cost has not reduced due to these external factors.

## 3) All Provinces

The indicators that apply to all of the provinces are analyzed based on the data of the sub projects provided in the answers to the questionnaires<sup>17</sup>. In all of the sectors, at the time of the ex-post evaluation, the actuals exceed the targets. It can be judged that the absorption of traffic demand, stable power supply, increase in water supply and expansion of the benefitted area have been realized.

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<sup>16</sup> Farmers are supposed to continue paying irrigation fees for secondary or smaller canals (not targeted by this project) and collected fees are used for maintenance. Farmers either pay to their commune or agricultural cooperatives that are under communes.

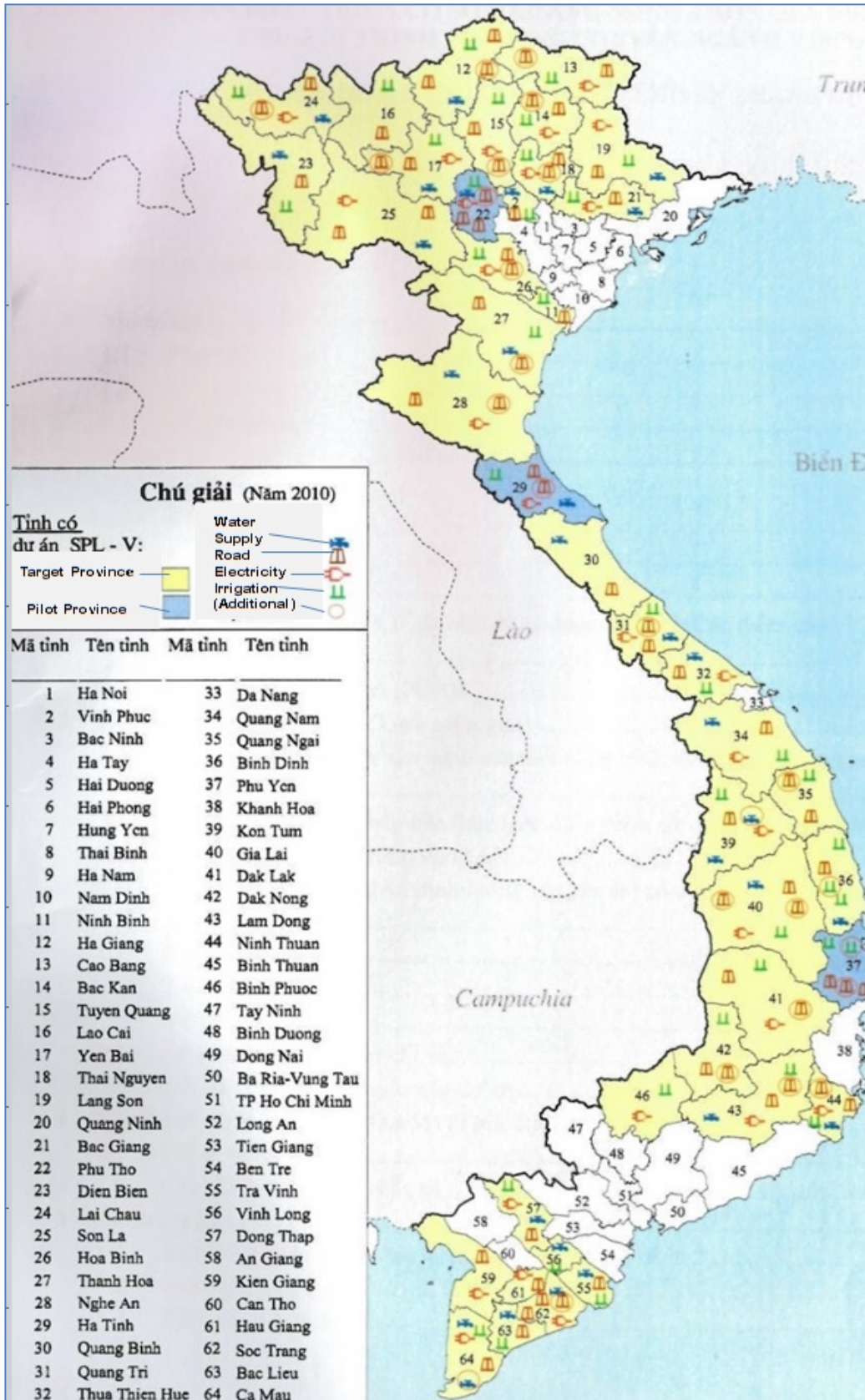
<sup>17</sup> The response rate concerning the questionnaires was 88% for roads, 76% for electricity distribution, 59% for water supply and 84% for irrigation.

#### 4) Others

Regarding the “number of established DDB”, the plan was 22 districts in five provinces. However it was reduced to nine districts in three provinces. According to MPI, this was mainly because the budget and staffing at the province level had some constrains in monitoring the progress of the targeted sub projects. It was confirmed that there were many responses that indicated that “access to public facilities” has improved. In particular, through the implementation of road projects, intra-regional networks have been developed, which have extended and improved access to commercial facilities, hospitals and schools<sup>18</sup>. Concerning “diarrhea and skin disease occurrence”, according to interviews with the residents near the sub project site in Thanh Son district of the Phu Tho province, visited during the field survey of this evaluation study, “We see less cases of diarrhea, skin disease and eye troubles.” This is probably because, before the project’s commencement, people used to take water from wells, rivers and lakes. However, today, they rely on water supply facilities and their access to safe water has improved. Considering such a comment, it is thought that the water supply facilities of this project are making certain contributions to the improvement in residents’ health.

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<sup>18</sup> It is worth noting that the beneficiary survey, which will be discussed under the Impact section (Figure 7), also points out the improvement in traffic access.



Source: Document provided by MPI

Figure 1: Locations of the Project Sites





Photo 3: Installed Electricity Distribution Facility (Yen Lap District in the Phu Tho Province)



Photo 4: Pilot Project Site in the Ha Tinh Province (Sales of Agricultural Equipment Grew Due to the Improvement in Road Networks with Neighboring Areas)

### 3.3.2 Qualitative Effects (Other effects)

#### 1) Improvement in the Living Conditions through the Development/Rehabilitation of the Irrigation, Road, Water Supply and Electricity Distribution Facilities

In interviews concerning the irrigation projects, farmers and residents in the provinces that were visited during the field survey commented, “Before the project’s commencement, our incomes were not stable because crops were affected by the flood before the harvest, which reduced the yields. Now, we are less worried. After the development of drainage facilities by this project, water can be discharged appropriately and we can expect a more stable income than before from rice and corn.” With regard to the road projects, they commented, “The wood processing industry has developed around the project site. After the completion of the project, buyers began to come for purchasing. Before the project’s commencement, we had to carry wood products to nearby towns, which was heavy physical labor. Now, we can sell our products easier than before and we can make profits in a short period of time.” Concerning the water supply projects, they said, “We think that the occurrence of skin diseases and eye troubles is decreasing thanks to the expansion of the service population. The water supply is also increasing in terms of both volume and hours supplied.” Regarding electricity distribution projects, they commented, “Before the project’s commencement, electricity supply was not sufficient and we only used to use electricity for lighting purposes. Now, we can purchase electronic goods and our life has changed dramatically.” Based on such comments, it can be presumed that this project contributes to the poverty alleviation by improving the living conditions of farmers and residents in the target areas.

## 2) Activities of the DDB

As discussed above, this project was also significant in that the DDB carried out activities along with the implementation of the sub projects in nine districts in three provinces. For example, farmers, women's groups and the People's Committee at the commune level<sup>19</sup> collaborated with district level Project Management Unit (hereafter referred to as "PMU") in the project formulation and design, as well as in the supervision and monitoring of construction during the implementation<sup>20</sup> in the Phu Tho province, which was visited during the field survey. This project was a pioneer in introducing such activities of the DDB. It can be said that the project was significant in that it promoted resident participation, from project formulation/design to progress monitoring, using a participatory method, thereby facilitating the sharing of responsibilities for the project management. The activities of the DDB had already ended following the completion of this project. However, these organizations continue to monitor the maintenance of the sub projects, as needed<sup>21</sup>.

### 3.4 Impacts

#### 3.4.1 Intended Impacts

##### 3.4.1.1 Contribution to Poverty Reduction

As part of this evaluation study, a questionnaire-based beneficiary survey was conducted, which targeted the farmers and residents of Phu Tho, one of the pilot provinces. The sample size was 50 for the irrigation project, 58 for the road project, 50 for the water supply project and 65 for the electricity project (223 samples in total), which were selected using the random sampling method. The respondents were residents who had either farmed or lived in the same area for more than 10 years, starting from the project's commencement to the time of ex-post evaluation<sup>22</sup>. The beneficiary survey results are shown in Figures 2-11 below:

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<sup>19</sup> The local administrative boundaries are provinces, districts and communes in Vietnam.

<sup>20</sup> Five to seven people from PMU, five to seven people from farmers/women/commune-level People's Committee, a total of 10 to 14 people, participated in the regular meetings. At the meetings, they discussed from the selection of the sub projects to the construction supervision and monitoring during the implementation, while checking the progress. Various stakeholders communicated among each other through such discussions.

<sup>21</sup> For example, if a maintenance related problem occurs (e.g., damage to road surface), they report it to PMU and request for action.

<sup>22</sup> This was intended to measure effectiveness and impact as accurately as possible.

## 1) Irrigation Project

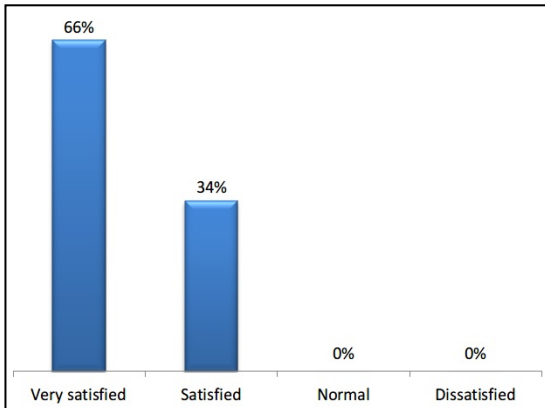


Figure 2: Are you satisfied with this project?

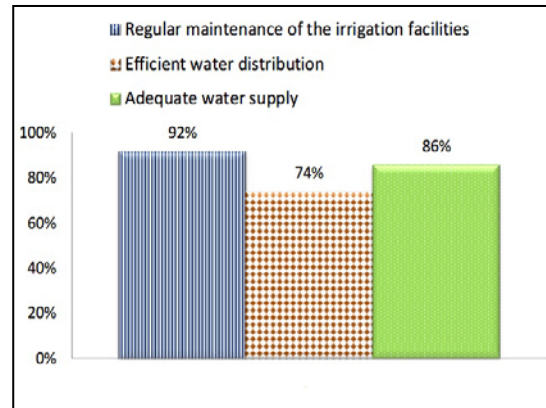


Figure 3: What is the reason (s) for your answer indicated in Figure 2?  
(Multiple answers allowed)

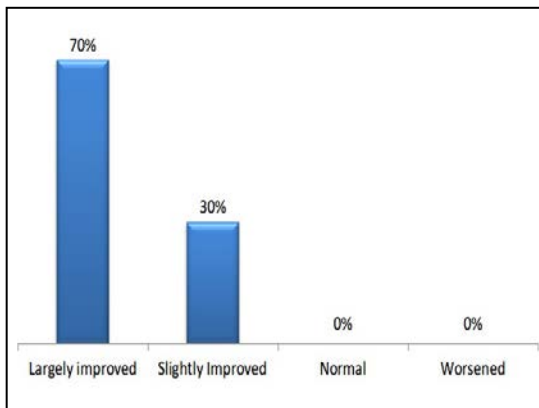


Figure 4: Do you think that the agricultural production has increased through this project?

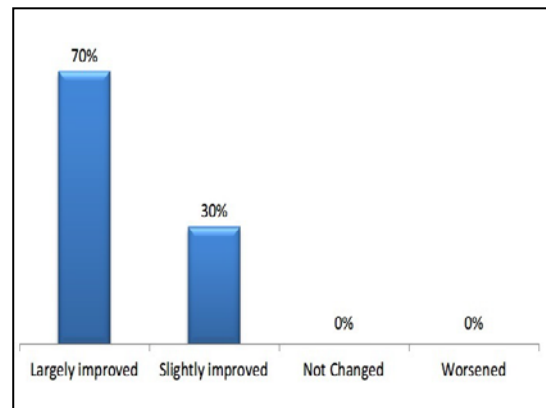


Figure 5: Has the agricultural income increased over the past 10 years?

It can be observed from Figure 2 that the level of satisfaction with the irrigation projects is high. From Figure 3, which indicates why, it can be judged that people are satisfied because of the factors that are directly linked to this project, such as the good maintenance of irrigation (drainage) facilities. As shown in Figures 4 and 5, there were many answers that pointed to the fact that agricultural productivity and incomes are improving. Thus, it is presumed that the living conditions of the target areas are improving.

## 2) Road Project

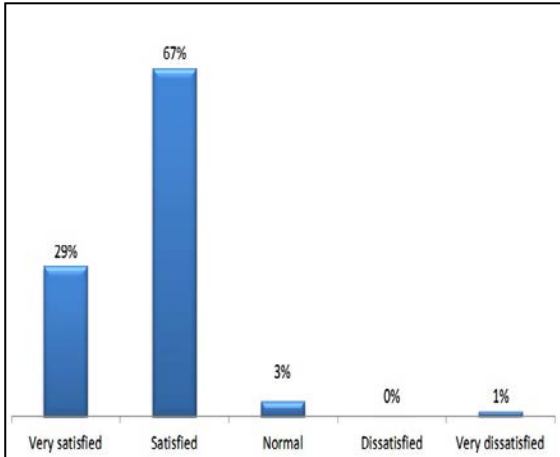


Figure 6: Are you satisfied with this project?

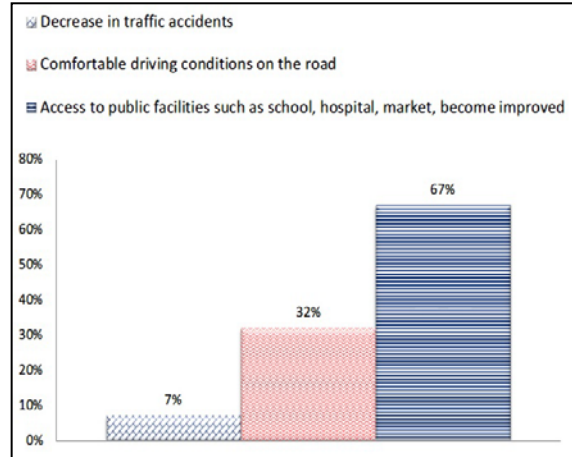


Figure 7: What are the reason(s) of your answer indicated in Figure 6? (Multiple answers allowed)

As shown in Figure 6, the level of satisfaction with the road projects is also high. As shown in Figure 7, which indicates why, many respondents pointed to the fact that driving on the road has become comfortable and that traffic access to public facilities (schools, hospitals, etc.) has improved. It can be presumed that traffic accessibility, through this project in particular, has expanded marketing possibilities for agricultural products for farmers and made visits to nearby towns easy for residents, thereby facilitating the interactions among different localities.

## 3) Water Supply

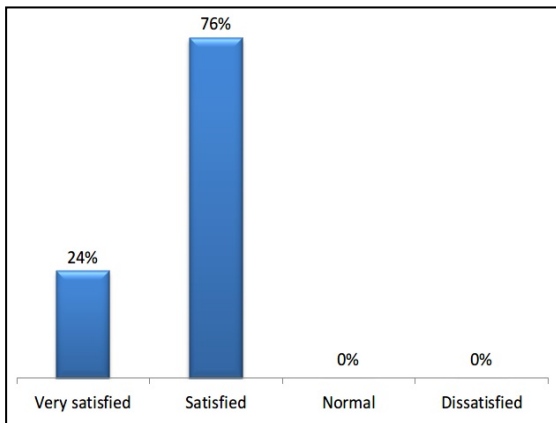


Figure 8: Are you satisfied with this project?

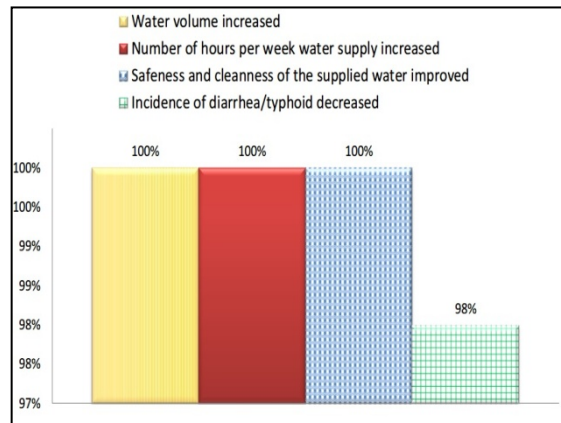


Figure 9: What are the reason(s) of your answer indicated in Figure 8? (Multiple answers allowed)

As shown in Figure 8, the level of satisfaction with water supply projects is also high. In addition to the increase in water supply volume and hours, respondents point to the supply of

safe water and reduction of water-borne diseases as reasons for their satisfaction. Thus, it can be presumed that health and sanitation is improving in the target areas.

#### 4) Electricity Distribution Project

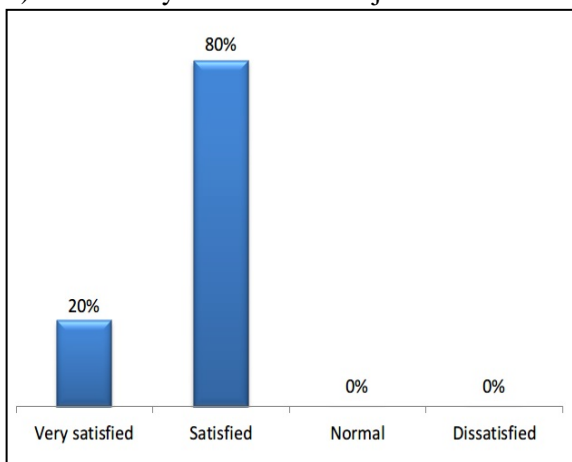


Figure 10: Are you satisfied with this project?

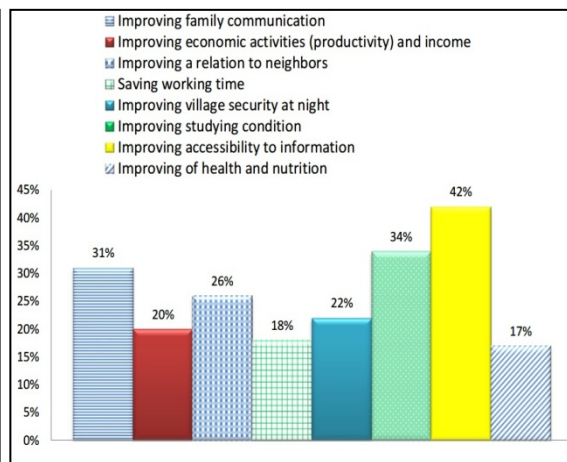


Figure 11: What is the reason(s) for your answer indicated in Figure 10? (Multiple answers allowed)

As shown in Figure 10, the level of satisfaction with the electrification distribution projects is also high. As seen from Figure 11, various reasons were given: communication among family members (conversation) has increased, the environment for studying at home has improved, security during the night time has improved and access to information has also improved. It can be presumed that the quality of life has improved, thanks to the stabilization of power supply in the target areas.

Based on the above beneficiary survey results, it is judged that this project supports the improvement in living conditions of farmers and residents, thereby positively impacting the target areas.

### 3.4.2 Other Impacts

#### 3.4.2.1 Impacts on the Natural Environment

In this project, sub projects were only implemented if each of the provinces conducted an environmental appraisal, studied the environmental impacts on the sites and the surrounding areas and confirmed that there would be no negative impacts. During this evaluation survey, questionnaires that were sent to the pilot provinces/districts have confirmed that the project did not have a negative impact on the natural environment (air pollution, noise/vibration, impact on

the ecosystem, etc.) during the project implementation and after its completion<sup>23</sup>.

#### 3.4.2.2 Land Acquisition and Resettlement

It has been confirmed, through the questionnaires and interviews with MPI, that this project did not involve any large-scale resettlement. Land acquisition was required for some sub projects. However, in any case, the procedures were smooth, followed the land acquisition plans and compensation was paid to land owners without any problems<sup>24</sup>.

#### 3.4.2.3 Other Impacts (Positive and Negative)

##### 1) Improvement in the Development Effects Through Partnership

This project attempted to enhance its development effects by partnering with NGOs, with the aim of alleviating poverty and realizing sustainable development of the local socio-economy in the project targeted areas. More specifically, the NGO Partnership Fund<sup>25</sup> (maximum 10 million yen) was set up using a part of the consulting service budget of this project. Out of the three pilot provinces, one organization from each of the Phu Yen and Ha Tinh provinces (all of which are local NGOs) were selected based on the criteria, such as NGO's operational capacity and experience within the province. They were then given funds for their activities<sup>26</sup>. Descriptions and achievements of these two organizations are shown in the column below:

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<sup>23</sup> No negative impacts were observed, in particular through the site visits and interviews with the residents and maintenance staff during the field survey.

<sup>24</sup> Interviews were conducted during the field survey with some landowners whose lands were subject to the land acquisition and they did not raise any particular complaints or concerns.

<sup>25</sup> It was expected that the activities of this fund would facilitate synergy between the pilot projects, such as road projects implemented in the project target areas, and the economic activities of the local residents.

<sup>26</sup> Regarding the selection process and procedure, the Department of Planning and Investment (DPI) of both of the provinces submitted their request for the NGO Partnership Fund to MPI. Simultaneously, the local NGOs submitted proposals to MPI via DPI, and MPI approved the utilization of the fund.

-Box.1 Enhancing Development Effects Through NGO Partnership: Overview of NGOs’  
Activities and Their Achievements-

(1) The Phu Yen Province (South Central Coast Region)

- Organization Name: Phu Yen Intercooperative
- Project Duration: About 10 months from October 2009
- Total Fund: 332 million VND (a little less than 2 million yen)
- Activities: Forming rice power producers’ association, market research, publicity and conducting training for enhancing production capabilities. These included quality management and sales planning, with the aim of increasing incomes of the poor and supporting their economic activities.

This organization provided assistance to producers of rice-power products (rice paper, spring roll raps, rice cracker, etc.). Four communes were selected from four different districts. Then, 40 households (10 households in each commune) were assisted. According to the interview with this organization during the field survey, they commented, “Through various activities, households increased their sales by 30-40% and their profits by 10-15%. The marketing route was developed as a result of the development of the road by this project and thus, accessibility to the markets was improved. Each family participated in the activities enthusiastically.” Now, at the time of the ex-post evaluation, this organization continues their activities so that families targeted by this fund can share their experience and information about processing rice powder with other families in the neighboring towns.

(2) The Ha Tinh Province (North Central Region)

- Organization Name: Ha Tinh Union of Science and Technique (HUSTA)
- Project Duration: About 13 months from August 2009
- Total Fund: 332 million VND (a little less than 2 million) (+NGO’s self fund: approximately 1 million VND)
- Activities: Steel processing in rural areas, lantern lamps, bamboo crafts, wooden furniture design improvement, support for market planning and new product development, with the aim of increasing incomes of the poor and supporting their economic activities

This organization selected a total of 40 households and assisted them in market expansion and income improvement. Households engaged in woodwork (10 families), steel processing (20 families) and kerosene lamps production (10 families). According to the interview conducted during the field survey, they commented, “Through the project activities, village-to-village interaction and networks have expanded. Before the project, there was not

much interaction between villages and marketing routes were limited. Now, people produce various goods when they are not so busy with agriculture and are able to get stable non-agricultural income. As we see many women with increased cash incomes, we feel that our assistance was clearly effective.” In addition, comments were received about the fact that sales have increased as a result of the road development in the pilot site (Trung Luong village) targeted by this project. Now, after the project has ended, this organization is trying to disseminate the experience and knowledge gained through the project activities to other rural areas.

Based on the above information, it can be judged that the NGO Partnership Fund of this project was utilized effectively for poverty alleviation and economic activity support in rural areas, despite the fact that the activities were not so large-scale. Thus, it can be said that this is one of the cases in which a sub project of this project (road project) supported grassroots activities, thereby contributing to the improved livelihoods in rural villages.



Photo 5: Pilot project site in the Phu Tho province (lantern making by women is popular in this area).



Photo 6: Farmers supported by the NGP Partnership Fund and his rice paper product (in the Phu Yen province).

## 2) Women's Participation in the Project as Part of the DDB's Activities

As discussed above, in the case of the DDB of the Phu Tho province, farmers, women's groups and commune-level People's Committee were engaged in the project's formulation/design and construction supervision/monitoring in collaboration with PMU at the district level. There, it was observed that the women's groups were actively involved in the project. In the Phu Tho province, which is famous for lantern lamps, it is mostly women who produce the products. From the design stage of the sub project, the women's groups emphasized the importance of developing roads and enhancing networks with neighboring areas at DDB



meetings, envisaging the increased sales of and incomes from their products. The DDB then formulated a plan for road development, taking into consideration the opinions of the women's groups. It is presumed that the incomes of the women who produce lantern lamps have also increased, while "rural industrial production" has greatly increased, compared to before the project's commencement, as explained in "3.3.1 Quantitative Effects" under Effectiveness.

This project has largely achieved its objectives. Therefore, the effectiveness and impact of the project is high.

### **3.5 Sustainability (Rating: ②)**

#### **3.5.1 Institutional Aspects of Operation and Maintenance**

During the project implementation, the MPI coordinated the entire project, while the provincial-level DPI, which is under MPI, virtually operated the sub projects. After the project's completion, the operation and maintenance of each of the facilities is mostly managed by the relevant division of the province or contracted out to private companies. However, the extent and scale vary from sector to sector and from province to province. The major operation and maintenance systems of this project are described below:

##### **1) Road Projects**

The operation and maintenance of this project are managed by the Department of Transportation (DOP), the People's Committees of each province/district/commune and private companies, which are commissioned by the People's Committee at the provincial level.

##### **2) Electricity Distribution Projects**

The operation and maintenance of power distribution facilities are managed by the EVN or electricity supply cooperatives at the district level, commissioned by EVN.

##### **3) Water Supply Projects**

The operation and maintenance of water supply facilities are managed by Water Supply Companies (WSC) of each of the provinces and the private companies managed by the People's Committees at the district and town levels.

##### **4) Irrigation Projects**

The operation and maintenance of irrigation facilities are managed by the Department of Agriculture and Rural Development (DARD) of each of the provinces, the People's Committees at a district, town and village level, and the Irrigation Management Company, under the

supervision of each province.

Through the interviews conducted in the provinces that were visited during the field survey and the answers to the questionnaires, no major problems or issues were observed in terms of the systems for operation maintenance, staffing, institutional functions, coordination between the MPI and DPI and the securing and storing of maintenance equipment concerning the sub projects. Therefore, it is thought that there were no major problems in the institutional aspects of this project.

### 3.5.2 Technical Aspects of Operation and Maintenance

It has been confirmed that, in the provinces that were visited during the field survey, the organizations that operate and maintain the sub projects have many staff members who have been working for a long time<sup>27</sup>. Thus, they are sufficiently aware of the importance of operation and maintenance works. It has also been confirmed that the staff have maintenance manuals and carry out their maintenance works based on such manuals, as needed. With regard to training, although there are few, they are conducted as appropriate<sup>28</sup>. Therefore, it is thought that there are no major problems in the technical aspects of the operation and maintenance of this project.

### 3.5.3 Financial Aspects of Operation and Maintenance

In this evaluation study, the information about operation and maintenance budgets of the sub projects was collected by sending questionnaires to the MPI and pilot provinces/districts, as well as non-pilot provinces/districts, and by interviewing the People's Committees who are responsible for the operation and maintenance. As a result, it has been confirmed that the provinces and projects generally tend to have minimum levels of operation and maintenance budgets allocated in recent years. However, quite a few road projects face harsh budget allocation situations<sup>29</sup>.

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<sup>27</sup> For the road projects, the staff know how to repair the road surface; for the electricity distribution projects, they know how to rehabilitate facilities such as transformers; for the water projects, they know how to operate the water purifying pumps and how to test the water quality; and for the irrigation projects, they know how to operate and repair the irrigation pumps. Many of the staff have been working since before the project's commencement.

<sup>28</sup> For example, training includes repairing the road surface for the road projects; maintenance of the transformer facilities for the electricity distribution projects; the operation and cleaning of the filter cisterns and chemical treatment for the water supply projects; and the operation of pumps for the irrigation projects.

<sup>29</sup> This is presumably because it is quite rare to charge fees for using the developed roads, unlike electricity distribution and the water supply projects. The maintenance costs of the irrigation projects are covered by the central government, as described above. It was confirmed through interviews that the provincial and district maintenance budgets for roads were limited; thus, it is presumed that the maintenance works are not sufficient.

Table 4 shows the operation and maintenance costs of the sub projects that were implemented in the Phu Tho province, which was visited during the field survey. The division responsible for the road project in the province commented, “The district’s budgets are limited. In addition, the disbursement of the budgets tends to face delay.<sup>30</sup>” With regard to the electricity distribution project, the EVN operates and maintains it. As shown in Table 4, they did not disclose the operation and maintenance costs. However, it was confirmed that sufficient operation and maintenance budget has been allocated after the project’s completion, according to a focal person in the Yen Lap district. Concerning the water supply project, the operation and maintenance costs of this year are less than that of other years because it was completed in the middle of 2011. On the other hand, sufficient budgets have been allocated since 2012. A focal person in the Thanh Son district commented, “We allocate sufficient operation and maintenance budgets that are needed. It does not affect the maintenance works.” With respect to the irrigation project, “The sufficient amounts that are needed are being allocated. We do not have problems such as lack of maintenance attributed to budget shortage<sup>31</sup>.” Based on the above, it turned out that the sufficient budgets that are needed were generally allocated, except for the road project.

The maintenance division that is responsible for the road project<sup>32</sup> in the Hoa Binh province, which was visited during the field survey, commented, “I think that the budgets for emergency and recovery from disasters are sufficient; however, the amounts that are disbursed on a yearly basis are limited. When we request budgets to the Provincial People’s Committee, only half of what we request has been allocated in recent years.” In addition, through interviews with the DPI of each pilot province, it has been confirmed that other road sub projects more or less face the same situations. Therefore, it is judged that there are some concerns regarding the allocation of operation and maintenance budgets for the road projects.

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<sup>30</sup> Regarding the road project (Van Mieu-Thuong Cuu Road) in the Phu Tho province, there are mines along the roads developed by the project. The mining companies financially contribute to the province for road maintenance, as they use the road with their heavy vehicles. Some of the maintenance budget is also allocated by the Phu Tho district, which is responsible for the operation and maintenance of this project; however, the donation and the district’s budget are not enough. As a result, damages are observed and the condition of the road surface is worsening due to over-loaded heavy vehicles that pass on the road. It has been confirmed that the road is not repaired every year due to the budget shortage and that maintenance is limited. It is thought necessary that the province and the district should make further efforts to maintain the quality of the road surface by charging fees according to the actual damages.

<sup>31</sup> As explained earlier, with regard to secondary or smaller canals (not targeted by this project), farmers pay irrigation fees. It was confirmed that the fees have been collected under the secondary canals and been allocated to repair and cleanings of the canals, in the case of the sub project in the Cam Khe district.

<sup>32</sup> The Road 433 in the Da Bac district (Km55-Km75).

Table 4: Operation and Maintenance Costs of the Sub Projects in the Phu Tho Province (Actual)

(Unit: million VND)

	2011	2012	2013	2014
1) Road Projects <sup>33</sup>	176	600	0	0
2) Electricity Distribution Projects <sup>34</sup>	N/A	N/A	N/A	N/A
3) Water Supply Projects <sup>35</sup>	N/A	180.11	1,023.75	993.18*
4) Irrigation Projects <sup>36</sup>	960-1120	960-1120	960-1120	960-1120

Source: Answers to the questionnaires.

\*Note: Data as of September 2014. According to the Thanh Son Town district, it is expected to be more than the 2013 figure.

### 3.5.4 Current Status of Operation and Maintenance

Interviews confirmed that there are no particular problems concerning the procurement and storage of the spare parts that are necessary for each facility of this project and that a proper procurement system is in place. In addition, it was also confirmed that maintenance and operation manuals are in place at each facility and that staff members refer to the manuals as needed. The status of operation and maintenance that was gathered from the questionnaires is discussed below:

#### 1) Road Projects

According to the questionnaires concerning all of the road projects, it was confirmed that, in general, there are no problems such as damaged road surface. On the other hand, there is a problem with the surface of the Van Mieu–Thuong Cuu Road, as discussed in “3.5.3 Financial Aspects of Operation and Maintenance” (footnote 31), which needs improvement.

#### 2) Electricity Distribution Projects

Through the questionnaires, such as above, it was confirmed that there are no problems with the status of the maintenance carried out by the EVN and the electricity supply cooperatives at the district level commissioned by EVN. In addition, it was confirmed, through the field visits to the sub project sites and interviews with the maintenance staff, that the power distribution facilities (e.g., transformers) are regularly checked.

<sup>33</sup> The Van Mieu–Thuong Cuu Road of the Phu Tho district.

<sup>34</sup> New construction of the electric network for a group of eight communes in the Yen Lap district.

<sup>35</sup> Water supply system for Thanh Son Tow in the Thanh Son district.

<sup>36</sup> The irrigation system of the Doc Gao–Dong Lang Chuong and the Ruot Tien Uy Reservoir of 16 in the Cam Khe district.

### 3) Water Supply Projects

It is thought that there are no particular problems with the maintenance that is carried out by the Water Supply Companies (WSC) within the provinces and the private companies managed by the People's Committee of the districts and towns. It was also confirmed, through the questionnaire answers and interviews with maintenance staff at the project sites visited during the field visits, that there are no major problems. It was also confirmed that the operation and periodic checks of the pump units are conducted appropriately.

### 4) Irrigation Projects

Through the field visits to the sub project facilities, it was confirmed that the drainage canals are managed and that the water gates are cleaned by the People's Committees at the districts, towns and village levels; thus, it was observed that the maintenance status is generally good. The questionnaires also confirmed that there are no major problems.

Some minor problems were observed in the financial aspect of this project and the status of maintenance of the road projects. Therefore, sustainability of the project effects is fair.

## **4. Conclusion, Lessons Learned and Recommendations**

### **4.1 Conclusion**

This project developed small-scale infrastructures in provinces and districts that require poverty reduction, with the aim of improving traffic accessibility, public services and increasing agricultural productivity. Since this project is in line with Vietnam's poverty alleviation policies, such as the "Five-year Socio-Economic Development Plan" and the "Ten-Year Strategy for Socio-Economic Development", as well as the need to develop roads, water supply, irrigation and electricity distribution facilities in rural and mountainous areas and Japan's assistance policy, its relevance is high. The project cost and project period slightly exceeded the plan (while the utilized ODA loan amount was less than the plan) because the number of sub projects was increased when the change in the exchange rates was expected to leave some of the approved ODA loan amount unused. Thus, its efficiency is fair. The initial targets of this project were generally achieved. It was confirmed that through the road project, smooth traffic was realized; through the electricity distribution project, the power supply was stabilized and the hours of power cuts were reduced; through the water supply project, the water supply and service population increased and through the irrigation project, agricultural production increased. Additionally, results from the beneficiary survey indicate that the level of satisfaction among

residents and living conditions has improved; thus, the project's effectiveness and impact is high. On the other hand, with regard to the operation and maintenance of this project, the allocated maintenance budget for the road project is not necessarily sufficient and thus, its sustainability is fair.

In light of the above, this project is evaluated satisfactory.

## **4.2 Recommendations**

### **4.2.1 Recommendations to the Executing Agency**

- Through interviews with the pilot provinces and maintenance staff and from questionnaire answers, it was confirmed that the road maintenance budgets of this project are not sufficient, compared to that of the electricity distribution/water supply/irrigation projects. It is thought necessary that each of the provinces and districts swiftly build a consensus so that the road maintenance budgets are secured and that they develop a system that ensures sufficient budget allocations.

### **4.2.2 Recommendations to JICA**

- None.

## **4.3 Lessons Learned**

(The necessity of establishing a system for the allocation of road maintenance budgets)

- As discussed in the "Quantitative Effects" section under Effectiveness and the beneficiary survey results, while the road projects are expected to generate significant project effects and impacts, appropriate maintenance works need to be conducted in order to sustain such effects. Interviews with the MPI, provinces and districts confirmed that sufficient maintenance budgets are not allocated, especially for the road projects in many of the provinces and districts. Before the project commenced, it would have been possible to build a consensus between the provinces/ districts regarding the maintenance budget allocations for after the project's completion. It would also have been preferable that a system was established from the very beginning in order to ensure that the needed budgets are duly allocated.

(Promoting the achievement of objectives of sub projects with participatory approach)

- With regard to the activities of the DDB in the Phu Tho province that was visited during the field visit, farmers, women's groups and the People's Committees at the commune level were

involved in the project formulation/design and construction supervision/monitoring during the project implementation, in collaboration with the PMU at the district level. Through such initiatives, the DDB's activities reflected the opinions and requests of the resident groups, who supervised the construction works of the contractors by their own interests. It is thought that, to some extent, this contributed to the quality maintenance, such as the road surfaces, because the resident groups had strong expectations of the sub project implementation. If a similar project that involves a resident group's participation is implemented in the future, it is worth assessing the capability of the resident group and understanding their expectations for the project before its formulation and design. This is also considered beneficial to the future of the local society.

Comparison of the Original and Actual Scope of the Project

Item	Plan	Actual
1. Project Outputs	<p>1) Forty road projects (concrete pavement, bridge construction, etc.)</p> <p>2) Twenty-nine electricity distribution projects (installation/extension/repair of medium and low voltage transmission lines, installation of transformers, etc.)</p> <p>3) Twenty-eight water supply projects (construction of water intake facilities, pump facilities, treatment and filtration facilities and water distribution networks.)</p> <p>4) Thirty-seven irrigation projects (reinforcement of irrigation canals, protection works for reservoirs, etc.)</p> <p>5) Consulting Services (Assistance in the detailed design and bid tendering/contracting; construction supervision (including environmental monitoring) and evaluations; institutional enforcement for project's implementation; institutional enforcement for maintenance; and operation and management of the NGO component (NGO partnership fund): planned M/M is 262.5M/M (out of which 125M/M were international and 137.5M/M were local)</p>	<p>1) Seventy road projects (concrete pavement, bridge construction, etc.)</p> <p>2) Twenty-nine electricity distribution projects (installation/extension/repair of medium and low voltage transmission lines, installation of transformers, etc.)</p> <p>3) Thirty-one water supply projects (construction of water intake facilities, pump facilities, treatment and filtration facilities, and water distribution networks.)</p> <p>4) Thirty-eight irrigation projects (reinforcement of irrigation canals, protection works for reservoirs, etc.)</p> <p>5) Consulting Services Mostly as planned: Actual M/M was 267.5MM (out of which 145M/M were international and 122.5M/M were local)</p>
2. Project Period	March 2006 – May 2010 (51 months)	March 2006 – August 2012 (78 months)
<p>3. Project Cost</p> <p>Amount Paid in Foreign Currency</p> <p>Amount Paid in Local Currency</p> <p>Total</p> <p>Japanese ODA loan portion</p> <p>Exchange rate</p>	<p>15,164 million yen</p> <p>2,234 million yen</p> <p>17,398 million yen</p> <p>14,788 million yen</p> <p>1 VND=0.00703 yen (As of October 2005)</p>	<p>1,185 million yen</p> <p>21,282 million yen</p> <p>22,467 million yen</p> <p>13,668 million yen</p> <p>1 VND=0.00526 yen (Average during the project period: The rate's source is from International Financial Statistics (IFS)'s data of International Monetary Fund (IMF))</p>