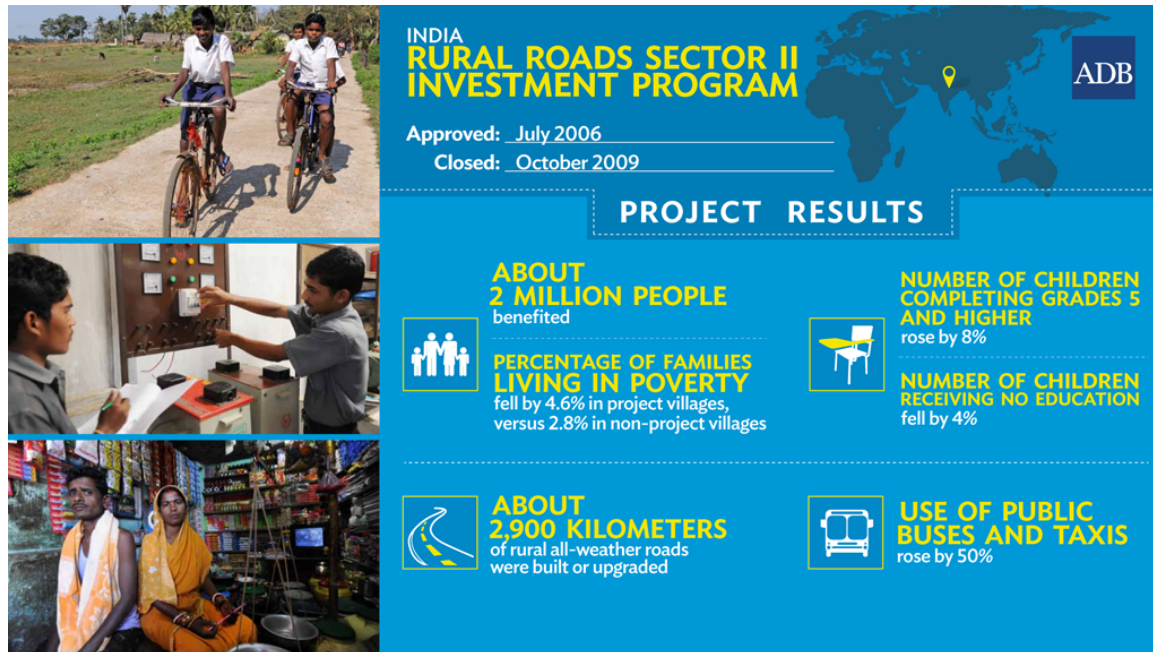




Building Rural Roads to Prosperity in India

Improving roads that connect vulnerable and isolated communities to schools, services, and markets is key to development in India.



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A community hospital in Chandanpur, in eastern India, is busier than ever. The 16-bed hospital is doubling in size to handle an influx of new patients. More than 100 patients come to the hospital each day, double the number of previous years.

More people can visit the hospital because the surrounding area now has improved roads to remote villages in the countryside. Safe, paved roads that can be used in all-weather conditions mean that people who once suffered at home, or died in transit, can now reach modern medical care.

"More and more pregnant women prefer to visit the hospital now for the delivery of babies," says Prakash Chand Mahate, a doctor who works at the center. "This has reduced the maternal and infant mortality rates by up to 25% in the region."

"Health workers have also been able to achieve a 100% immunization rate in many villages now that they can be reached by modern roads," says Prakash.

"Lives are being saved," he adds. "Ambulances can now reach the villages where there was no road in the past."

The lives are being saved through the ADB-supported Rural Roads Sector II Investment Program, which aimed to help the Government of India with its national effort to improve roads in the countryside.

Having a poor road system, particularly in the countryside, makes it more difficult for children to go to school and more expensive for farmers to bring their produce to the market. Bad roads adversely affect people in countless other ways.

"Bad roads make people poorer. It's as simple as that."

Lee Ming Tai, a senior transport specialist at ADB

"Bad roads make people poorer. It's as simple as that," says Lee Ming Tai, a senior transport specialist at ADB. "Building and repairing roads make a powerful impact on people's lives in the rural areas."

In India, the neglect of the rural road system in recent years has deprived many rural communities of the economic opportunities that cities in India have enjoyed. Many small towns are poor, and young people are being driven to go to large cities to find jobs.

In response, the project improved the roads in some of the poorest areas in India.

"The project focused on being socially inclusive and gender responsive by helping the poor through improved access to social and economic services," says Lee Ming.

Better access to market

The ADB-supported project helped about 2 million people, mostly the poor in rural areas, by providing modern roads to 1,503 communities in the states of Assam, Odisha (formerly Orissa), and West Bengal. About 2,900 kilometers of all-weather rural roads were built or upgraded under the project.

The improved roads enabled people, particularly women, to find jobs, commute to work and schools, and go to clinics and hospitals more quickly and safely. It also encouraged farmers to grow higher-value crops, and enabled them to transport their produce faster, keeping it fresh and in good condition.

As a result of the project, farmers in the area made more visits to the market than before the new roads. The number of visits made by government agricultural extension workers to farming communities increased threefold, bringing much-needed expertise and other help to farmers.

Before the project, Shatrughan Mahapatra, a 63-year-old farmer in Deulapada Village, was not able to bring the wheat and other crops he grows to the market when there was heavy rain. An old-fashioned ox cart was the only way to trudge through the knee-deep water on the old road.

As part of the project, an elevated all-weather road was built near his village. Shatrughan can now get his crops to the market quickly and efficiently, even when it is raining hard. Because of this, his income has doubled.

"It was a hand-to-mouth existence for the family," he recalls of life before the new road. "Now, we are much better off and are able to meet our needs."

Farmers are just one group that has enjoyed wide-ranging benefits from the road improvement project. Many people, who had previously been engaged in low-paying day labor in the countryside, were able to use the roads to find better-paying jobs just outside of their villages.

After project completion, the distance traveled to the workplace by people in the area increased by up to 10%, but the time it took for them to get to work was reduced by up to 60%.

This positive effect was confirmed by the increased use of public transport. The use of public buses and taxis increased by 50%, while trips by minibus were up by 150%.

Increased enrollment

At the public elementary school in the village of Khamar, students faced huge obstacles trying to get to class during the monsoon season. As the roads into the village were flooded, boats had to be used to get to the school or some students just stopped attending school.

Since the new road has been built, students from neighboring villages have been able to walk, ride bicycles, or take a bus to school even when it is raining.

"Before the road was constructed, there were only 40 students in the school," says Keshav Chander Pradhan, a 40-year-old teacher at the school. "Now, we have 70 students on our rolls."

The improved school attendance was seen as well after the completion of the project in 2009. The number of students who completed grades five and above increased by 8%, while the number of children receiving no education dropped by 4%.

Flooding was also a problem for Madhusudan Biswal and his wife, Bhanumatib Biswal, who operated a small grocery store in the same village. On the old dirt road, they had to use a bicycle to bring in the food and other items they sell in their store. This required bringing only small amounts and making many time-consuming trips.

"Now, vehicles can reach our village and we can purchase in bulk all the commodities we require," says Madhusudan.

Bhanumatib agreed that the road has had a major impact on their business. "We are earning much more now," she says.

Panchai Swain, a 45-year-old secretary of a women's community organization in the village, says her group earns money through embroidery and making stuffed toys. This required obtaining the thread and other raw materials, as well as transporting the finished textiles and toys to the market to sell.

Before the improved road in the area, these were difficult trips. Today, public buses move along the new road and stop in the village. They can now easily get to the market and as a result, their group's income has more than doubled.

"We want our kids to be educated," she says. "With more income, we can now afford to send our children to school."

On the cutting edge

The effectiveness and impact of the road building project were rigorously evaluated by ADB using a cutting-edge approach to assess how well development organizations were doing their work.

The study looked at how people in an area benefited from a road compared to a similar village that did not receive a road during the same period. This analysis allows an organization to understand if positive results—such as improved school attendance and increased incomes—are attributed to the project, or if other factors, such as a generally improving economy, contributed to the results.

The study conducted on roads built in Madhya Pradesh State found that villages that received new or upgraded roads improved in various ways, unlike similar villages that did not benefit from the improved roads.

Most importantly, the percentage of poor families—measured according to those living below the poverty line—declined by 4.6% in project villages versus 2.8% in the villages that did not receive roads.

Villages with improved roads from the project saw a 61% increase in buses serving them, while other villages experienced a 23% decline. Primary school dropout rates among girls declined by 7.2% in villages without the new roads, and by 9.7% in the areas that received them. The attendance of teachers increased by 5.5% in villages benefiting from the project and declined by 0.3% in unaffected villages.

The study also found that the amount of crops that spoiled during transport to market declined by 9.7% in villages with new roads, and increased by 2.6% in similar villages without the roads.

Inspiring students

At the Industrial Training Center in Parakhanda Village, students come from surrounding areas to learn to be electricians and pipe fitters, and to study other valuable trades that could lead to jobs.

"I am studying so that I can become economically independent and also support my family," says Sandhya Rani Jena, a 19-year-old student who rides to school on a bicycle from her village 4 kilometers away. "The road has certainly inspired more students from neighboring villages to join the center."

Ronjan Kumar, a 30-year-old teacher at the school, said enrollment has increased since the new road was built in the area.

"Two years ago, the village was inaccessible," he says. "When there was no road, there were only about 20 students at the center. Now we have about 60 students. Due to the improved road, the commuting time has also been reduced for students coming from far-off places."

Jitender Biswal and Rakesh Pradhan, who are both students at the school, said the road made studying at the school possible for them and their relatives. One of Rakesh's brothers has finished his studies at the school and has found a good job.

"Improved road access certainly helped us to look at the opportunity to enroll at the center," says Rakesh. "I want to supplement my family's income by getting a job after finishing the electrician course here."

For Jitender, the road was a major factor, as well in getting a chance to study.

"Our village mostly remained marooned due to flood water," he says. "An unpaved track was the only approach to the village. With the road, our connection to other villages and nearby towns has improved. It has also helped students like me from neighboring villages to consider coming here to study."

This article was originally published in [Together We Deliver](#), a publication highlighting successful ADB projects across Asia and the Pacific that demonstrated development impacts, best practice, and innovation.

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