Honduras

Nationwide Road Network Improvement Project

Report date: March 2001
Field survey: August 2000

1. Project Profile and Japan's ODA Loan

Site Map: Roads in Honduras

Procured equipment in use

1.1. Background

Of total road length of 18,000 km in Honduras, 7,316.5 km, comprising trunk roads and their feeders, were controlled by SECOPT[1] (current SOPTRAVI[2]). However, only 23% of these roads and feeders were paved and only 25% were in good condition. The National Development Plan (1982-1986) formulated in February 1983 viewed the operation and maintenance of the existing road networks and the construction of access roads (feeders) as the most important issue for the transport sector and an extremely important issue in the country's socio-economic development plans.

1.2. Objectives

The objective of the project was to improve existing road networks and construct new road networks in order to promote effective utilization of road networks and improving distribution systems between agricultural areas and centers of consumption.

1.3. Project Scope

In order to achieve the above objectives, construction machines and equipment were procured as listed below, for a total of 538 units (including spare parts) for 50 models.

1. Equipment for the operation and maintenance of the 7,316-km road network (approximately 3,050 km per year)
2. Equipment for repairing the 403-km existing roads consisting mainly of access road (approximately 200 km per year)
3. Equipment for constructing 857-km new access roads (approximately 170 km per

[1] SECOPT: The Ministry of Communications, Public Works and Transport
[2] SOPTRAVI: The Ministry of Public Works, Transport and Housing

year)

4. Construction equipment for repair workshops
5. Highway patrol cars

The ODA loan covered all project costs quoted in foreign currency.

1.4. Borrower/Executing Agency

Borrower: The Government of the Republic of Honduras

Executing agency:

(at implementation)

Secretaria de Comunicaciones, Obras Publicas y Transporte

(SECOPT; The Ministry of Communications, Public Works and Transport)

(1997 to August 2000)

Secretaria de Obras Publicas, Transporte y Vivienda

(SOPTRAVI; The Ministry of Public Works, Transport and Housing)

1.5. Outline of Loan Agreement

Loan amount/Loan disbursed amount	¥7,971 million/¥4,550 million
Exchange of notes/Loan agreement	June 1985/August 1985
Terms and conditions	Interest rate: 4%, Repayment period (grace period): 30 years (10 years), Partially untied
Final disbursement date	June 1992

2. Results and Evaluation

2.1. Relevance

In Honduras, approximately 70% of the land consists of steep mountainous areas populated by scattered village settlements. Given these topographical and geographical features, the operation and maintenance of road networks and the construction of access roads has been an important issue in national development from the outset of the project to the present day, and the project is considered relevant. Equipment procured under the project was mainly used to construct provincial roads and access roads to villages, and works were implemented according to their priority. At the time of appraisal, the number of construction machines required for road operation and maintenance was estimated at 658. The number of such machines actually in operation at that time, however, was 324, less than half the required number. This lack in the absolute number of machines was one of the principal reasons for the delay in the implementation of road operation and maintenance. Relevant support was provided under the project, and was quite significant.

2.2. Efficiency

When equipment was procured, bidding documents were revised and the quantity of

spare parts needed was changed after the decision on the successful bidder, delaying the conclusion of contracts. Overall project completion was consequently delayed by about two years. Although equipment was delivered and consulting services initiated later than scheduled, the executing agency reports that the equipment is being used for the initially intended purposes and that consultants have provided appropriate assistance and guidance that is compatible with the current status of the executing agency. The actual project cost was ¥4.55 billion, approximately 43% less than the ¥7.971 billion initially estimated. The reason being that part of the equipment procurement requirements was later cancelled and that actual equipment purchase prices were lower than estimated as a result of bidding.

2.3. Effectiveness

The project targeted the national road network in Honduras. It was primarily designed to repair and improve existing roads and to simultaneously construct provincial access roads. The status of operation and maintenance for SOPTRAVI-controlled roads and the total length of such roads during the pre- and post-project periods are as described below.

(2.3.1.) Actual Results of Road Maintenance

At the time of appraisal in 1984, the total length of SOPTRAVI-controlled roads was 7,316 km, and equipment was procured on the assumption that maintenance would be provided for approximately 3,050 km per year (about 41.6% of the total). An examination of the actual results of maintenance provided by the General Department of Road and Airport Maintenance in 1990, 1991 and 1992, which corresponded to the project period, indicates (Table 1) that while the subsequent construction of new roads increased the total length of SOPTRAVI-controlled roads to more than 12,000 km, maintenance was provided for approximately 9,000 km of roads annually (about 70% of the total). Indicating that the length of roads for which SOPTRAVI annually provided maintenance using equipment procured under the project significantly exceeded the 3,050 km initially estimated.

Maintenance was annually provided on an average of 3,260 km during the four-year period from 1994 to 1997. This exceeded the initial annual goal of 3,050 km but fell far below the actual results for 1990, 1991 and 1992.

The major reasons are:

(1) The four-year period marked the transition from the consigning of all road maintenance to the private sector, a policy announced in 1993, to the establishment and start up of the executing agency Fondo Vial (road fund) in 2000; and

(2) SOPTRAVI personnel were opposed to the establishment of Fondo Vial due to the fear of redundancy and staged frequent strikes.

Table 1 Status of Operation and Maintenance by SOPTRAVI's General Department of Road and Airport Maintenance

(Unit: km)

Classifi-Cation	1990			1991			1992[1]		
	Length of SOPTRAVI-controlled roads	Length of road main-tained	Percent-age	Length of SOPTRAVI-controlled roads	Length of road main-tained	Percent-age	Length of SOPTRAVI-controlled roads	Length of road main-tained	Percent-age
Class-A roads	2,134.1	1,984.7	93.0%	2,121.8	2,009.8	94.7%	2,121.8	1,983.3	93.5%
Class-B roads	1,681.1	1,597.0	95.0%	1,794.9	1,469.2	81.9%	1,794.9	1,382.2	77.0%
Provincial roads	7,788.5	5,062.5	65.0%	7,873.4	4,600.5	58.4%	7,873.4	4,859.1	61.7%
Other[2]	896.1	896.1	100.0%	1,119.1	1,119.1	100.0%	1,119.1	1,119.1	100.0%
Total	12,499.8	9,499.8	76.0%	12,909.2	9,198.6	71.3%	12,909.2	9,343.7	72.4%

Source: SOPTRAVI annual reports
Notes: (1) Actual results for the period until October 1992
(2) Provisional and temporary operation and maintenance

Table 2 Actual Results of Regular and Routine Road Maintenance

(Unit: km)

Year	Paved roads		Unpaved roads		Total	% to total road length
	Regular maintenance	Routine maintenance	Regular maintenance	Routine maintenance		
1992	577	245	2,862	6,733	10,417	73.3%
1993	154	108	4,193	1,519	5,974	42.0%
1994	266	392	983	983	2,624	18.6%
1995	96	247	1,860	1,860	4,063	28.6%
1996	100	625	1,385	1,385	3,495	23.9%
1997	638	421	905	905	2,869	19.6%

Source: SOPTRAVI materials
Note: The figure for 1992 does not correspond with that for the same year in Table 1 because the 1992 figure in Table 1 is not the one obtained at the end of the year.

As described above, the percentage of roads for which maintenance was provided during the period from 1993 to 1997 is low. No comparative study can be performed, however, because there are no data on the status of roads for the period from 1989 to 1992, when the project was implemented. A comparison of data for the period from 1984 to 2000 alone shows (Table 3) that the percentage of roads classified as "poor" to the total has continued to decrease. This suggests that the overall condition of roads was improved as compared to the pre-project period.

Table 3 Road Conditions

(Unit: km)

Year	Good		Average		Poor		Under repair		Total
1984	1,797	25%	2,464	34%	3,056	42%	–		7,316.5
1994	2,886	20%	3,723	26%	5,633	40%	1,890	13%	14,132
1996	5,305	36%	3,475	24%	4,484	31%	1,338	9%	14,602
1998	3,414	23%	7,939	54%	3,249	22%	–		14,602
2000	5,086	37%	5,217	38%	3,300	24%	–		13,603

Source: SOPTRAVI

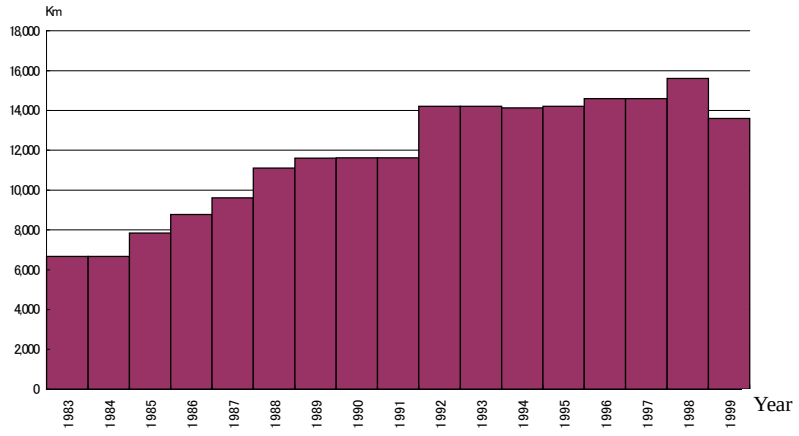
Good: No damage to road surfaces.
Average: The road is slightly damaged and requires repair but is usable.
Poor: For gravel and unpaved roads, the road is heavily damaged and is unusable. For

asphalt-surfaced roads, the road is heavily damaged and requires overlaying.

(2.3.2.) Total Road Length

The project was primarily designed to operate and maintain existing roads. Equipment was procured for road construction on the assumption that only 170 km of new provincial access roads would be built annually. Trends in the total length of SOPTRAVI-controlled roads during the project period from 1985 to 1992 indicate that this period marked the largest growth in total road length (from some 8,000 km in 1985 to some 14,000 km in 1992), i.e. road construction was concentrated in this period. Total road length grew by some 800 km a year, and it is considered that a considerable part of the growth is attributed to the utilization of construction equipment procured under the project.

Figure 1 Total Length of SOPTRAVI-controlled Roads



Source: SOPTRAVI

Note: The decrease in total road length during the period from 1998 to 1999 is largely due to the damage caused by Hurricane Mitch, which devastated Honduras in October 1998.

2.4. Impact

(2.4.1.) Promotion of Distribution

During the project period, 56.7% of the population engaged in economic activities in Honduras resided in agricultural villages and 35.6% of the population was engaged in agriculture. Agriculture is the key industry and also the major export industry of the country. Foodstuffs and agricultural products accounted for 80% of total exports in terms of value. In addition, the project corresponded to a period in which the Honduran economy, which had declined in the 1980s, started to become active again. The GDP for the agricultural sector grew at an average annual rate of 5% during the period from 1988 to 1992, and exports of agricultural products also grew rapidly. The executing agency did not provide data on distribution, but it is considered that the improvement of the national road network and the construction of access roads in agricultural villages during the period facilitated the distribution of

agricultural products[3].

(2.4.2.) Socio-environmental Impact

With respect to the maintenance and construction of roads using materials and equipment procured under the project, no socio-environmental impact has been reported.

2.5. Sustainability

In accordance with the policy of consigning road operation and maintenance to the private sector, which was announced by the Honduran government in 1993, project equipment has been partially sold off through bidding where necessary. It has also been decided that regular and routine road maintenance operations carried out by the General Department of Road and Airport Maintenance will be consigned to the private sector through Fondo Vial, which was established under SOPTRAVI. Only emergency road operation and maintenance, in the event of a disaster or in order to serve social development purposes is directly undertaken by SOPTRAVI.

Of the project equipment, the part that remains at the executing agency is used for public works by the General Department of Roads and the General Department of Public Works, including the construction of access roads in agricultural villages and new roads, as well as river conservation work, in addition to emergency road operation and maintenance. However, the useful life of much of the equipment had expired by the time of the field survey, some ten years after went into use. Spare parts are in short supply due to budget shortages for operation and maintenance, and the facilities of repair workshops in the capital city of Tegucigalpa have become obsolete. For these reasons, some equipment is currently unusable[4].

The executing agency reports that other equipment has been sold to private companies in accordance with the government policy. An overview of Fondo Vial operations reveals that the fund is establishing a system to facilitate independent road operation and maintenance by the private sector. The percentage of roads for which maintenance was provided in 1999 to the total road length was approximately 33%, higher than the 20% recorded for 1997. Regular maintenance for paved roads is carried out by 10 to 12 companies (18 projects), that for unpaved roads by 32

[3] One specific example is an agricultural development demonstration project called “Proyecto Demonstrativo de Agricultura la Esperanza,“ which has been underway in Honduras since the 1980s with Japan International Cooperation Agency assistance. It is reported that the road from La Esperanza, the demonstration project area, to Siguatepeque was improved using ODA financed equipment. This enabled distribution of agricultural products to Tegucigalpa, San Pedro Sula and other cities, making this project area, which was formerly a self-sufficient agricultural town, a major supplier of fruit and vegetables, the products promoted under the development project. The report is based on an interview with an official representative of the demonstration project at the Ministry of Agriculture’s Dirección de Ciencia y Tecnología (DICTA).

[4] About 40% of all procured equipment is owned by SOPTRAVI, 50% of which is in operation. Of the remaining 50%, which is idle, 20% will become usable if repairs are conducted.

companies (on 65 contracts), and routine maintenance by very small companies (currently six) contracted under the World Bank project. Such road-related private enterprises have grown in number in recent years.

In order to ensure the quality of consigned work, Fondo Vial has established detailed penal regulations that are applicable if contractors fail to perform work of a certain quality within the designated period of time. In addition to the contractors that actually perform operation and maintenance work, it engages consultants to supervise and evaluate consigned work with the aim of inspecting operation and maintenance after it is consigned to contractors. In terms of funding, budgets are allocated to Fondo Vial via SOPTRAVI, but in technical and administrative terms, the fund maintains its independence with all consignment processes handled in-house. Swifter road operation and maintenance can thus be expected.

Comparison of Original and Actual Results

Item	Plan	Results
1. Project scope	(1) Procurement of equipment for the operation and maintenance of the 7,316-km road network (about 3,050 km per year) (2) Procurement of equipment for the improvement of the 403-km existing access roads (about 200 km per year) (3) Procurement of equipment for the construction of 857-km new access roads (about 170 km per year) (4) Procurement of facilities and equipment for repair workshops (5) Procurement of highway patrol cars The total number of units, including those mentioned above, is 538. (6) Consulting services	(1) Same as left (2) Same as left (3) Same as left (4) Same as left (5) Same as left The total number is 462. (6) Same as left
2. Implementation schedule	August 1985 to February 1990	August 1985 to July 1992
3. Project cost Foreign currency Local currency* Total ODA loan portion	 ¥7,971 million – ¥7,971 million ¥7,971 million	 ¥4,550 million – ¥4,550 million ¥4,550 million

* In this project, local costs and other costs quoted in local currency were not reported at the time of appraisal. Project costs were wholly comprised of the figure quoted in foreign currency, in other words, the ODA loan.