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**PROJECT PERFORMANCE ASSESSMENT REPORT**

**VIETNAM**

**HIGHWAY REHABILITATION PROJECT 1 (CREDIT 2549-VN)**

**RURAL TRANSPORT PROJECT 1 (CREDIT 2929-VN)**

**March 9, 2004**

*Sector and Thematic Evaluation Group  
Operations Evaluation Department*

## Currency Equivalents (annual averages)

Currency Unit = Vietnamese Dong (VND)

1993	US\$1.00	VND10,700	1994	US\$1.00	VND10,858
1995	US\$1.00	VND11,015	1996	US\$1.00	VND11,149
1997	US\$1.00	VND12,292	1998	US\$1.00	VND12,950
1999	US\$1.00	VND13,800	2000	US\$1.00	VND14,019
2001	US\$1.00	VND15,029	2002	US\$1.00	VND15,250
2003	US\$1.00	VND15,499			

## Abbreviations and Acronyms

DANIDA	Danish International Development Agency
DFID	Department for International Development (U.K.)
GOV	Government of Vietnam
HSDC	Hanoi South Development Corridor
HRP 1	Highway Rehabilitation Project 1
HRP 2	Highway Rehabilitation Project 2
ICR	Implementation Completion Report
IDA	International Development Association
JBIC	Japan Bank for International Cooperation
MOT	Ministry of Transport
OED	Operations Evaluation Department
OP 4.30	Operational Policy (on Involuntary Resettlement)
PAP	Project Affected Person
PDOT	Provincial Department of Transport
PMU 1	Project Management Unit 1
PMU 18	Project Management Unit 18
PPAR	Project Performance Assessment Report
PPC	Provincial Peoples' Committee
PPMU	Provincial Project Management Unit
QAG	Quality Assurance Group
QEA	Quality at Entry Assessment
RRAP	Resettlement and Rehabilitation Action Plan
RTP 1	Rural Transport I Project
RTP 2	Rural Transport II Project
RTSS	Rural Transport Strategy Study
SDR	Special Drawing Rights
SOE	State-Owned Enterprise
UNDP	United Nations Development Program
VND	Vietnamese Dong
VRA	Vietnam Road Authority
VLSS	Vietnam Living Standards Survey

## Fiscal Year

Government: January 1 — December 31

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The Operations Evaluation Department assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, OED annually assesses about 25 percent of the Bank's lending operations. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons. The projects, topics, and analytical approaches selected for assessment support larger evaluation studies.

A Project Performance Assessment Report (PPAR) is based on a review of the Implementation Completion Report (a self-evaluation by the responsible Bank department) and fieldwork conducted by OED. To prepare PPARs, OED staff examine project files and other documents, interview operational staff, and in most cases visit the borrowing country for onsite discussions with project staff and beneficiaries. The PPAR thereby seeks to validate and augment the information provided in the ICR, as well as examine issues of special interest to broader OED studies.

Each PPAR is subject to a peer review process and OED management approval. Once cleared internally, the PPAR is reviewed by the responsible Bank department and amended as necessary. The completed PPAR is then sent to the borrower for review; the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

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**Efficiency:** The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. *Possible ratings:* High, Substantial, Modest, Negligible. This rating is not generally applied to adjustment operations.

**Sustainability:** The resilience to risk of net benefits flows over time. *Possible ratings:* Highly Likely, Likely, Unlikely, Highly Unlikely, Not Evaluable.

**Institutional Development Impact:** The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial, and natural resources through: (a) better definition, stability, transparency, enforceability, and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Institutional Development Impact includes both intended and unintended effects of a project. *Possible ratings:* High, Substantial, Modest, Negligible.

**Outcome:** The extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently. *Possible ratings:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

**Bank Performance:** The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project). *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

**Borrower Performance:** The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development objectives and sustainability. *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.



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This report was prepared by Peter Freeman, Task Manager, who assessed the project in October 2003. The report was edited by William Hurlbut, and Romyne Pereira provided administrative support.



## Principal Ratings

### *Highway Rehabilitation Project 1 (Credit 2549-VN)*

	<b>ICR Review</b>	<b>PPAR</b>
Outcome	Satisfactory	Satisfactory
Sustainability	Likely	Likely
Institutional Development Impact	Modest	Modest
Bank Performance	Satisfactory	Satisfactory
Borrower Performance	Unsatisfactory	Satisfactory

### *Rural Transport Project 1 (Credit 2929-VN)*

	<b>ICR Review</b>	<b>PPAR</b>
Outcome	Satisfactory	Moderately Satisfactory
Sustainability	Unlikely	Likely
Institutional Development Impact	Modest	Modest
Bank Performance	Satisfactory	Satisfactory
Borrower Performance	Satisfactory	Satisfactory

\*The Implementation Completion Report (ICR) is a self-evaluation by the responsible operational division of the Bank. The ICR Review is an intermediate Operations Evaluation Department (OED) product that seeks to independently verify the findings of the ICR.

## Key Staff Responsible

### *Highway Rehabilitation Project 1 (Credit 2549-VN)*

<b>Project</b>	<b>Task Manager/Leader</b>	<b>Division Chief/ Sector Director</b>	<b>Country Director</b>
Appraisal	Gerhard Menckhoff	Jeffrey Gutman	Callisto Madavo
Re-Appraisal	Sigfus Sigfusson	Jeffrey Gutman	Callisto Madavo
Completion	Alain Labeau	Jitendra Bajpai	Andrew Steer

### *Rural Transport Project 1 (Credit 2929-VN)*

<b>Project</b>	<b>Task Manager/Leader</b>	<b>Division Chief/ Sector Director</b>	<b>Country Director</b>
Appraisal	Supee Teravaninthorn	Jeffrey Gutman	Javed Khaliigadah-Shirazi
Completion	Sally Burningham	Jitendra Bajpai	Andrew Steer



## Preface

This Project Performance Assessment Report (PPAR), prepared by the Operations Evaluation Department (OED), covers two recently completed transport sector projects in the Socialist Republic of Vietnam. The first, Highway Rehabilitation Project 1 (Credit 2549-VN), involved the rehabilitation of two sections of Vietnam's main highway, while the second, Rural Transport 1 (Credit 2929-VN), was for the rehabilitation of rural access roads in 18 provinces.

An International Development Association (IDA) credit of Special Drawing Rights (SDR) 112.2 million (US\$158.8 equivalent) for Highway Rehabilitation 1 was approved on October 26, 1993. The final project cost was US\$186.7 million of which IDA's contribution was US\$145.3 million. During early implementation the Danish International Development Agency (DANIDA) agreed to finance the upgrading of the ferry services and increased the amount available for this part of the project to US\$14.9 million. All other components as originally defined were completed in December 1999, just three months later than the target set at appraisal. Some savings in the IDA credit were reallocated to finance part of the Hanoi South Development Corridor (HSDC) bypass and the project completion date was extended to December 2001 to accommodate this. The loan was closed in October 2003, following the repayment of US\$7.2 million in ineligible expenditures by the Government of Vietnam (GOV).

The credit for Rural Transport 1 of SDR 37.8 million (US\$55.0 equivalent) was approved on December 23, 1996. At completion the final project cost was US\$56.6 million (US\$60.9 million at appraisal) and the IDA component was US\$50.6 million due to exchange rate fluctuations. The project was completed on schedule in December 2001. A Rural Transport Strategy Study (RTSS) that was part of the original project description was funded as a separate project with grant funding from the United Kingdom's Department for International Development (DFID).

OED prepared the report based on an examination of the relevant Staff Appraisal Reports (SAR's), Implementation Completion Reports (ICR's), legal agreements, project files, documents presented to the Board, as well as other reports, memoranda, and working papers. Discussions were also held with a number of Bank staff. An OED mission visited Vietnam in October 2003 and discussed the projects with government officials, provincial and district peoples' committees, contractors, consultants, road maintenance workers, and project-affected persons (PAP's). Their kind assistance is gratefully acknowledged. Following standard procedures, copies of the PPAR was sent to the Government of Vietnam but none were received.

## Summary

In the early 1990s the economy of Vietnam was beginning to expand rapidly but was threatened by constraints in the transportation sector. Two important sections of Vietnam's main national highway were failing badly, maintenance regimes were inadequate, and institutional capacity in the sector was weak. In addition, urban areas were experiencing more rapid economic growth than rural areas and it was increasingly apparent that rural areas would need productive investments to enable them to share more equitably in the country's impressive economic growth.

The Government of Vietnam (GOV) first approached the World Bank for assistance in the transportation sector in 1990, and Highway Rehabilitation Project 1 (HRP 1) was the first transport sector project to be funded under the agreed United Nations Development Program-sponsored National Transport Sector Review. The project was first appraised in 1991, but had to be re-appraised in 1993 following delays in the lifting of the foreign aid embargo on Vietnam. HRP 1 was also the first Vietnamese project which involved significant involuntary resettlement. The project undertook the restoration of the deteriorated national highway, as well as ferry improvements in the Mekong delta, maintenance equipment, institutional strengthening and technology transfer, as well as studies to improve road safety and strategic planning. The Rural Transport Project 1 (RTP 1), the first Bank-funded rural roads project in Vietnam, was aimed at upgrading rural roads in 18 provinces and encouraged the development of local contractors and changes in the approach to maintaining rural roads.

Together, these projects cemented the relationship between the GOV and the Bank through improved understanding of the policies and procedures involved in externally funded projects, including best practice for re-settlement and compensation of affected persons. Both projects also laid the foundation for longer term institutional strengthening and improvements in strategic planning and maintenance capability of the road authorities in Vietnam. Continuity in these endeavors has been pursued in subsequent highway and rural transport projects.

The Highway project had a substantial positive impact on existing road users through improved traffic flow and riding quality of the country's major north-south road, Highway 1A. There was also a noticeable improvement in the level of maintenance support with the provision of new equipment and infusion of technical knowledge. Institutional development impact is rated as modest and the number of people trained under the credit was lower than expected due to the late start of the training program. Nevertheless, there were a number of useful initiatives that put in place essential manuals and guidelines and provided an important platform on which to build future projects. In retrospect, questions may be asked as to the advisability of supporting only rehabilitation and not expansion of future capacity given the strong rate of economic growth experienced by Vietnam, which has been sustained for over a decade. The building of the Hanoi bypass as part of HRP 1 and the subsequent widening of other sections of the road, suggest that the investment originally appraised was not optimal, but this had to be weighed against potential risks at appraisal such as uncertain future rates of economic (and thus traffic) growth and the lack of a track record between the GOV and the Bank.

The design and construct approach used, whereby construction proceeded based on preliminary design, was not consistent with normal Bank practice and resulted in minor additional expenditures. The chosen design method was utilized on a “by exception” basis, because of the urgency of commencing with implementation in the light of the rapid deterioration of the existing facility; this approach has not been repeated in subsequent projects.

Similarly, despite a sound project appraisal, the implementation of the resettlement component was not successful to begin with and only came back on track (thus avoiding a safeguard violation) after senior management intervention. People erroneously evicted without compensation were traced and compensated and system problems leading to late or incorrect payments were resolved. This underscored the need for much better communication at an early stage with all levels of government in involuntary resettlement cases as well as a very careful monitoring program to provide a timely alert when problems occur. The Bank also needs to look closely at arrangements for compensation “in kind” which may have to be designed to take account of local factors and customs in the particular country concerned. Despite these comments, the benefits of the highway project have been immediate and substantial and the outcome in the end was satisfactory.

The outcome of the Rural Transport project was slightly downgraded to moderately satisfactory, taking relevance, efficacy and efficiency performance into account. In several instances the cost of rehabilitation per kilometer was higher than anticipated and provoked a debate about the appropriateness of standards; a few of the roads improved subsequently failed. The institutional development impact was modest, but did establish the basis for further improvements in later projects which have now materialized. The evidence observed by the PPAR team led it to conclude that sustainability could now be rated as “likely” based on positive developments since the ICR as a result of later projects. In RTP 1, much of the discussion centered on how to impact poverty in the most meaningful way and how to increase the involvement of local contractors. The nurturing of emerging small contractors successfully met expectations with an average of 30 percent of all contracts being awarded to these entrepreneurs.

A highly contentious and ongoing discussion between the GOV and the Bank was and still is the standard of the roads and the preservation of the system through appropriate maintenance practice. The GOV generally favors higher standards resulting in greater cost per kilometer. Here, a balance has to be found between international best practice for low volume road design and its applicability in local circumstances. Vietnam has areas that are subject to climatic and geological constraints and where after road improvement a surprisingly large amount of traffic may be generated because of the dense population. Intangible cost impacts caused by dust pollution and safety factors regarding two-wheeled road users need to be factored-in during future appraisals. Each case has to be looked at carefully as theoretical standards will not always work and both parties need to be more flexible to find the best solution.

The rural transport project complemented studies on the effectiveness of infrastructure investments in alleviating poverty and showed that the provision of access

roads in rural areas could be a worthwhile mechanism in helping to raise living standards. At the same time the highway project emphasized the crucial role of infrastructure in supporting economic recovery.

The primary lessons from the experience of these projects are:

- Where significant involuntary resettlement is anticipated a special effort is required at the outset to ensure that careful monitoring and excellent communication concerning Bank policies and safeguards takes place with all parties at all levels at an early stage in the implementation process. This is especially true for a new Borrower likely to be unfamiliar with such details;
- Where economies are in rapid transition or recovering from extreme situations such as, for example, conflict or natural disaster, projects preferably should be designed to accommodate expected future capacity needs and not simply to restore collapsed infrastructure;
- When framing institutional and capacity building objectives, the challenge is to ensure they are achievable, that the Borrower has full ownership of them and they are given sufficient priority early in implementation; and
- Road standards need to be adapted to meet local conditions and a flexible approach used in their adoption to take into account local circumstances, but without compromising the basic principles of best international practice for low volume roads in developing countries.

Gregory K Ingram  
Director-General  
Operations Evaluation

## 1. Background

1.1 Vietnam stretches over 1,600 kilometers from the Chinese border in the north to the Gulf of Thailand in the south. It is a densely populated, mainly agrarian country with 80 percent of the population of 79 million living in rural areas. Gross Domestic Product (GDP) growth has been substantial in the past decade, ranging between 6.6 and 8.5 percent per annum. GDP per capita is US\$1,996. Despite the 1997 Asian financial crisis, Vietnam has made significant progress in reducing its poverty incidence by just over one-third since 1990. This success is at least partly attributable to the implementation of several macroeconomic and structural reforms, including farm de-collectivization, price liberalization, and limited privatization of state-owned enterprises (SOEs). The economy is centrally planned, but has features of a free-market system and has successfully attracted public and private foreign capital. A socio-economic development strategy for the next 10 years is now in preparation.

1.2 In the early 1990s the economy of Vietnam was beginning to expand rapidly, and this surge of development had to be underpinned by appropriate infrastructure investments. Two important sections of Vietnam's main national highway were failing badly, maintenance regimes were inadequate, and institutional capacity in the transportation sector was weak. At the time, urban areas were experiencing more rapid economic growth than rural areas and, given the country's poverty reduction agenda, it was increasingly apparent that rural areas would need productive investments to enable them to share equally in the country's overall economic growth. It was in this context that the GOV approached the World Bank for assistance in the transportation sector.

1.3 HRP 1 was the first transport sector project funded by the World Bank in Vietnam; it was also the first involving significant involuntary resettlement. The project undertook the restoration of the deteriorated national highway, as well as ferry improvements in the Mekong delta, maintenance equipment, institutional strengthening and technology transfer, as well as studies to improve road safety and strategic planning. RTP 1, the first Bank-funded rural roads project in Vietnam, was aimed at upgrading rural roads in 18 provinces and encouraged the development of local contractors and changes in the approach to maintaining rural roads.

1.4 Although the transport sector in Vietnam at the time HRP 1 and RTP 1 were appraised was fairly underdeveloped and for the most part the road network was in poor condition, considerable progress has been made in the past decade. Over 106,000 kilometers of classified roads make up the present network and the proportion of paved roads has now grown from 13,000 to over 20,000 kilometers. These roads are better maintained than in the past, but significant improvements are still needed. Road transport is the dominant mode and the road freight industry has benefited from the relaxation of the previously strictly controlled allocation of freight permits and tariffs. Water transport is also significant because of the extent of navigable waterways (11,000 kilometers) especially in the Mekong and Red River deltas. However, these same rivers pose a challenge to road engineers as they are formidable constraints to the continuity of the road network in certain areas, necessitating costly bridges and ferries.

1.5 The importance of these early projects was also the opportunity presented to the GOV to strengthen its institutional capacity and to the World Bank to improve the effectiveness of its support to Vietnam's infrastructure development needs. In this regard an important focus of discussion has been adequate maintenance. Both projects have since been consolidated by follow-on projects and there has evolved a better understanding of what is necessary to ensure that this sustainability goal is achieved, including appropriate standards, budgets, staff training and road standards.

## 2. Objectives and Project Design

2.1 The objectives and components of the two projects are shown in Box 1.

### Box 1: Project Objectives and Components

#### *Highway Rehabilitation 1*

##### **Objectives**

- To raise overall economic efficiency and support economic recovery by upgrading critical segments of the national highway network
- To transfer modern road technology to relevant agencies through technical assistance and training
- To strengthen highway maintenance capacity by providing technical assistance and equipmentAll the above to lay the groundwork for a longer term collaboration between Vietnam and IDA in the transport sector.

##### **Components**

- Civil works involving the rehabilitation of two sections of Highway1A from Hanoi south to Vinh (279 km) and from Ho Chi Minh City south to Can Tho (151 km). (US\$ 112.4 m of which IDA component US\$ 97.8m; supervision and tech. asst. US\$13.9 m; resettlement US\$ 28.0m; IDA US\$ 17.7m)
- New ferries and rehabilitation of existing ones, as well as improved ferry operations at the two river crossings of My Thuan and Can Tho in the Mekong Delta (US\$ 14.9m funded by DANIDA)
- Maintenance of equipment for the Regional Road Management Unions (RRMUs) and equipment for the design and quality control of road construction and maintenance (US\$ 10.3 m)
- Institutional strengthening/reform and transfer of technology components through technical assistance (US\$ 3.2) and training (US\$ 1.8) for the RRMUs as well as training for highway personnel
- Studies to improve the sector and to select and prepare future road investment programs (US\$ 0.6m)

#### *Rural Transport 1*

##### **Objectives**

- To improve and upgrade access to rural communities and link them to the district and provincial road networks
- To develop local capacity to improve the level of service of low-volume roads and to maintain them on a sustainable basis
- To encourage the development of local contractors.

##### **Components**

- Rural access road rehabilitation and maintenance using spot improvement techniques (US\$ 50.4m)
- Institutional strengthening and training (US\$ 0.2m)
- A study of issues relating to rural transport development (funded separately by DFID).

2.2 During the implementation of HRP 1 DANIDA offered to finance the improvement of ferry services, which freed US\$8.5 million IDA funding for re-allocation. After extensive investigation this amount was used toward financing construction of 17 kilometers of a 35-kilometer section of road bypass along the Hanoi South Development Corridor (HSDC) of Highway 1A and the project closing date was subsequently extended to accommodate the additional works related to this bypass. The ferry services across two major rivers nevertheless remained an integral component of the overall project concept. In the view of the PPAR team these amendments enhanced the overall project.

2.3 Neither HRP 1 nor RTP 1 were subject to review by the World Bank's Quality Assurance Group (QAG) and there was no formal process for reviewing Quality at Entry (QEA). In both cases the ICR's indicated the status at entry was satisfactory. Initially, preparation moved somewhat slowly due to the Borrower's unfamiliarity with the Bank's policies, but "the learning by doing approach" resulted in the GOV steadily improving its knowledge throughout appraisal. HRP 1 was first identified in 1990 and appraised in 1991, but delays in lifting the foreign aid embargo on Vietnam meant that some of this work was premature and the project had to be re-appraised before final approval in 1993. This led to preparation costs for both parties that were higher than normal, but this was unavoidable in the circumstances.

2.4 The only point concerning project design on which the PPAR team takes issue is the approach to future capacity. Senior officials in both the Ministry of Planning and Investment and the Ministry of Transport indicated to the PPAR team that perhaps in hindsight both the World Bank and the GOV had been overly conservative in adopting only a rehabilitation approach in HRP 1. They based this opinion on the continued strong growth in the Vietnamese economy leading to the now already high levels of traffic congestion on certain sections of Highway 1A, and the fact that the country has already had to widen and upgrade some sections using different funding sources. The officials also suggested that more consideration could have been given to the priority of road safety aspects, since the later-constructed crash safety barrier along the center of the Bank-financed road would almost certainly have yielded a very high ERR due to the significant reduction in traffic accidents. This view, of course, disregards the uncertainty and risk associated with the future and concern about the available capacity in the Ministry of Transport at the time of the project appraisal. Nevertheless, the assessment team concludes that a bolder strategy might have been more appropriate.

2.5 A number of Technical Assistance components were incorporated into HRP 1. For example, there was a provision for general training for Ministry of Transport staff related to road network technical and financial management, including maintenance, pavement design, bridge design and traffic safety. This was followed by selection, installation and training in the use of computerized road and bridge management software at the RRMU level. A further separate contract focused on a review of Vietnamese road and bridge standards and the preparation of new ones based on international practice, but adapted to local conditions. There was also a review of the road safety situation and the preparation of traffic safety manuals. Additional technical assistance covered the retraining of Vietnamese transport professionals. This element included customized

training materials to be delivered by trained local experts and was targeted not only at the relevant GOV departments and agencies, but also at the road engineering sector in general.

2.6 A Resettlement and rehabilitation Action Plan (RRAP) was prepared in accordance with Operational Policy (OP) 4.30 on involuntary resettlement. Assurances were obtained from the GOV that the resettlement process would be completed in accordance with the RRAP and in a manner satisfactory to IDA.

2.7 RTP 1 on the other hand had no involuntary resettlement implications. During the period of war and subsequent economic hardship the condition of many existing rural roads had deteriorated significantly. RTP 1 sought to work toward reversing this decline by rehabilitating some of these rural roads. At the time of appraisal many rural roads typically had inadequate drainage, unstable shoulders and missing or unsafe bridges. About 30 percent of district and over half of communal roads became impassable in the rainy season. Rural road maintenance and support for the training of local contractors was seen as an integral part of the project and routine maintenance for one year after completion of the rehabilitation was included in order to facilitate the transition to a better maintenance management regime. A study was also included in the original project description to identify issues and establish guidelines relating to demand and investment in the rural transport sector. This study (the RTSS) was by agreement funded by a grant from DFID and the amount thus freed in the credit was re-allocated to civil works in the rehabilitation component. The World Bank also undertook a related Poverty Assessment Study financed by Canadian trust funds and DFID grants. The study included findings on initial impacts on living standards as affected by RTP1 project roads and was useful to the assessment team in their evaluation. There were no major problems during the preparation phase of RTP 1.

2.8 Both HRP 1 and RTP 1 were prepared and implemented through the GOV Ministry of Transport, which has overall responsibility for national highways, railways, harbors and airports; each mode managed by a separate administration. The projects, like all donor-financed rehabilitation programs, were implemented within the Highway Administration through Project Management Units - PMU 1 for national roads and PMU 18 for rural access roads. Four RRMUs are responsible for maintenance at national level and new construction is undertaken by construction corporations, each comprising a number of small SOEs, which bid for work at all levels of government. Government administration is further organized in descending order by province, district, and commune. Communal roads are maintained by community-organized labor.

### **3. Highway Rehabilitation 1 (Cr. 2549)**

#### **Project Implementation**

3.1 The SAR cost estimates for the civil works were estimated based on preliminary designs. Normally, in accordance with Bank policy, the detailed design would have been completed before construction commenced. However, a combination of factors led to a

decision to implement the project using a “design-and-construct” approach. This meant that the initial contracts were signed on the basis of preliminary engineering with the contractor undertaking detailed design during implementation under the oversight of the supervising engineer. The reasons for adopting this strategy are inadequately documented, but the exception to policy was apparently made to speed up preparation on a project that had already been in abeyance for two years, in which time the old road had deteriorated to such an extent that it was considered critically unsafe. Other factors that had a bearing on this decision were the fact that PMU 1, which would perform the function of “employer” during the contract, was not “up and running” immediately, decision-making was initially very slow, and appropriate road and bridge standards had yet to be prepared. Moreover, the rehabilitation works were somewhat less complicated than new construction would have been.

3.2 The “price” paid for this short-cut was a higher cost component for supervision, especially in the early stages of the project, and fruitless expenditure where redesign work became necessary, for example due to insufficient geo-technical investigations. In mitigation, the project was finished earlier than would otherwise have been the case and local staff gained valuable experience from their involvement in the “design-and-construct” approach. Nevertheless, this practice has not been repeated in any subsequent highway project in Vietnam and even in the additional contract for the HSDC bypass detailed design was completed prior to construction commencement.

3.3 Further problems arose on the issue of resettlement. A socio-economic survey of the rights-of-way affected by realignment and road widening to a standard 12 meters, revealed that 10,722 households would be affected by the project, many just losing a narrow strip in front of their property, but others having to be fully relocated. The affected people were entitled to compensation and/or relocation assistance, depending on the severity of impact in each case. Families that needed to relocate were given the option of self-relocation or resettlement through the project. Provincial Peoples’ Committees (PPCs) in the 10 affected provinces were responsible for implementing the Resettlement and Rehabilitation Action Plan. About 11 000 persons had to physically move in accordance with this plan.

3.4 Although the GOV and the Bank had agreed that anyone living in the right-of-way was to be included in the program in terms of OP 4.30, there was a mismatch between existing government laws in Vietnam and compensation principles normally adopted by the Bank. A road safety decree was issued allowing for eviction without compensation of anyone living along the national highways without a permit (deemed to be an “illegal” person). The PPCs, who had no information on what had been agreed in the resettlement plan, started to evict people without compensation. Protracted negotiations were necessary before the situation could be rectified. It then became necessary to trace the people who had been evicted so that they could be assisted in accordance with the plan.

3.5 In the mid-term review (November 1997) many affected persons expressed dissatisfaction with the level of compensation received and inconsistencies in procedures for determining entitlements and making assessments. Data management was not computerized and the interface between compensation data and accounting entries was

unreliable. The review concluded, “the inadequate targeting of economic recovery measures, combined with delays in the provision of water and electricity services to some resettlement sites, was creating hardships for many of the more vulnerable families.” In the ICR it was recorded that some aggrieved persons had even interfered with the contractor’s work, including obstruction and damage to equipment.

3.6 This review stimulated a number of changes and greater urgency leading to accelerated implementation schedules. Better communication and co-ordination also eventuated. Clearly, the original levels of communication and the capacity to co-ordinate were inadequate, but the impact of the mid-term review was sufficient to get the project back on track. It was evident to the PPAR mission, nonetheless from discussions with several government departments, that while at the highest level the principles of OP 4.30 were accepted, many officials were still in disagreement with the involuntary compensation concept for “illegal” households. When the PPAR mission met with randomly selected resettled persons by far the majority indicated that they were better off after the relocation. However, a few individuals still felt aggrieved by the process and believed they were worse off than before.

## RATINGS

### Relevance

3.7 The relevance of the project is rated **substantial** based on its close alignment with the country’s development priorities, especially with achieving rapid sustainable economic development. Highway 1A is Vietnam’s most important transport artery facilitating the movement of goods and people and underpins its economy. HRP 1, through restoring significant sections of that highway, was highly relevant to the country’s economic priorities.

3.8 The project also represented an opportunity to lay the groundwork for longer-term collaboration between Vietnam and IDA in the transport sector. The newness of this relationship presented an element of risk in meeting implementation requirements because of Vietnam’s unfamiliarity and experience in using IDA procedures such as procurement, disbursements, and audits. Nevertheless, IDA had already been involved in the United Nations Development Program (UNDP)-sponsored National Transport Sector Review, completed in 1992, and the Bank-financed project was fully in line with the recommendations made by that review.

3.9 Transport sector strategy at appraisal agreed between GOV and the Bank was to focus assistance on the rehabilitation of existing infrastructure rather than new construction projects. This strategy was justified at the time because it was clear that the economy in the early 1990s was radically changing for the better, but uncertainties about the sustainability of the economic transformation made it difficult to predict future transport demand. Nevertheless, worldwide experience of countries transitioning toward a market economy has shown that one of the first pressure points due to pent-up demand is usually to rapidly expand capacity for road transport through increasing the capacity of under-developed road systems. Therefore it could be argued that the conservative approach adopted in this project

may not have been the most relevant or appropriate investment strategy. In the view of the PPAR team the failure to anticipate the future capacity constraints suggests a “high” rating would be inappropriate and it is on this basis that “substantial” was selected

### **Efficacy**

3.10 The efficacy of the project is also rated **substantial**. The rehabilitated sections of Highway 1A (430 kilometers of roadway) were open to traffic by September 1999. Records examined by the PPAR team (including a “Monitoring and Evaluation Study” undertaken by consultants appointed by the Vietnam Ministry of Transport), show that the project had a highly beneficial effect on reducing transport costs and traffic congestion, and on shortening travel times. Before it was rehabilitated, the road was in an extremely poor condition with uneven and broken pavement, poor geometry, and potholed shoulders that were especially dangerous in wet weather. Unacceptably long journey times were commonplace. Since the rehabilitation, however, some randomly selected users interviewed by the PPAR mission reported that the journey between Hanoi and Vinh, which formerly required an overnight stay, could now be made in one day .

3.11 The decision to re-deploy some funding to finance the construction of part of a new HSDC Bypass was based on the expectation that traffic levels along the nearby rehabilitated section of Highway 1A would soon reach capacity and that further upgrading of this congested section would be extremely costly, given the very high costs of land acquisition and resettlement anticipated. This also suggests, however, that the capacity issue had not been thoroughly considered at appraisal (as noted in para. 3.9).

3.12 The DANIDA-funded ferry component comprised the rehabilitation of 10 existing ferries and the commissioning of two new ones. This work was completed on schedule and the GOV expressed strong satisfaction to the PPAR team with the outcome. This view was similarly noted in the ICR.

3.13 A further small, but in the PPAR team’s view very important, portion of the savings in the credit, US\$2.1 million, was used to improve identified hazardous road accident locations (black-spots) along Highway 1A. This afterthought was certainly a worthwhile investment and the program was extended and continued in the subsequent Highway Rehabilitation 2 (HRP 2) project. The traffic on Highway 1A includes a substantial proportion of motorcycles and bicycles, resulting in traffic weaving behaviors and poor road discipline. However, lack of reliable traffic accident data with which to quantify the effectiveness of road safety measures remains an unresolved problem despite recommendations in the Vietnam Road Safety Study, financed from HRP 1.

3.14 The credit also funded equipment for PMU 1, the Vietnam Road Administration (VRA), and the RRMUs. This ranged from motor vehicles and communication devices to maintenance and road and bridge inspection equipment. At the time of project closure it was recorded that all equipment had been purchased and was in use by the relevant agencies. Spot checks by the assessment team verified that most of this equipment is still in operation and in good condition and in the view of the PPAR mission the investment was an essential project component. In addition, a computerized road and bridge

management system was installed and staff were trained in the operation of the system. Standards and specifications for roads and bridges were prepared reflecting local conditions and road sector professionals received additional training through customized courses. Supporting documentation was translated into Vietnamese. Based on discussions by the PPAR team with various relevant parties this investment was clearly of great value to the Ministry of Transport.

### **Efficiency**

3.15 The efficiency of the project is rated **high**. At appraisal the economic rate of return (ERR) was estimated to be 89 percent, without the bypass component. The ICR re-estimated the ERR at 38 percent, based on higher than expected construction costs, lower than expected traffic growth and higher road roughness (leading to increased vehicle operating costs). Although below appraisal expectations this is still a very good ERR. In the SAR traffic was projected to grow by 15 percent annually, which is unrealistically high — 10 percent would have been more in line with other similar projects. There was also inadequate traffic data on which to base the appraisal estimates. The mix between motorcycles and vehicles with four and more wheels assumed in the analysis was certainly questionable. Better data were available in the follow-up project for HRP 2 and results from more robust surveys on clearly less busy road sections than experienced in HRP 1 suggest that the true return for HRP 1 could well have been higher than 38 percent. Overall, the benefits were clearly substantial, taking into account potential unquantifiable beneficial macro impacts on the Vietnamese economy.

3.16 During an extensive field trip, the PPAR mission observed that at times the road is already operating at close to capacity in several places. However, the only estimated ERR available for the HSDC Bypass (in a consultant's report) is 23 percent. A much higher return on this section would normally have been expected due to the high semi-urban traffic volume, but the ERR is reduced by increases in the construction cost, which for the first 17 kilometers increased by 55 percent. The increased cost was to accommodate additional flyovers, underpasses, and a local access road (funded by GOV since the provision in the IDA credit was fixed). The calculation also included a further section of 18 kilometers financed jointly by the Japan Bank for International Construction (JBIC) and GOV. In the view of the PPAR team, the concept of utilizing HRP 1 to include part of the bypass for capacity reasons made sense, but by the end of the additional contract there were so many additions that a rather different project had emerged from that originally envisaged.

### **Outcome**

3.17 Taking the above assessment into account the outcome of the project is rated **satisfactory**. Both the physical and the immediate institutional development goals as defined in the project objectives were achieved. The rehabilitation works had a substantial positive impact on road use, through improving traffic flow on busy sections of the country's most important national highway. At the same time, the project was a useful mechanism for transferring technological knowledge to the relevant agencies and

the new equipment and training that was provided enabled a noticeable improvement in the level of maintenance support rendered in subsequent years. The project also opened dialogue with regard to the best way to sustain maintenance at a higher level in the future and this longer-term strategy has undoubtedly been vindicated through improved maintenance practice despite continuing financial constraints in available budgets for road maintenance. Technical assistance components have been included in subsequent projects and progress in making the best use of locally available resources has been encouraging. Although not part of the project as defined, future traffic capacity needs were not addressed, except for the inclusion of the HSDC bypass section, which was designed to meet latest traffic growth expectations.

### **Institutional Development Impact**

3.18 The institutional development impact is rated as **modest**. There was, for example, uneven performance of a number of technical assistance components financed by the credit. Appropriate manuals and training materials were successfully developed and are still in use, with the road and bridge standards now being adopted nationwide. The software packages were also utilized successfully. Some local organizations such as the Vietnamese Institute of Transport Science and Technology were strengthened in their ability to deliver courses reflecting international thinking and practice. Moreover, some benefits accrued from hands-on learning opportunities during project implementation; local engineers, jointly with foreign experts, were involved in supervision of civil works and local sub-contractors gained experience from international contractors to varying degrees. Experience with international bidding procedures was also useful. The assessment mission corroborated these benefits through several sources.

3.19 On the downside, however, the number of people trained under the credit was lower than expected due partly to the late start of the program. This was in turn due to protracted discussions on course content to ensure Vietnamese needs were specifically met and due to delays in securing the necessary government clearances. In general the government was understandably reluctant to accept technical assistance without first ensuring that it met local needs and, second, that local people were involved in the training. Several comments were made to the assessment mission to the effect that training by overseas companies tended to be relatively expensive at typical expatriate hourly rates and that, while appreciating the need for capacity building, the government preferred to finance such inputs through separate grant funding rather than through including them in loan credits. A sense of urgency to give the institutional component a higher priority, however, was missing.

3.20 Only 44 percent of the allocation of US\$7.2 million for institutional development and 72 percent of the estimate for the training program were actually expended under the credit, although the training activity did continue as part of the follow up project, HRP 2. One area that deserved greater attention was that of environmental performance in matters such as site safety, traffic management, and disposal of waste materials. The GOV had realized that it needed to introduce environmental legislation to comply with international practice, but procedures for environmental assessment of road investments were only introduced into Vietnamese law during project implementation. There was also

a need for data collection systems, especially in respect of road safety, enforcement of legislation and collection of traffic data, but the resources and experience to mobilize a program encompassing different departments across different tiers of government was still inadequate. Although a dialogue had commenced between the World Bank and the GOV on the need for upgrading Vietnam's institutional capacity, progress under HRP 1 was relatively modest. Awareness of the need to improve institutional capability was stimulated, but internalization of the knowledge on the effective use of data, systems and policy-setting is a gradual process that could not have been achieved in this first highways project. Lastly, while the establishment of PMU 1 was an essential step it had the effect of creating a parallel system in the Ministry of Transport with different pay scales and benefits, which should not continue indefinitely and in the long run will have to be resolved.

### **Sustainability**

3.21 The overall assessment of the sustainability of the project is **likely**. When the assessment team visited the rehabilitated portions in October 2003 they had been fully operational for 38 months and were found to be in good condition. Problems encountered were more to do with encroachment on the road reserve by small businesses engaged in activities such as drying rice or hawking wares. A visual inspection showed little evidence of potholes or cracking despite recent heavy rains. Maintenance teams were observed in action and markers were being re-painted. The high volume of traffic, however, was noted and it seems very likely that the road will have to be upgraded by widening before the road pavement itself becomes unserviceable. This has already happened on the Ho Chi Minh City to Can Tho component of HRP 1 where 40 kilometers of widening to Trung Luong Junction has already taken place using domestic funds.

3.22 The PPAR mission found in all agencies a strong commitment to the effective functioning and maintenance of the project funded infrastructure, especially in view of Highway 1A's strategic importance to the country. Ministry of Transport staff have received some training from international experts and are better equipped to plan and manage the maintenance of the highway. The manuals and guidelines prepared under the technical assistance allocation are being used. Appropriate levels of funding were identified by the PPAR mission to have been allocated to routine maintenance for national highways, but periodic maintenance, while still a few years away, is more of a concern and may to some extent be combined with upgrading (funded by international agencies) if, as expected, traffic volumes continue to increase at the present rate. Nevertheless, the dialogue on necessary support measures to ensure sustainability begun on this project have continued in both the subsequent HRP 2 and Mekong Transport and Flood Protection projects, while the issue of provision for timely periodic maintenance is specifically being addressed as part of the Road Network Improvement Project currently in preparation, which will substantially improve the likelihood of sustainability.

### **Bank Performance**

3.23 On balance, Bank performance is rated **satisfactory**, but there were some shortcomings and in this regard the context of the project is important. This was one of

the first projects financed by IDA in Vietnam and the Borrower was relatively unfamiliar with Bank policies and procedures. For this reason greater efforts should have been made by Bank staff to ensure that in the initial stages there was a thorough understanding of all requirements and safeguards, especially as involuntary settlement was involved. This is an issue of supervision and communication.

3.24 A further issue relates to the manner of payment. Bank policy is that cash compensation of those who are involuntarily resettled is disallowed as part of the credit for reasons of potential abuse. Therefore, it is preferred that affected persons receive assistance in kind, such as land, materials, or vocational training. In this project, the GOV preferred to use cash for compensation in some instances and this matter was still unresolved at project closure, by which time US\$7.2 million had been disbursed for what amounted to ineligible expenditures under the credit. These ineligible funds were finally repaid to the Bank in October 2003 after much discussion, but the PPAR team questions why this matter was not resolved at an earlier stage.

3.25 Could closer supervision by the Bank have avoided some of these misunderstandings? The Bank conducted 21 supervision missions between November 1993 and March 2001, an average of three per year, but closer supervision and oversight during the *early* stages on the delicate issues of resettlement and compensation could have ensured more timely intervention and may have avoided the embarrassment of permitting such a large amount of ineligible expenditure to have been disbursed. The Bank may have relied too heavily on the monitoring reports of a local agency and a resident settlement advisor, both of which reported to the Ministry of Transport.

3.26 The Bank may also need to customize some of its “in kind” compensation arrangements; what works in one country may not work so well in another. A typical example is compensation in the form of bricks. The supply of bricks locally according to several PAP’s rarely met demand, so that “in kind” compensation had to be paid in installments. This created a secondary market for bricks, which were sold for cash at inflated prices. Moreover, in Vietnamese culture, dwellings should if possible be constructed in a “propitious” or “lucky” year and this gave rise to unforeseen problems in respect of storing materials and finding temporary accommodation.

3.27 Certain issues regarding the adequacy of infrastructure design capacity and fruitless expenditure in respect of the “design and construct” approach are also questionable. On the other hand in the end, all the project objectives were accomplished, an additional contract was included after funds were made available by DANIDA, the ineligible expenditure was repaid, the persons who had been evicted were traced and compensated and Bank safeguards, though threatened at one time, were respected after appropriate interventions.

### **Borrower performance**

3.28 Borrower performance is rated **satisfactory**. This represents an upgrade from the rating in the Evaluation Summary. Again, it must be stressed that this was a first project between the Bank and the GOV and that there was a degree of unfamiliarity of the

government with IDA policies and procedures. While there was to some extent poor management of resettlement activities, late hand-over of sites by the employer, and problems with compensation payments these can all be attributed to a lack of knowledge of Bank resettlement policy and a lack of capacity, initially, to organize and communicate effectively.

3.29 Enormous strides were actually made during the project to rectify these problems and in subsequent projects there has been a much better understanding of what is necessary. Although implementation did go awry at times, there was a commitment to rectify problem areas as exemplified by the tracing and compensating of the persons evicted as “illegal”. At all times the borrower’s officials were positive and clearly wanted the project to succeed. The counterpart funding by DANIDA resulted in the provision of an excellent ferry service and freed funds for the partial construction of the Hanoi Bypass. PMU 1, overcame its initial difficulties and demonstrated an ability to master the project scope in both its physical objectives and in creating a sound platform to strengthen its institutional capability. The rating of Borrower performance takes into account all the above, plus the fact that the project outcome was satisfactory, the project objectives were achieved and that the Bank could have been more proactive in assisting with resolving the issues that did arise at an earlier stage.

## **4. Rural Transport 1 (Cr. 2929)**

### **Project Implementation**

4.1 A great deal of thought went into the selection of appropriate criteria to determine which roads should be improved. Currently, the majority of the poor in Vietnam are located in the densest areas of population (mostly urban or semi-urban areas, see Map 1 attached to this report), but with the country’s present economic growth rate these same people will probably escape the poverty trap in a few years. The poverty problem in the remoter areas, where the percentage of people below the poverty line is higher, is more intractable, not only because of physical location, but also because economic resources are fewer in these districts (see Map 2 attached to this report). These maps, which are based on information from the Government of Vietnam “Poverty Mapping Project” using data from the 1998 VLSS and the 1999 census, illustrate this point very effectively. It should be noted that Vietnam is a densely populated country and even in the mountainous areas substantial communities can be located. A simplified and user-friendly engineering design was applied in this project, which created favorable conditions for small scale contractors to participate. Rehabilitation was carried out mainly on existing road alignments with minor widening and improvements to drainage and structures. More attention could have been given, however, to public awareness and communication with persons affected by the project. This item was not included in the project credit and was also not provided for in the budget of the provincial project management units (PPMU’s).

4.2 There was reluctance on the part of some road authorities to adopt the Bank-advocated “spot improvement” technique. Both the rural inhabitants (randomly

interviewed by the PPAR team) and the road authorities supported bitumenizing at an early stage on the assumption that surfaced roads not only guarantee year-round passability, but also are not as easily damaged as earth or gravel roads. There are, furthermore, well-publicized accounts of a World Bank-financed rural access road that failed in Dak Lak Province, where difficult climatic conditions are experienced. Obviously, in this case the investment cost per kilometer was too low, but this is more the exception than the rule. Roads (both district and communal) observed first hand by the PPAR team were mostly in fair to excellent condition. None could be described as poor. However, available information suggests that the standard of maintenance is frequently less satisfactory in the more remote and mountainous areas. Cognizance of the cost involved in trucking in suitable gravel material in areas like the Mekong delta are also part of the equation in finding an appropriate balance.

4.3 The other factor that deserves mentioning in this context is the rapidly increasing traffic volumes on many of the roads upgraded with World Bank support. Although very few traffic counts on such roads are made, some limited data are available. For example, in Bac Kan Province traffic on the Sau Hai to Nong Thuong road increased from 250 to 400 motorcycles a day after upgrading, while on the 15-kilometer Phung Vien to Bang Phuc road there was an increase in trucks from 0 to 23 and from 8 motorcycles to 80. In Tra Vinh Province in the Mekong delta the assessment mission was advised that some 30 percent of the roads upgraded under RTP 1 had now been bituminized and more surfacing was planned for the near future. This further upgrading was mainly due to generated traffic, but also in response to the wishes of the public. A similar pattern was found in Ben Tre Province. This illustrates that the accepted wisdom of what standard is appropriate, and when, is a complex matter. The high volume of motorcycles, bicycles, and pedestrians and the number of dwellings immediately adjacent to the roads in the Mekong delta and other densely settled areas leads the community to place a high value on externality costs such dust nuisance and safety. It is the view of the PPAR mission, after numerous discussions with various parties at all levels, that the Bank's appraisal teams should not neglect such externality costs in their analyses.

## RATINGS

### Relevance

4.4 The relevance of the project is rated **high**, especially as the GOV places rural development - the principal focus of this project- at the forefront of its poverty alleviation initiative. In this context the GOV made the project a priority because rural transport development was identified in the poverty assessment study as a key element to accelerate their poverty alleviation program. Analysis of the VLSS shows that people who live near an all-weather road have higher living standards than those who do not. Research further indicates that rural roads can improve access to better agricultural technology, allow for more efficient marketing of agricultural surplus, and provide greater opportunities in other economic activities. Socio-economic benefits mainly in education and health are also usually evident after rural road investments. The criteria developed in RTP 1 ensured that communities in remote mountainous areas and/or with ethnic minorities also benefited. This was probably more beneficial in terms of poverty

alleviation than would have been the case if the beneficiaries had been chosen on an income basis alone.

4.5 Rural roads rehabilitation and maintenance needs were first identified during the December 1994 programming mission in Hanoi between IDA and the GOV. The Ministry of Transport was assigned as the counterpart agency responsible for project preparation jointly with IDA and the objectives framed were fully in accord with the Bank's Country Assistance Strategy. The provinces selected to benefit from the project were chosen on the basis of poverty criteria jointly developed. In September 1995 a poverty workshop consisting of representatives from the GOV, UNDP and IDA agreed the overall project objectives including the development of local contractors.

### **Efficacy**

4.6 The efficacy of the project as a whole is rated as **modest**. Under the project 4,403 kilometers of road were improved and upgraded against a target of 5,000 kilometers; the extent of upgraded road was lower than planned, mainly because upgrading costs per kilometer were higher than anticipated and partly due to a devaluation affecting the credit amount available. There was often a marked resistance to using the "spot" improvement technique, with local engineers and community representatives pushing for more visible and comprehensive improvements. The rehabilitated roads consisted of 4,061 kilometers of district roads, but only 342 kilometers of communal roads. This district-communal split of 92%-8% was skewed more toward district roads than had been expected during appraisal on the basis of a desk study, when the split was estimated at 70%-30%. The split that was actually used, emanated from an agreed prioritization process that covered 15 provinces - later extended to 18 - (including the 10 with the highest poverty levels). A greater emphasis on district roads was logical as a first step, but the bias toward district roads was also a consequence of criteria that gave strong weighting to provincial equity considerations. The PPAR team's assessment was that the rationale for the split which effectively focused on busier higher order roads was not unreasonable for a first phase, but also recognizes that the prioritization process was improved in RTP 2 to focus more on the poorer communities

4.7 The development of local capacity to improve the level of service of low-volume roads was not achieved. It would be fairer to say that the project began a process of interaction which has been nurtured in subsequent projects and studies and which continues today. There was a disconnection between the objective as phrased and the resources allocated. Only US\$0.24 million was expended on this item, which primarily covered the cost of an advisor to the implementing agency, a monitoring and financial system, and related training. The PPAR mission nevertheless found that many (but certainly not all) of the RTP 1 roads were being maintained in a good condition. This, however, can be attributed mainly to developments subsequent to this project. The strengthening of the capacity of domestic road building contractors to carry out small contract works, on the other hand, definitely met expectations. Some 30 percent of all contracts were won by private contractors, but the percentage varied from province to province. No differences were found between the abilities of the private contractors versus those of SOE's; any difficulties arising from lack of experience were quickly

resolved during implementation. The GOV, which initially was somewhat hesitant about using private contractors, accepted their use when it was clear that there were no major problems.

### **Efficiency**

4.8 The efficiency of the project is rated as **substantial**. In the SAR an ERR of 32.5 percent was estimated using the producer surplus method, assuming that the benefits from improved roads and lower transport costs would contribute to a gradual increase in paddy production of one percent annually. There was also an assumption that losses in the transport of agricultural produce would decrease by two percent per year. This ERR used input figures of cost per kilometer investment of US\$7,200 in comparison with US\$10,789 actual costs as reported in the ICR. Routine maintenance costs at completion were also higher than budgeted and paddy revenues were assumed to be slightly lower than expected. The revised ERR in the ICR based on actual figures, was 12.7 percent.

4.9 Unfortunately, this analysis is not as revealing as was intended as it is difficult to distinguish the real impacts of the roads from the macro impacts affecting agricultural output. A more common alternative nowadays is to use the consumer surplus approach focusing on user benefits, but this was impractical for the project team because traffic count records had not been kept, as is frequently the case for low-volume roads in developing countries.

4.10 Nevertheless, despite the caveats on the methodology, there is no doubt, given the backlog of rural roads that needed to be upgraded and the prioritization method adopted, the return was acceptable. The formal methodology used also did not take into account the substantial social advantages which are an important element of the poverty alleviation strategy. It was noted by the PPAR mission that in RTP 2 a revised approach was followed whereby different economic evaluation methodologies were used. Using cost effectiveness criteria in a community participatory process the lower-order roads were tackled first. This ensured a better focus on reaching the poor than was achieved in RTP 1.

### **Outcome**

4.11 Based on the above assessment and taking certain shortcomings into account, the outcome of the project is rated **moderately satisfactory**. Although this is a slight downgrading in rating it should be seen in context as the first rural transport project in Vietnam and the program which has subsequently developed has obviously improved in an evolutionary way. The value of RTP 1 lies not just in the physical infrastructure rehabilitated, but in the platform it created on which to build a better understanding of the best way to use roads to have an impact on poverty reduction.

### **Institutional Development Impact**

4.12 The institutional development impact is rated as **modest**. It was really a platform for subsequent work in this field. Funds spent on institutional strengthening were a mere 0.4 percent of the project cost covering the cost of an implementation advisor and a financial management system. A small amount was also used to train provincial Department of Transport officials to assist contractors in matters of project management and supervision. This training was undertaken by the Center for Research, Consulting and Experimental Construction at the Hanoi Transport University.

4.13 In practice, however, the best training was the experience of actual “hands-on” participation by those small contractors who secured work. These contractors showed themselves throughout the project to be capable of implementing such works. On average during project implementation 30 percent of contracts were awarded to emerging private contractors as opposed to SOEs, which were often in an advantageous position to tender as they received hidden subsidies. It is interesting to observe that the value of awarded rehabilitation work to private contractors increased to 48 percent in the last year of RTP 1 and further increased to 61 percent in RTP 2. This trend is thought to be due to the enforcement of a procurement rule from 2001 onwards to the effect that SOEs under the Ministry of Transport and the project provincial governments were not eligible to bid for this work.

4.14 In the ICR reference is made in the Borrower’s comments to the need for greater attention to public education and awareness as well as the need to strengthen the capability of PPMU staff to handle issues involving the environment, ethnic minority rights and land acquisition.

### **Sustainability**

4.15 Despite the fact that insufficient maintenance funds and lack of consistent maintenance procedures were identified as potential risks at completion, sustainability is now rated as **likely** by the assessment team. This upgrade is based on actual observations in situ, official records and discussions with various authorities. Despite a small number of failures, most of the RTP 1 roads (some of which are nearly seven years old), appear to be functional. Some have been surfaced and others will soon be upgraded. This suggests that the sustainability of the project is a fact despite some initial doubts.

4.16 Because of the relatively large backlogs in road development at appraisal the GOV was focused more on rehabilitation than maintenance. Nevertheless, during RTP 1 it recognized the need to tackle the maintenance issue and in this regard has not been short of offers of assistance. However, it must be understood that there is a difference between the district and the communal roads in the way that they are funded and managed. Funds currently available for road maintenance at district level are in theory adequate. The problem that arises is that only parts of the district network (including RTP 1 roads) remain in a maintainable state, while the remainder have deteriorated to the level where full rehabilitation has become necessary. Communal or village roads are maintained by the communes themselves, using own contributions and communal labor

days. In some communities this works well, but in others the motivation or leadership is lacking. Under RPT 2, assistance was designed to support the introduction of a strategy to facilitate a change in maintenance culture in order to encourage the more efficient use of local resources. This initiative was intended to work in tandem with the DFID project to develop a Rural Transport Strategy Study to assist the GOV to establish appropriate and consistent standards, strengthen institutional capacity, and encourage international standard road maintenance practice, especially for low volume roads.

4.17 Progress is taking place, but it takes some time to fully disseminate the philosophy and ensure “buy-in” at all government levels. Road standards are a contentious issue in Vietnam. The various road authorities are sometimes reluctant to adopt “spot” improvement techniques preferring, in reaction to public perceptions and perhaps in some cases to a lack of knowledge, to be seen to upgrade whole road sections. This was one of the pressures to increase the cost per kilometer in RTP 1.

4.18 It is expected that the standards debate will be ongoing for some time. The important thing is to note that progress toward a better maintenance system is taking place with strong technical assistance support. There is also a proposal from DFID that there be more co-ordination through the government with the major financiers of roads in Vietnam to ensure a more consistent approach is adopted.

### **Bank Performance**

4.19 World Bank staff performance overall is rated **satisfactory**. The project was declared effective within four months of approval, but was not subject to a QEA review by the Bank’s QAG. Eleven supervision missions were undertaken and there was continuity of staff on the project. The Bank provided considerable advice during both appraisal and implementation. Unlike HRP 1 where resettlement was a major issue, RTP 1 had no instances where people had to be relocated. Compensation was mainly for small portions of land expropriated; the project team took cognizance of the lessons of HRP 1 and no cash compensation was allowed using the IDA credit.

4.20 The objective to develop local capacity to maintain low-volume roads was too ambitious as framed and given the magnitude of the task should have been qualified. However, the project was completed in the originally appraised schedule and performed very well in terms of disbursements. In comparison to refinements made to project prioritization, evaluation and the approach to standards in RPT 2, aimed at benefiting the poor more directly, RTP 1 was less successful, but it laid the groundwork for subsequent phases and created the right environment to make further progress.

### **Borrower Performance**

4.21 Borrower performance is also rated **satisfactory**. The Ministry of Transport through its Provincial Departments managed 809 rehabilitation contracts and 210 maintenance contracts, implemented in 18 provinces and on project schedule. This is a remarkable achievement given that this kind of program had not been implemented before in Vietnam. Misprocurement was declared on two works contracts (violations of

procurement guidelines) in the amount of US\$180,000 and the contracts were declared ineligible for IDA funding. This matter arose from a misunderstanding and was professionally handled. The amount after investigation was not cancelled from the credit, but made available for other contracts.

4.22 PMU 18 responded efficiently on project issues and followed up on all matters raised. The ministry also hosted a stakeholder workshop to discuss the results of the project with the provincial departments and this provided invaluable feedback for RPT 2. Initially payments to the numerous small contractors took an average of 41 days, against a target of 30 days. After special efforts to improve this situation the number of days reduced to 26 by the end of the project.

4.23 Borrower performance at policy level was good and there was an excellent understanding of the links between poverty alleviation and rural transport investments. Weaknesses were found more at the provincial level where the importance of the social issues involving the public and the environment were in many cases not yet fully comprehended. A gradual process over several projects has subsequently begun to strengthen the performance in these areas.

## 5. Conclusions and Lessons

5.1 *Vision and Planning.* Where there is a large backlog in infrastructure the need to move quickly with an investment program is understandable. The challenge is to frame *achievable* institutional and capacity building objectives in each project and ensure there is a phased approach to change. The sections of national highway financed under HRP 1 have experienced enormous traffic growth within a few years of opening and are already at capacity in some sections. More attention could also be paid to issues such as the accommodation of and appropriate design for a high proportion of two-wheeled traffic and to give more prominence to issues such as road safety.

5.2 *Economic Evaluation and Road Standards.* In the absence of reliable input data, projected ERRs may be misleading and their estimation should be treated with caution. Project teams need to be aware of the latest thinking in the evaluation field. In this regard more weight could be given (even if only qualitatively) to including the macro impacts of large-scale infrastructure, where appropriate, and the valuation of externalities and non-monetary benefits, especially in relation to poverty reduction. The use of varying standards according to different circumstances in RTP 1 was commendable, but could have been applied with more flexibility. For example, the threshold of US\$15,000 per kilometer before a cost benefit analysis was necessary led to too many projects just under this threshold. Some of these low-standard roads failed. At the same time, though, the borrower must be prepared to accept much of the accumulated international knowledge that has been compiled on road standards and road maintenance best practice, including preventive maintenance. The answers are never totally clear and have to be customized to the particular circumstances in each country.

5.3 *Technical Assistance.* It is essential for the borrower to identify with and take ownership of the technical assistance components and for the Bank to focus more attention on them. Their importance is often crucial to the long-term success of the projects, but they are sometimes neglected at the beginning of implementation. The borrower may acknowledge their importance or be extremely sensitive to perceived value-for-money, especially when expatriate hourly rates may appear to be very high. A particularly important aspect for the Government of Vietnam was to ensure that course contents were customized to meet Vietnamese requirements. Where technical assistance is grant funded it may have less ownership in the recipient country.

5.4 *Involuntary Resettlement.* The experience in HRP 1 underscores the need for all resettlement agencies to be actively involved in the planning process from the outset and for an excellent communication strategy at all levels. There is also a need for frequent and effective supervision in the early stages of implementation when the ground-rules are clarified. Disbursements for compensation need careful monitoring. Finally, more thought needs to be given to compensation “in kind” to adapt to local circumstances. If this aspect is not thought through and customized, it may have unintended consequences.

5.5 *Design and Construct Approach.* HRP 1 showed that it is not worth while to try and take short cuts by basing construction on preliminary design. This results in fruitless expenditure and additional costs, albeit in this case relatively small.

5.6 The primary lessons learnt from these projects are:

- Where significant involuntary resettlement is anticipated a special effort is required at the outset to ensure that careful monitoring and excellent communication concerning Bank policies and safeguards takes place with all parties at all levels at an early stage in the process. This is especially true for a new Borrower likely to be unfamiliar with such details;
- Where economies are in rapid transition or recovering from extreme situations such as, for example, conflict or natural disaster, projects preferably should be designed to accommodate expected future capacity needs and not simply to restore collapsed infrastructure;
- When framing institutional and capacity building objectives, the challenge is to ensure they are achievable, that the Borrower has full ownership of them and they are given sufficient priority early in implementation; and
- Road standards need to be adapted to meet local conditions and a flexible approach used in their adoption to take into account local circumstances, but without compromising the basic principles of best international practice, especially for low volume roads in developing countries.



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## Annex A. Basic Data Sheets

### HIGHWAY REHABILITATION PROJECT 1 (CR. 2549-VN)

#### Key Project Data (amounts in US\$ million)

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>
Total project costs	176.00	186.67
Loan amount	158.50	145.29
Co-financing	-	14.91
Date physical components completed	12/31/1999	12/31/2001*
Economic rate of return	89%	38% (see para 3.9)

\*Originally defined project completed 09/30/1999, but scope of works extended to include Hanoi South Development Corridor Bypass.

#### Staff Inputs

<i>Stage of project cycle</i>	<i>Actual</i>	
	Weeks	US\$'000
Preparation/Preparation	220.1	605.1
Appraisal/Negotiation	32.8	109.0
Supervision	371.4	1,480.8
ICR	10.1	32.2
<b>Total</b>	<b>634.4</b>	<b>2,227.1</b>

### Mission Data

Stage of project cycle Month/ year	No. of persons	Days in Field	Specialized staff skills* represented a/	Performance Rating** Impl. Progress	Dev. Objectives	Types of Problems* **
Dentification/Preparation Sept.5-26, 1990	7	-	PHE, TE			
Appraisal/Negotiation Aug.31- Sept.25, 1993	4	-	PHE, DC, CSt			
4, 1993						
Supervision 3-20, 1993	1	-	PHE	HS	HS	
8-February 5, 1994	8	-	TM, HE (2), RS(2), TE, DO, UP (c), RS (C)	HS	S	
April 26-May 31	7	-	TM, HE, RS, DC, SC, RS (C), UP	HS	S	
September 2-28, 1994	4	-	TM, HE, RS, UP (C)	HS	S	
June 17, 1995	4	-	TM, RS, SrTE,	S	S	
September 11 — 10, 1995	5	-	SrTE, HE, PFS, RS, UP (c)	S	S	
December 6-18, 1995	5	-	HE, IE, SrTE, RS (c), UP (c)	S	S	
18 — 13, 1996	9	-	HE, PFS, TE, HE, IE, RRA (2), SrTE, UP (c)	S	S	
June 13, 1996	4	-	HE, IE, RRA, SrTE	S	S	
September 18-22 and October 2-11, 1996	8	-	HE, ES (2), RS(2), IE, RR A, SrTE	S	S	
January 28 — February 2, 1997	4	-	SrTE, HE, IE, RRA	S	S	
July 7 — 21, 1997	2	-	SrTE, OO	S	S	
November 17-29, 1997	4	-	SrTE, HE, RS, OO	S	S	
June 25 — July 3, 1998	4	-	SrTE, SrES	S	S	
September 28 — October 9, 1998	7	-	SrTE, SrES, RS, TE(2), RSS, OO	S	S	
February 23 —March 12, 1999	5	-	SrTE, SrES, RS, RS, R S S, OO	S	S	
June 28 — July 3, 1999	4	-	SrTE, SrES, RS, OO	S	S	
November 1 — 5, 1999	4	-	SrTE, PS, RS, OO	S	S	
April 17 — May 3, 2000	5	-	SrTE, SrES, RS, OO (2)	S	S	
October 2-10, 16-21, 2000	5	-	SrTE, RS, OO (3)	S	S	
March 15-24, 2001	6	-	SrTE, RS (2), E, E, FOO	S	S	
ICR November 30 — December 14, 2001	8	-	SrTE, SrTS, RS, SrE S, O O, RO, SDS, FMO	S	S	

PHE=Principal Highway Engineer  
DC=Division Chief  
UP=Urban Planner  
TM=Task Manager  
HE=Highway Engineer  
PF=Public Finance  
PFS=Public Finance Specialist  
RS=Resettlement Specialist (2)  
OO=Operations Officer  
FOO=Financial Operations Officer

TE=Transport Economist  
CS=Consultant Specialist  
RS=Resettlement Specialist  
SC=Senior Counsel  
SrTE=Sr. Transport Engineer  
IE=Infrastructure Engineer  
ES=Environment Specialist (2)  
RSS=Road Safety Specialist  
E=Engineer, E=Economist

**RURAL TRANSPORT PROJECT 1 (CREDIT 2929-VN)****Key Project Data (amounts in US\$ million)**

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>
Total project costs	60.89	55.77
Loan amount	55.00	50.60
Co-financing		
Date physical components completed	12/31/2001	12/31/2001
Economic rate of return	32.5%	12.7%

\*Originally incorporated Rural Transport Infrastructure Investment Study now funded by DFID as a separate project in the amount of US\$1.35 million

**Staff Inputs**

<i>Stage of project cycle</i>	Actual	
	Weeks	US\$'000
Identification/Preparation	57.6	181.25
Appraisal/Negotiation	23.4	130.65
Supervision	155.28	348.94
Completion	10.0	25.0
<b>Total</b>	<b>264.58</b>	<b>685.84</b>

## Mission Data

Stage of project cycle Month/year	No. of persons	Days in Field	Specialized staff skills* represented a/	Performance Rating**		Types of Problems***
				Impl. Prog.	Dev. Obj.	
Identification/Preparation						
January 10-24, 1995	-	3	E; IE; CE			
May 17-June 2, 1995	-	4	CE (3); IE			
September 25	-	5	E; OO; RS			
October 13, 1995	-					
Appraisal/Negotiation						
January 31 –	-	6	E; CE; TE; RS; OO; E			
February 12, 1996						
Supervision						
February 19 –	-	5	TE; CE; RS; OO; DO	S	S	
March 1, 1997						
October 7 – 17, 1997	-	3	CE; RRE; OO	S	S	
January 5-7, 1998	-	3	CE, PS, OO	S	S	
May 11-21, 1998	-	6	CE (2); TE; S(2); FMS	S	S	
September 21 – October 2, 1998	-	8	CE; TE (2); A; SDO; FM S (2); OO	S	HS	
January 18-31, 1999	-	4	CE; A; DO; OO	S	HS	
August 11-22, 1999 Mid-Term Review	-	7	CE; SDS; OO(4); TA	S	S	
January 10-21, 2000	-	7	CE, OO (2); A; T E; R O, TA	S	S	
May 17-27, 2000	-	5	CE, FS; OO; RS; TA	S	S	
October 23- November 3, 2000	-	6	SrTE, SrTE; OO (3); TA	S	S	
ICR						
September 10-19, 2001	-	8	SrTE, SrTS, OO (3), TA, FMO, DA	S	S	

E=Economist  
 CE=Civil Engineer  
 OO=Operations Officer  
 RS=Resettlement Specialist  
 DO=Disbursement Officer  
 PS=Participation Specialist  
 TE=Transport Economist(2)  
 SDO=Social Development Officer  
 FS=Financial Specialist  
 DA=Disbursement Analyst

IE=Infrastructure Engineer  
 TE=Transport Engineer  
 RS=Resettlement Specialist  
 ES=Environment Specialist  
 RRE=Rural Roads Engineer  
 FMS=Financial Management Specialist  
 A=Anthropologist  
 TA=Team Assistant  
 FMO=Financial Management Officer