How to Improve the Rural Road Network in El Salvador

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The purpose of these case studies is for INE to share its work in the region, the problems and challenges encountered, and the lessons learned. The sector specialist for the ***How to Improve the Rural Road Network in El Salvador*** case study is José Rodrigo Rendón Rodríguez, Transport Division. The case study was written by Alejandro Tarre, consultant, and Olga Morales, Infrastructure and Energy Sector.

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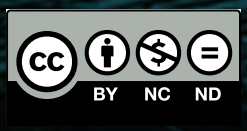


How to Improve the Rural Road Network in El Salvador

IDENTIFYING THE PROBLEM

In some places, there are luxuries that have become so commonplace that they no longer seem like luxuries. For a child or adolescent living in the countryside, getting to school every day can be almost impossible. In the region's rural areas, it is not uncommon to see classrooms with several empty desks. Pregnant women face similar problems. Many mothers die due to lack of care during labor or pregnancy because hospitals and health centers are not easily accessible.

Respiratory illnesses are also common in rural settings due to the dust kicked up by vehicles on dirt roads. Mud pits often form on these roads during the rainy season, which prevents farmers from getting from one place to another and makes it hard for them to buy the supplies they need for their crops or to transport their products to places with higher demand. These obstacles severely limit their income.

These problems and many others share a common cause. Rural communities don't have the modern road infrastructure that would help them combat their isolation and connect with the rest of the world.

The Government of El Salvador has prioritized road infrastructure improvements and maintenance since the late nineties. By 2009, the national network had more than 6,400 kilometers of road, half of which was paved, particularly in urban areas. 6,400 kilometers of road in just 21,000 square kilometers of territory means that El Salvador has one of the densest road networks in Central America[1].

Despite this progress, there is still a lot to be done. One of the chief problems is the disparity in road infrastructure between urban and rural zones (home to 40% of the population). In rural areas, many roads are impassable during the six-month rainy season.

1 During this time, El Salvador's road density (linear kilometers of road for every 100 square kilometers) was 34.7, higher than that of Guatemala (14.8), Nicaragua (18.1), Mexico (19.1), and Panama (20.3). *World Bank WGI 2011 (World Governance Indicators*).

The situation was especially serious in mountainous areas, where residents had to throw together temporary infrastructure and use all-terrain vehicles just to leave their communities.

Unreliable local road infrastructure limited the growth of productive activities and access to basic social services. It increased transport costs and travel times to schools and health centers. It also made travel to municipal and departmental capitals difficult and eliminated the possibility of exploiting these areas' potential for tourism.

The global economic crisis of 2008 hit El Salvador hard, worsening already-serious problems. Between 2000 and 2007, the Salvadoran economy grew at a moderate pace and there was a significant decline in rural poverty. The crisis erased a large portion of these gains. Between 2008 and 2009, the unemployment rate rose from 5.5% to 7.1% and GDP fell 3.5%. Remittances from family members, which make up between 15% and 20% of GDP, fell 9.4%.

The Government of El Salvador took strategic steps to counteract the effects of the crisis, including significant public investment to revive the domestic economy. Authorities from the Ministry of Public Works, Transportation, Housing, and Urban Development (MOPTVDU), the body that manages El Salvador's roadways, decided to prioritize improvements to rural roads to boost competitiveness and improve living conditions in rural areas.

El Salvador has enormous natural and cultural wealth. It is home to archaeological treasures like the Joya de Cerén, a Mayan ruin that was declared a World Heritage Site by UNESCO, and natural wonders like the volcanic mountain range and the coffee forest, plus beautiful mountains and pine forests that are ideal for ecotourism. There are centers of art like Ilobasco, which produces extraordinary pottery and ceramics, and lovely colonial cities like Suchitoto. For the Salvadoran government, it was extremely important to expand the road network to provide access to these treasures, and this included improving rural roads.

ADDRESSING THE ISSUE

Prior to the 2008 crisis, the MOPTVDU already had substantial road development policies in place. Aside from making infrastructure improvements, they had taken steps to manage national road maintenance by creating the Road Conservation Fund (FOVIAL; see "The challenge of sustainability").

After the crisis, the government redoubled its efforts to help its most vulnerable people. Its 2009-2014 plan declared that road connectivity was critical to promoting economic development in rural areas, and the government turned to the Inter-American Development Bank (IDB) to express its interest in investing in the expansion of its road network. This was a good partnership for the Salvadoran government because the Bank had experience with this kind of project in El Salvador; in 2001 and 2005, it financed an ambitious two-phase program to improve road infrastructure.

The Bank's role

IIn September 2010, the IDB approved a US$35 million loan for the Rural Roads for Development Program. The program's objective was to support economic growth and poverty reduction in El Salvador's rural communities. More specifically, it sought to reduce travel times and transport costs and ensure that the selected roads were passable year-round. This way small producers and everyone else could get around more easily and have better access to supplies and public services.

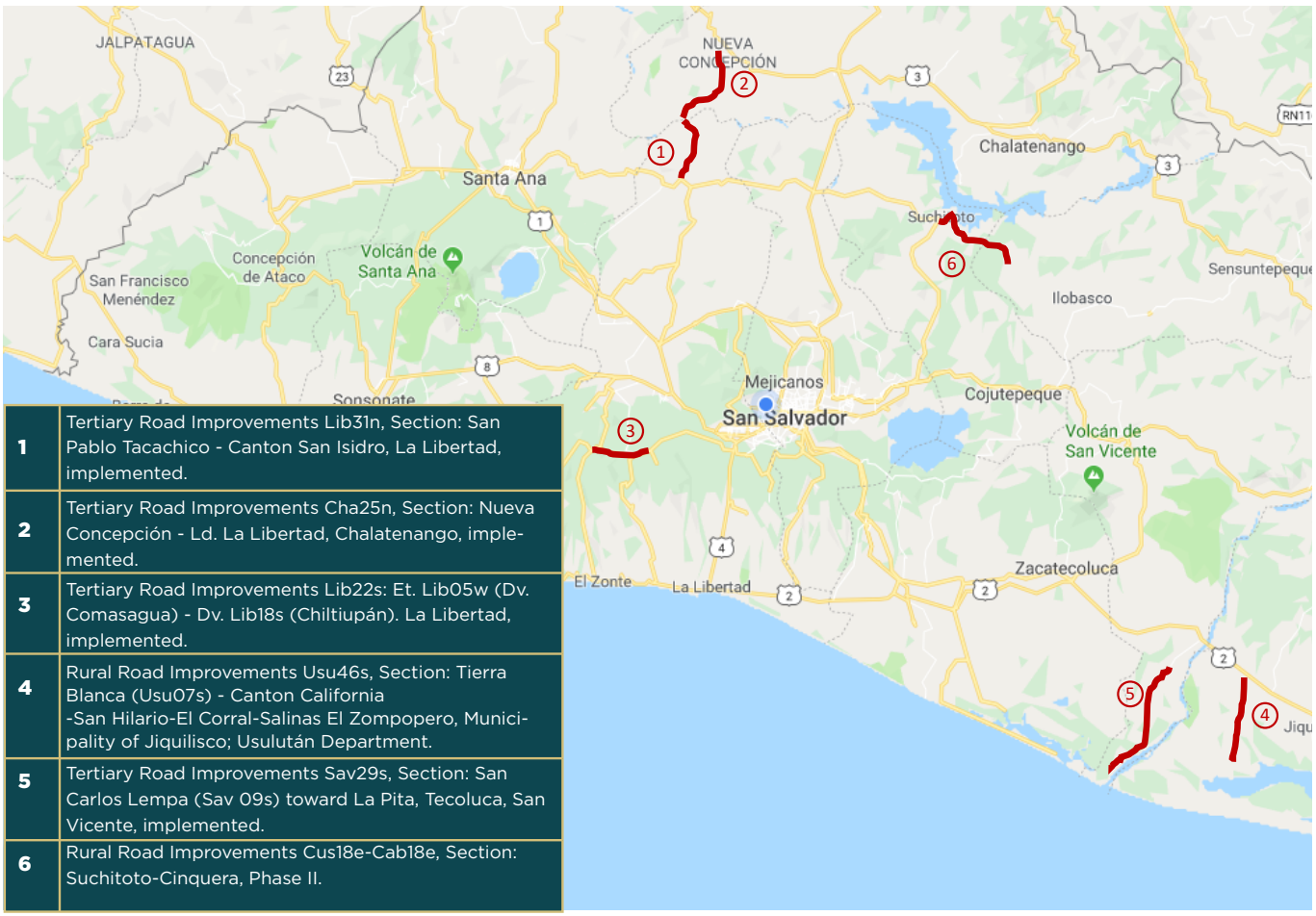
The loan financed the repair and improvement of approximately 80 kilometers of rural roads. The initial plan was to work on seven roads. But three roads were replaced by one in Usulután Department (Tierra Blanca section) to promote development of the coastal-marine area, one of the Salvadoran government's priorities[22]. Another road was added (the Suchitoto-Cinquera section) using the resources saved during the project's execution. In the end, the project repaired and improved six roads. The roads were selected using a methodology that prioritized roads in rural areas with

2 El Salvador's maritime area is almost six times as large as its land area. The government has prioritized aerial, maritime, and land infrastructure on this stretch of the Pacific—including the ambitious modernization of Acajutla Port—to promote fishing, trade, production, and tourism.

economic activity, among other factors (see map). The pre-selected roads were also subject to a socioeconomic feasibility study and a social impact analysis.

Beyond its work on the six roads, which represent less than 1.3% of El Salvador's roadways, the Rural Roads for Development Program sought to provide the government with tools to improve the rest of the network.

The loan financed institutional-strengthening activities such as training for MOPTVDU staff (and staff from other institutions that took part in the program), equipment acquisition, and campaigns to promote road safety. The financing also covered the creation of a system for planning, oversight, and evaluation to strengthen the Ministry's capacity to carry out and monitor their rural road investments and measure the results.



1	Tertiary Road Improvements Lib31n, Section: San Pablo Tacachico - Canton San Isidro, La Libertad, implemented.
2	Tertiary Road Improvements Cha25n, Section: Nueva Concepción - Ld. La Libertad, Chalatenango, implemented.
3	Tertiary Road Improvements Lib22s: Et. Lib05w (Dv. Comasagua) - Dv. Lib18s (Chiltiupán). La Libertad, implemented.
4	Rural Road Improvements Usu46s, Section: Tierra Blanca (Usu07s) - Canton California -San Hilario-El Corral-Salinas El Zompopero, Municipality of Jiquilisco; Usulután Department.
5	Tertiary Road Improvements Sav29s, Section: San Carlos Lempa (Sav 09s) toward La Pita, Tecoluca, San Vicente, implemented.
6	Rural Road Improvements Cus18e-Cab18e, Section: Suchitoto-Cinquera, Phase II.

Box 1

Name: Rural Roads for Development Program

Borrower: Republicof El Salvador

Amount: US$35 million

Project Start Date: February 2011

Date of Last Disbursement: March 2017

Project Site: El Salvador.

Executing Agency: Ministry of Public Works, Transportation, Housing, and Urban Development (MOPTVDU)

Two models

Five of the six roads were designed by the Salvadoran Fund for Pre-Investment Studies (FOSEP), while the Tierra Blanca section used the "design and build" model.

FOSEP is the state body in charge of public infrastructure design. In most cases, the MOPTVDU requests a final project design from FOSEP and FOSEP issues a tender for a design firm. The Ministry then requests tenders from two other companies to oversee and execute the project based on the final design delivered by FOSEP. The Ministry already had a preliminary design for the Tierra Blanca project, so it did not have to turn to FOSEP.

Instead, it hired just one company to finalize the design and execute the project. This dual role is known as "design and build".

CHALLENGES FOR IMPLEMENTATION

Establishing a positive work dynamic among actors

An executing unit affiliated with the MOPTVDU was created to implement activities under the Rural Roads for Development Program. It was supposed to work closely with Ministry employees and other program participants like FOSEP and the Ministry of Finance. However, the members of the executing unit had not worked with these other groups before, which made developing a productive working relationship difficult. In cases like these, it is critical to take timely steps to bring the parties together and foster a collaborative environment. This will help avoid complications and delays.

At the beginning of the program, executing unit members and ministry employees were introduced at a series of meetings. But this initial introduction wasn't enough to achieve the kind of closeness that facilitates cooperation, which led to delays. For example, the executing unit didn't know which person to go to to resolve certain problems, some of which were as simple as getting a signature for approval. The MOPTVDU, on the other hand, didn't have enough information about what the executing unit needed. This disconnect slowed even the simplest processes.

To bridge this gap, members of the executing unit approached the IDB with an idea: use the training sessions, an integral part of the institutional strengthening component, as a platform to bring program participants together and achieve greater cooperation. Up until that point, the training had been purely technical in nature. Several courses were organized to improve teamwork among different actors, including the executing agency, the MOPTVDU, the Ministry of Finance, and FOSEP. The training sessions offered a much better opportunity to build relationships than the initial meeting.

The effect was almost immediate. Within a short time, participants achieved a rapport that helped them meet program objectives more quickly (see lesson "Training leads to greater collaboration").

The challenge of direct management

The Tierra Blanca section, executed under a "design and build" model, was one of the most complicated sections. The contractor's delays in finalizing the design

and executing the project required two extensions, 90 and 48 days respectively. When the contractor asked for a third extension, the MOPTVDU decided not to grant it, letting the contract expire with 40% of the project remaining.

This wasn't an easy decision. There wasn't enough time to hire another company to complete the project. A new tender would take time, and the contractors needed more resources than what was available, given the indirect costs. After much deliberation, the MOPTVDU decided that the only way to finish the project was through direct management: it would take on the role of contractor.

The transition to direct management was one of the program's biggest challenges. The MOPTVDU's Maintenance Unit was in the best position to assume the management role.

But the Maintenance unit did not have the staff it needed to complete the project on time.

The program found itself in a tough situation. Direct management was the only available option, but the Maintenance Unit wasn't in a position to do it. What to do?

The executing unit recognized that direct management was an enormous challenge for the MOPTVDU and that the Maintenance Unit needed support to make that challenge feasible. With this in mind, the executing unit did two things.

First, the executing unit and the IDB agreed to hire more support staff for the Maintenance Unit. This included the skilled labor required to finish the Tierra Blanca section, which the Ministry didn't have.

They also hired specialists in social management, the environment, topography, and traffic law.

Second, the executing unit proposed that the Maintenance Unit use remaining program funds to buy the necessary materials, equipment, fuel, and spare parts that the Ministry lacked. This support solved the problem. Closer collaboration among the project's main actors meant that the Maintenance Unit was able to finish the road (see lesson "Align each actor's incentives with project objectives").

The unforeseen impact of oversight

The Court of Accounts of the Republic is the institution in charge of government transparency. The Court of Accounts is independent from the executive branch and oversees public finance and the national budget. It is vital to preventing, punishing, and discouraging corruption. However, an indirect effect of this invaluable scrutiny is that it can delay the progress of MOPTVDU and other government projects.

This is what initially happened with the Rural Roads for Development Program. Worried about receiving censures or comments from the Court, MOPTVDU employees acted with excessive (and understandable) caution when making decisions. Any error, action, or omission can provoke a reaction from the Court and launch complicated administrative proceedings. If the staff member in question can't respond in a satisfactory manner, they may face a trial. So, when employees have doubts about a decision, they often consult advisors or subordinates who in turn consult other advisors and subordinates. Because no one wants to make a mistake that leads to censure, there are powerful incentives not to make decisions quickly.

The program found a solution to this problem. The IDB requires borrowers to hire an external auditor. Under the loan agreement, every so often the IDB can ask the executing agency for legal and financial program documents, which the external auditor is then responsible for. In light of the issue with the Court, it was decided that the auditor would take on a larger-than-normal role. Instead of occasionally delivering reports with its recommendations, it would follow the process step by step.

Any employee who had questions about any decision could consult the auditor. The auditor's objective was to help the Ministry avoid mistakes that could lead to censure from the Court.

The program also offered training for members of the Court of Accounts so that they could familiarize themselves with IDB loan regulations and understand the pressures the MOPTVDU was under. Just as it was important to follow procedures to avoid censure from the Court, it was critical that the Court have a better understanding of the rules under which the MOPTVDU operates when it receives financing from an institution like the IDB.

At the beginning of the program, the Court of Accounts made some observations, none of which led to a trial because the MOPTVDU responded appropriately to each one. Once the auditor's role was expanded and the training took place, there were no more observations from the Court.

Design changes

FOSEP arose from the need to create synergies among government institutions and use economies of scale to maximize available resources to create or request designs. Its job is to issue tenders for final designs and prepare tender documents for the project's execution.

Unless the project is implemented using "design and build" or direct management, FOSEP issues tenders for designs and the Ministry issues tenders for execution. The MOPTVDU is also responsible for supervising the design firm because it has more technical capacity in this area than other government institutions.

For the five roads that were part of the Rural Roads for Development Program under FOSEP, designs were the biggest challenge because of mistakes made by the design firms.

Sometimes the errors were due to negligence, but more often they came from lack of information about the project's scope and objectives. For example, the design might stipulate a layer of asphalt for a road instead of a surface treatment, even though the program's budget only covered the second option.

The construction company also sought changes to the final design, arguing that they would improve the projects or make them more durable. These changes, which were often unnecessary, could lead to increased costs that could then affect the program's scope and timeline.

The challenge was two-fold: get the design firm to deliver a final design that didn't require changes, and make sure the construction company didn't request changes unless they were truly necessary.

What was the solution? The MOPTVDU increased its oversight of its contractors and began to hold frequent meetings with all participants, including the executing unit, FOSEP, the design firm, and the construction company. The construction company was informed that from then on it would receive completely finalized designs. If the company thought that the design needed changes, it had to present a complaint and show that the design firm had made an error. The design firm would have the chance to defend its design. Specialists from the MOPTVDU and the executing unit would meet with both parties to listen to them and resolve disputes.

If the construction company requested changes that could increase costs, it had to identify ways to reduce costs in other areas so that the original budget was unaffected.

Steps were also taken on the design side. Greater care was taken to explain the project's scope and objectives to the design firm. More information would allow the contractor to more easily reconcile the design requirements with the program budget. If the construction company requested a change and was able to show it was justified, the design firm would be penalized. Contracts often stipulate that the firm must pay a fine if the design is found to have errors. The MOPTVDU made it clear that it would enforce this clause.

This strategy worked. Once these measures were in place, there were no more problems with the designs

OUTCOMES

Improving lives is always the priority for road infrastructure improvement programs and other IDB development projects. If communities don't experience tangible benefits, the program can't be seen as a success. For the Rural Roads for Development Program, successfully improving these sections of road would mean that children could get to school and sick relatives could be taken to the hospital more easily; it would mean that farmers and ranchers could take their goods to places with higher demand that had previously been hard to access; it would open up the possibility of attracting larger investments to historically isolated

areas and provide easier access to inputs to increase production.

But reaching these objectives first requires establishing targets to make success more likely. The program established three important targets: reduce vehicle operation costs, reduce travel times, and eliminate days when the roads are inaccessible during the year.

The program achieved all three goals.

To determine whether the first two targets were met, the program used three indicators to measure operating costs and three indicators to measure speed3[3]. The indicators revealed that the program met or surpassed its original goals.

Operating costs fell 32% for cars and 20% for passenger buses. Average speed increased from 24 km/h to 55 km/h for cars and from 23 km/h to 50 km/h for buses. The number of days that the roads were impassable dropped to zero.

If the communities don't receive tangible benefits, the road infrastructure improvement program is a failure.

3 The indicators include cars, buses, and heavy trucks.

Box 2

How Communities Benefit

The MOPTVDU hired a consulting company to interview people who live near the roads in the target area. Their conversations confirmed the positive results of the Rural Roads for Development Program evaluations.

Many interviewees mentioned that the road improvements allowed local producers to access new markets. In one interview, José Daniel García Mejía, principal of the Canton San Juan Las Mesas educational center (Tacachico–San Isidro section) said, "now it is easier for people to transport their watermelons, beans, really all their crops; the ranchers also use the roads." He added, "There was no tilapia farming before the road, and if it did exist, it was for the family's own use…[now] there are fish farms that export to other countries." Wilfrido Menjívar, representative of the Nueva Concepción Mayor's Office (Nueva Concepción–L.D. La Libertad section) says that "work is now more feasible for all farmers. There is more accessibility to buy inputs and transport their crops."

Another constant is how the road improvements eased transportation to education and health centers. Orlando Sáenz, coordinating physician, Valle Mesas Family Health Community Unit (Tacachico–San Isidro section), said that "it is easy to get around, and there is greater accessibility to preventative services and the people don't have an excuse not to come and seek services; it has brought the health establishment and the community closer…maternal mortality has dropped because a pregnant woman can be taken to the health center to get emergency care in five minutes."

Juan Carlos Blanco, a teacher at the Jose River Campos National Institute (Desvío Comasagua–Chiltiupán section, La Libertad) says that at his school, "paving the roads has increased the number of students. And [it has also led to] increased safety because now they don't walk from home. They use the transportation provided by the city or public transportation."

This benefited nearby communities in several ways. An interim evaluation found that 40% of students said their travel time to school had fallen significantly. According to middle school principals, enrollment increased by at least 20%.

The interim impact evaluation was conducted just six months after the program concluded—too short a time to measure long-term economic benefits. But the final evaluation has already been completed for some roads, and certain indicators are encouraging. In the areas surrounding the San Pablo Tacachico–Canton San Isidro road, economic activity increased 2.9% between 2015 and 2018. During that same time period, corn and sorghum output rose 107%[4].

Near the Desvío Comasagua–Chiltiupán section, income among employed residents rose almost 45%, and corn and bean output increased 18.5% and 90.3%.

Along the Nueva Concepción–L.D. La Libertad corridor, economic activity also increased by nearly 5% and the income of employed residents by 38.5%. Corn and sorghum increased 184.6% and 16.8%.

Not all roads saw the same results. Connectivity is just one factor that impacts local economies. But the available evidence points to a clear expansion of economic opportunities in nearby communities.

4 Final evaluation of three rural roads IDB-2369. Sections: San Pablo Tacachico–Cantón San Isidro; Desvió Comasagua–Chiltiupán; and Nueva Concepción–L.D. La Libertad.

Institutional strengthening

The program's institutional strengthening component also led to positive outcomes. It met its training goal with flying colors. The initial plan was to provide training to 548 people. In the end, the program trained 2,186 individuals, almost 400% more than planned.

The program also built a room to serve as a virtual classroom to train staff within the MOPTVDU. These sessions were previously held elsewhere, so having the classroom saves time and money. The MOPTVDU also benefitted from a new meeting room and a storage area for administrative documents.

The initial plan was to purchase 259 pieces of equipment. By the end of the program, that number was 1,419. As with the training sessions, the program was able to do more than expected because of its strategy to increase the number of companies that took part in tenders.

How? First, greater efforts were made to notify all companies that were eligible to compete. In the past, many companies that could have participated did not. Second, transparency mechanisms were put in place to assure companies that the best tenders would be chosen. Third, bidders were guaranteed on-time payments if they won the contract. These measures increased competition, which led to better prices for training and equipment as well as design and construction. For some training sessions, the program hired companies that provided better services for a quarter of the price that was initially estimated based on previous contracts[5].

The program also ran educational road safety campaigns over the radio and delivered assorted safety equipment to neighboring communities, including cones, helmets, vests, and flags for directing traffic.

Lastly, the program successfully introduced a system for project planning, oversight, and evaluation. This system, which was going to be used exclusively for the Rural Roads for Development Program, was designed for the Ministry to use for any other program and was able to combine several existing MOPTVDU systems into one single system[6].

5 Interview with Pedro Pérez, engineer, executing unit
6 Interview with Pedro Pérez, engineer, executing unit

The new system's importance should not be underestimated. As a result, the program was able to achieve much more than planned without increasing costs. The system will also facilitate the execution of future projects.

Benefits like these that go beyond the program objective are critical. The training sessions (more than 2,000 total) not only helped improve the roads, but increased the capacity of Salvadoran institutions to continue improving the road network. Some of the equipment purchased will be helpful for other projects. The same is true of the procedures to avoid design changes and slow decision making. All these actions helped build capacity for further improvement of the country's road infrastructure (see "The multiplier effect").

Box 3

The multiplier effect

The program only addressed 80 kilometers of a 6,400-kilometer road network. This was how it had to be. Resources are limited and the program couldn't take on a larger portion of the road system. But what this small project could do was give the Salvadoran authorities more tools to improve the remaining roads.

This multiplier effect goes beyond institutional strengthening. Connecting a poor and isolated area to the rest of the country is a powerful tool for encouraging development and productivity. Now homes and small businesses in these areas have access to larger markets for their goods and services, as well as the supplies they need for their own economic activities. Better access provides opportunities that increase production, investment, and employment. The more wealth these areas create and the more investment they attract, the more income and resources they will have to improve connectivity and other important areas—like health and education—that help revitalize the local economy and improve quality of life.

LESSONS LEARNED

Training leads to greater collaboration

At the beginning of the program, it was clear that without closer collaboration between the executing unit and employees from the MOPTVDU, the Ministry of Finance, and FOSEP, the project was going to take longer than expected. The goal was to "break the ice" and get participants to see themselves as part of the same team. Initial meetings weren't enough.

Training was one of the tools used to improve collaboration. This was a creative solution to a common problem that could be applied in very different contexts.

The program trained more than 2,000 government employees. The engineers received training on various aspects of the new planning, oversight, and evaluation system. Courses were offered on topics as diverse as structural design, project management, and the use of Excel and Word. In addition to the technical training, several sessions focused on teamwork to bring together different actors and foster relationships.

One of the secrets of this training is that it was very attractive to the

government employees. For them, it was an opportunity not only to develop skills but to meet new people and escape from everyday office activities for a short period. The leaders of the training sessions made a special effort to make them fun and complement them with social activities. Sometimes there were activities at the end of the day that gave participants more opportunities to get to know each other better.

The results were as expected. The training educated many people, but also built relationships among members of the executing agency and employees from the MOPTVDU, the Ministry of Finance, and FOSEP. This helped streamline procedures and speed up the project.

Expand the role of the external auditor

The growing oversight of governance in El Salvador is a very positive trend. But this strategy caused unexpected problems for several ministries: government employees felt paralyzed when making decisions because they were afraid of making mistakes that would be punished.

The solution is not to undermine scrutiny of public management, but to look for a way to make oversight compatible with a rapid decision-making process.

The Rural Roads for Development Program found a novel solution: expand the role of the external auditor. Have concurrent or preventive oversight every step of the way to avoid errors that could invite censure from the Court of Accounts.

Expanding the role of the external auditor may increase costs slightly, but it is one way to address the insecurity that leads many government employees to put off decisions in any kind of program. It also encourages transparency within the project itself. The auditor provides internal program oversight prior to the Court of Account's external oversight. Two oversight processes considerably reduce the likelihood of mistakes (or corruption).

This was the case with the Rural Roads for Development Program. The auditor not only provided government employees with a sense of security but reduced the number of Court of Accounts censures to zero.

Align each actor's incentives with project objectives

When the Tierra Blanca contract was canceled, direct management was the only available option to complete the project. From the outside, it seemed logical that the MOPTVDU's Maintenance Unit would take on the role of contractor. From the inside, this was an insurmountable challenge due to lack of resources and staff.

The executing unit decided to find a way to help the Ministry and reached an agreement with the IDB to use loan funds to hire additional technical staff and help the Maintenance Unit purchase replacement parts, equipment, and fuel. These resources not only helped the unit finish the road but helped with many other important responsibilities unrelated to the program. Thanks to this decision, direct management became feasible for the MOPTVDU and an attractive option that led to benefits in and outside of the project.

The program was also able to align various actors' incentives with the program's own objectives. The problem with the designs was due to requests for unnecessary changes by the construction company and flaws in the designs themselves. On the execution side, the solution was to come up with a process that would make it harder for the construction company to ask for changes. It would have to meet with other participants, including the design firm, to show that the changes were necessary. It also had to suggest cuts every time it requested a change that could raise costs. These measures discouraged the construction company from asking for changes that weren't really needed.

Adjustments were also made on the design side. The design firm received a better explanation of the project's objectives and scope and was warned that it would pay fines if there were demonstrable design flaws. It was understood that the costs of making a mistake with the design would be higher. These changes had the hoped-for results. Once they were applied, there were no more design changes that affected the costs, scope, or deadlines.

THE CHALLENGE OF SUSTAINABILITY: FOVIAL'S GROWING NEEDS

Maintaining El Salvador's road network falls under the responsibility of the Road Conservation Fund (FOVIAL), an independent institution affiliated with the MOPTVDU. FOVIAL performs routine and regular maintenance of roads, bridges, and crosswalks. They are also in charge of signage and road safety.

When a road is being repaired —like the six roads in the Rural Roads for Development Program—FOVIAL temporarily stops working on that road. When the repairs are finished, the contractor creates a maintenance manual, which the MOPTVDU turns over to FOVIAL along with the road so that it can continue its work.

So far, FOVIAL has done its job well, owing in part to its high-level professional staff. But its funding also plays a role in its success. Most of its resources come from a fuel tax (US$0.20/gallon). This funding mechanism has a huge advantage.

FOVIAL's funding is guaranteed. It does not depend on national budget decisions made by the Legislative Assembly (or Parliament) each year.

However, there is also a disadvantage. FOVIAL's annual budget is more or less fixed. The more roads that are repaired, built, or expanded, the more resources it must spend on maintenance. More roadways must be maintained using a fixed amount of money. This is the biggest challenge to the road network's future sustainability.

The solution is simple: FOVIAL's resources should be adjusted to match its increasing obligations. If it is going to maintain more roads, it needs more money. Some experts have proposed increasing the fuel tax by ten or fifteen cents. Others have suggested transferring responsibility for certain roads from FOVIAL to cities. Whatever the solution, the priority is to find a way to fund FOVIAL so that it can sustain its current level of performance.

Box 4

How communities benefited Strategic priorities: reducing deadlines and anticipating risks

The IDB has emphasized the need to reduce project timelines. Its priority is to speed up execution times and finish projects in an optimal manner without sacrificing quality. Achieving this goal depends on the work and preparation done at every step of the process.

The Rural Roads for Development Program puts this strategy into practice. Efforts to avoid censure from the Court of Accounts are connected to the Bank's strategic commitment to reduce timelines, as are the training sessions for thousands of government workers. Not only does training build up employees' knowledge and skills, it improves collaboration among project participants, which increases the pace of project execution.

Another strategic priority is to anticipate risks, especially the risk of cost overruns (or differences in the approved budget and the executed budget), and to take measures to reduce them. This guideline led to the decision to implement direct management for the Tierra Blanca project. When the construction company defaulted and the contract expired, issuing a new tender was a logical choice. But this option carried a large risk of increasing costs, which is why the task of finishing the road was assigned to the MOPTVDU. Direct management also has risks, but it was the best way to try to finish the project without exceeding the budget.

The Rural Roads for Development Program shows how each project's needs and challenges can fit within a set of general strategic guidelines for all projects.