Investing for Our Future

Impact Stories
Ordinary Capital Resources

Asian Development Bank
Since 1968, the Asian Development Bank (ADB), through its ordinary capital resources (OCR), has supported projects that have enabled a dynamic set of countries to build the right infrastructure and create the proper environment for development.

Over the years, ADB, through OCR, has modernized urban and rural transportation systems, brought electricity to poor households, provided poor people access to clean water and sanitation facilities, installed transmission and distribution lines, helped mitigate environmental degradation, and improved the quality of national and local public administration that impacts citizens every day.

Today, OCR-borrowing countries—including three of the world’s four largest and most populous states—are steering their development process in a globalized economy. Their industrialization and urbanization have been large scale and rapid.

Since the first OCR loan to Thailand for $5 million in 1968, ADB’s OCR annual sovereign lending operations have grown to $6.9 billion in 2008. From approval levels averaging about $4.0 billion annually from 2001 to 2005, OCR sovereign lending approvals increased significantly beginning in 2006—in support of critical policy and reform measures, and because of a strong demand for the newly introduced operational instrument, the multitranche financing facility.

Nonsovereign private approvals also continued to increase, reaching $1.78 billion in 2008—and are further expected to reach $2.2 billion by 2010, resulting from a greater geographical diversification of the private sector loan portfolio, and from a significant increase in cofinancing.

Between 1990 and 2005, the number of people living in extreme income poverty based on $1.25 a day was reduced from 1,389 million to 877 million because of rapid progress in Southeast Asia and the People’s Republic of China. Still, OCR-borrowing countries are home to about 64% of the world’s poorest people—those living on the new international poverty line of less than $1.25 a day—and account for the bulk of ADB lending operations.

OCR countries are facing a set of unprecedented global and development challenges—heightened demands on energy, competition over natural resources and raw materials, and environmental degradation—making collective regional and global efforts imperative.

Despite the poverty and social challenges, OCR countries have a large growth potential, and have great physical, financial, and human resources potential for social and anti-poverty programs.

In this publication, we tell stories of how OCR projects have bridged gaps, connected lives, and made successful investments for the future.

Ordinary capital resources-borrowing countries are home to about 64% of the world’s poorest people—those living on less than $1.25 a day—and account for the bulk of ADB lending operations.
Decades of conflict devastated Afghanistan’s already challenged communications systems. Fixed telephone lines are virtually absent in a country with rugged terrain—soaring mountains and wide deserts—as well as limited electricity and poor roads. Postal services don’t work well either, especially with weak demand—the illiteracy rate is roughly 70%. An unstable security situation further contributes to a difficult environment.

Thus, the arrival of mobile phones in Afghanistan represented a telecoms revolution, enabling the country to leapfrog conventional fixed line systems straight to 21st century satellite technology. As a result, families that have been displaced by the conflict can remain connected. Commerce and industry can grow as business owners are better able to search for the best prices and are better informed as to when goods are arriving. Isolated communities can be more integrated into the economy. In a country where remittances play a vital role in the economy, cellular technology enables people to carry out basic banking functions.

Demand for mobile phones was strong from the outset, but service rollout was constrained by limited financing options in Afghanistan’s challenging political and security environment.

Telecom Development Company Afghanistan—operating under the name Roshan, which means “light” and “hope” in the two national languages—is the country’s largest operator with over 2.6 million subscribers. Roshan has been able to expand its mobile network infrastructure nationwide as well as improve its range of services with an assistance package from ADB’s private sector operations. An initial loan of $35 million in late 2004 was followed by a $40 million loan in mid-2006. The second loan was accompanied by a complementary financing scheme of up to $30 million and a political risk guarantee of up to $15 million. In July 2008, ADB provided a third loan of $60 million and a $10 million political risk guarantee.

ADB is helping Afghanistan’s largest telecom operator develop a nationwide mobile phone infrastructure as well as expand cellular services.
levels of society,” says Craig Steffensen, ADB’s Country Director for Afghanistan. “Having access to information and knowledge is as critical for the education of the young—almost half the population is under 15—as it is for the social development of women.” He notes that such communications promote better understanding—and reduce misunderstandings—in a society that is ethnically and linguistically diverse.

Innovative Services

With expansion, Roshan has been able to lower the cost of its mobile phone services, increasing their accessibility to the poor.

As an example of innovative services, Roshan introduced M-Paisa, designed as a mobile wallet. M-Paisa enables the transfer of funds by mobile phone in a quick, easy, safe, and cost-effective way for peer-to-peer transfer, repayment of microfinance loans, purchase of airtime, and salary disbursement. This has brought financial transaction services to a country where only 3% of the population has a bank account. Users can access the service at the push of a button and face less of the risk involved with physical money transfers.

Countrywide, Roshan has set up public call offices—places to call for those who do not have their own mobile phone. Apart from offering a service to the poor, this scheme offers an opportunity for Afghans to learn how to run their own business. Roshan has partnered with First Microfinance Bank in a scheme under which aspiring entrepreneurs can borrow capital to set up a public call office.

Roshan also supports women-only public call offices. This is important in a culture in which the sexes are often segregated.

In another example of using innovative technology, Roshan is installing solar photovoltaic panels to power telecom towers, thus reducing diesel fuel consumption and greenhouse gas emissions. In 2009, Roshan plans to launch Trade Net, which will provide farmers with market prices through text messaging. This will allow farmers and traders to secure the best prices possible for their crops, enabling them to increase their incomes.

Telemedicine: Linking Health Workers with Experts

On a wider level, the provision of mobile telecom services is also helping improve the delivery of essential services such as health care, education, and security.

“Where possible Roshan focuses on using its technology and know-how to bring both innovative social solutions in balanced and culturally sensitive ways to address problems,” says Shainoor Khoja, Roshan’s Director of Corporate Affairs.

Roshan has pioneered a telemedicine project that links doctors in Kabul, as well as a rural hospital in Bamyan, to more experienced staff at the Aga Khan University Hospital in Karachi, Pakistan. The Aga Khan Fund for Economic Development is Roshan’s majority shareholder. This potentially life-saving telemedicine project could play a key role in the reconstruction of Afghanistan’s health care system.

Dr. Khalid Ansari, a radiologist at the French Medical Institute for Children (FMIC), uses telemedicine to transmit imagery from the hospital’s magnetic resonance-imaging scanner to colleagues in Karachi. “If we have
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—Shainoor Khoja
Director of Corporate Affairs, Roshan
Azerbaijan’s oil boom underscores the contrast between Baku and the rest of the country. A new generation of grand hotels and buildings is springing up in the capital beside the palatial residences and civic structures built during the oil bonanza of a century ago.

Outside petroleum-rich Baku, however, the largely agrarian country is still struggling with the transition from the command system of the former Soviet Union to a market economy. It also continues to recover from the effects of the conflict with Armenia in the mid-1990s.

But the divide between capital and countryside is narrowing with the upgrading of a road that starts in Baku, on the Caspian Sea, and traverses the length of the country to Georgia—and Europe and the Middle East beyond. Firmer transport links and shorter travel times will help revive the agriculture and industrial sectors and spur regional growth.

Key sections of the 500 kilometer (km) East-West corridor are being rehabilitated under projects supported by ADB that will cover 127 km at a cost of $170 million. This is part of the larger ADB-backed Central Asia Regional Economic Cooperation program under which eight countries have agreed to spend $18.7 billion to modernize and expand six road and rail corridors that were once part of the Silk Road network between the People’s Republic of China and Europe.

Even with the global downturn, oil accounts for over 90% of Azerbaijan’s export earnings as state and western oil

A rehabilitated East-West corridor has a vital role as Azerbaijan develops a fledgling non-oil industrial base that was wrecked after markets vanished along with the disintegration of the former Soviet Union.

Road to Recovery

By Ian Gill

Upgrading Azerbaijan’s East-West corridor will help revive agriculture and industry after crisis
Azerbaijan’s growing agro-processing sector

Quality Key

Fruit and vegetables provide the base for the country’s agro-processing sector. Key sections of the 500-kilometer East–West corridor have been rehabilitated under projects supported by ADB companies tap deepwater fields and pump oil by pipeline to Turkey. The government is keen to diversify and is allocating more oil revenues—expected to run to hundreds of billions of dollars in the coming years—for infrastructure, including roads. Half the country’s roads are gravel based and 70% of them need repair.

Improving Product Quality Key

Close transport and trade ties with neighbors are critical as much of Azerbaijan’s attraction lies in its being part of a regional bloc. “The multinational companies, we sell Azerbaijan as part of the Eurasia Business Platform that comprises nine countries,” says a Baku-based trade analyst who represents international and local exporters.

An improved East-West corridor has a vital role as Azerbaijan develops a fledgling non-oil industrial base that was wrecked after the painful transition of the Soviet union. “Much of the industrial strategy involves processing agricultural goods and accessing the highly competitive and quality-conscious European markets,” says Emil Majidov, Head of Azerprom, the government agency tasked with encouraging exports and investment.

Majidov is persuading small- and medium-sized producers in the food-processing sector, for example, to come together to improve product quality as well as become more competitive in marketing and distribution.

“But it’s not easy,” he says. “Small companies don’t like working with each other and distrust remains between the public and private sectors.”

The road is also an ally as Azerbaijan seeks to resuscitate an agriculture sector that was stricken after the dismantling of collective farms when the Soviets left.

This is evident around Ganja, the country’s second largest city 430 km west of Baku, where farmers are adjusting to new realities, says Arif Jahangirov, deputy director of the Ganja Regional Consulting Centre, a privately funded agency that advises farmers how to increase productivity.

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Head of Azerprom, the government agency tasked with encouraging exports and investment

Painful Transition

After independence, rural land was redistributed among villagers who received, on average, a one hectare each, depending on the size of the family. The process “is very painful for people who had been only laborers to learn about farming, especially if they didn’t have money to buy farm equipment,” says Jahangirov. The government helped by providing tractors at affordable terms and subsidizing fertilizer.

But now, as Jahangirov is advising, farmers need to band together to achieve economies of scale if they want to revive exports of wheat or grapes to the Russian Federation, for example. So far, this notion is meeting resistance as memories of collective farming remain fresh.

At the village of Morul, 30 km north of Ganja, a former manager of a collective farm is showing the way forward. As well as raising crops and breeding cattle, Oruch Mammedov, 63, is selling seeds to other farmers. He revved up a recently purchased threshing machine that separates seeds from chaff. Now he plans to construct a market in a nearby town so that he and other farmers—who will be offered stalls at a discount—can hopefully negotiate better prices on a group basis. Better roads will help this enterprise, he says.

Typical of the small-scale farmer is middle-aged Növruz Huseynov, who grows potatoes, onions, and pomegranates in his garden and other small lots in the village of Tovuz on the East-West Corridor, 40 km from the Georgian border.

Because of its soil and climate—and a tradition of wine making going back over a thousand years—Tovuz produces excellent grapes. But most villagers opt for smaller, individual enterprises such as cultivating fruits and vegetables and breeding cattle.

For the moment, Huseynov still bumps along a potholed, unpaved road to sell his produce across the Georgian border as far as the capital of Tbilisi, 100 km away. Last year, he and other villagers pooled their onions and trucked them. This year, he hopes to sell potatoes, lifting the straw in his barn to reveal an ample stock. So dependent are villagers on petty trade that, when the Georgian border closed recently, some trekked to Baku, 400 km in the opposite direction.

Just outside Tovuz, trucks are carrying earth and other small lots in the village of Tovuz to Baku, 400 km in the opposite direction.

Road to Recovery

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Project Information

COUNTRY: Azerbaijan
PROJECT NAME: East-West Highway Improvement Project
APPROVED: November 2005
FINANCING:
ADB ordinary capital resources: $49 million, ADB Special Funds resources: $3 million, Islamic Development Bank: $10.4 million, Saudi Fund for Development: $11 million, Counterpart Financing: Government of Azerbaijan: $19.8 million
FOOD SECURITY: General Intervention
SECTOR: Transport and communication
SUBSECTORS: Roads and highways
SUBTHEMES: Promoting economic efficiency and enabling markets, fostering physical infrastructure development
ENVIRONMENTAL CLASSIFICATION: Category B

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ENVIRONMENTAL CLASSIFICATION: Category B
A Mobile Revolution

By Inam Ahmed

ADB assistance to Grameen Telecom has helped provide mobility and connectivity to about 20 million subscribers in Bangladesh—and changed their lives.

Mobile phone operations have penetrated even the remote regions of Bangladesh to open up new business prospects for the people. The country’s mobile revolution began in 1997 with the introduction of the Village Phone program by Grameen Telecom, where ADB’s private sector operations provided an initial investment of $1.6 million in equity and $16.7 million in loans. Grameen Telecom is one of the shareholding companies of Grameenphone and Grameen Bank.

Grameenphone connects users by helping them get better information instantly, and makes them aware that information is a means of increasing returns on investment.

Small traders such as Abdul Khaleq have benefited by cutting out the expense of a middleman to conduct his business.

"[Before Grameenphone], I had to depend on the middlemen to sell my vegetables, and they used to cheat me like anything," Khaleq says. "I had to believe whatever rates they quoted."

Grameenphone connects users by helping them get better information instantly, and makes them aware that information is a means of increasing returns on investment.
But things have changed since he got himself a phone. He now discusses prices from his home and decides which market would fetch him the best price.

Remote Areas Get Access

The change was even more radical in the Chittagong Hill Tracts in the southeast part of the country. After being denied a mobile phone network for security reasons, Grameenphone rolled out its operations there in May.

And now farmer Taio Mroo of Bandarban district, about 450 kilometers from the capital Dhaka, was busy making decisions about picking oranges from the orchard.

“Since we can contact the buyers directly over the mobile, we get better prices,” Taio says. “We can delay the picking if prices are not good.”

Blazing a Trail for Women

With its deep penetration in remote areas where land phones would probably never reach, all types of new ventures are spawning with the fast spread of Grameenphone’s network.

Mobile phone operations have opened up new business prospects for many like Pun Khal Loncheo of Farukpara in Bandarban town. He has set up a cellphone call center where people who cannot afford a mobile phone come to make calls.

“I’m happy not only because it brings me money but also because my neighbors benefit,” he says. Already there was a queue in his shop for mobile use in front of a Grameenphone poster.

Farmers like Mokhlesur Mondal of Poranbaria village in Bandarban are negotiating with traders before going to market.

“Since we can contact the buyers directly over the mobile, we get better prices,” says farmer Taio Mroo.

Plant doctor Piyara Begum (right) advises farmers on pest control of crops.

Shahidul Islam (seated), a disabled person, earns a living by renting his mobile phone to students.

Farmer Mokhlesur Mondal negotiates with traders before going to market.

With its deep penetration in remote areas... all types of new ventures are spawning with the fast spread of Grameenphone’s network.

The villages were hooked up to the world and the tech-shy villagers got used to the technology.

Today, as mobiles have become cheap and widely available, the Village Phone’s popularity has waned, but it still is regarded as a trailblazing scheme with about 250,000 women using the phones commercially. Grameenphone connects users by helping them get better information instantly, and makes them aware that information is a means of increasing returns on investment.

Farmers of Bogra’s Shahjahanpur upazila (subdistrict) found a new way to address their crop problems as the Rural Development Academy (RDA), a government organization, introduced its “Plant Doctor” program. RDA trained a group of local residents on plant diseases and solutions. Each “doctor” carries a mobile.

When Habibur Rahman of Poranbaria village found the leaves of his eggplants dying, he approached his neighbor for the use of his Grameenphone network. Then he called the plant doctor, Piyara Begum. After a few
minutes of listening, he hung up and rang the pesticide dealer in the market. The stock was available, so he hurried off to the shop.

From her house, Piyara was still talking to another client who was unsure whether his land was good for potato growing. “I get so many phone calls a day,” says Piyara, once a village housewife. “They all call me the plant doctor. It’s amazing how they respect me.”

Beyond respect, Piyara also benefits financially from her mobile advice. She gets Tk350 ($5.07) from RDA a month. And grateful farmers often send her a portion of their harvest. Sometimes, they pay her in cash in whatever amount they can afford. “I don’t mind whatever they pay,” Piyara says. “I am now at least earning something and my husband appreciates that. From my savings, I have started a small poultry business.”

Empowering Millions

In Sariakandi upazila, ward commissioner Phuti Begum’s mobile is the only way for the Kajlar char (a small riverine island) villagers to contact the outside world. She bought a

Grameenphone connection 3 years ago mainly to keep in touch with her fellow commissioners and local government chairperson. But then Phuti found that her mobile was in huge demand among the villagers.

“Phuti Apa’s mobile saves unnecessary trips to town to know if the fertilizer supply has come,” says Abdul Barek, a farmer. “One trip to town means 1 day is lost and the trip fare with it, too. Now, I make sure that the supply is there and place my order. Only then do I go to town.”

“There are people who talk to doctors before going to Sarikandi town or who get to talk to their husbands working abroad,” 42-year-old Phuti Begum says. “Sometimes, the husbands call me from abroad and I carry the mobile to their wives.”

Out of ADB’s initial investment, several reinvestments have been made over the years in network facilities that now reach more than 20 million subscribers. Today, mobile networks have ushered in a new wireless revolution and empowered millions across the delta.

In Bangladesh’s rural environs where not even 60% of the population gets electricity, mobile networks have ushered in a new wireless revolution and empowered millions across the delta.
In the crowded Beijing West railway station, Huo Quanfu, a 36-year-old migrant worker from Henan province, is sitting on a pile of luggage. He has been coming to Beijing every year since 2005 to work with the crew maintaining the city’s parks and gardens. Now he is returning to his hometown on the midnight train.

He is among millions of people throughout the People’s Republic of China (PRC) who rely on trains for long-distance travel. Over the past three decades, passenger volume on the railways has grown at an annual rate of 6.7% and topped 1 billion in 2007. Rail is also the main mode of transport for freight. Freight traffic has been rising by an average of 5.3% a year and exceeded 3 billion tons in 2007.

The PRC’s railways have the highest freight density in the world and second highest passenger transport volume after Japan. Their growth rates are putting great pressure on capacity, making the reduction of capacity bottlenecks a key goal.

Key to Growth

Railways stimulate balanced economic growth and efficiency. Transport links to more developed areas and improved transport access to inland provinces lead to direct employment and business opportunities. By creating jobs and income-generating activities for the poor, railways help reduce poverty. Access roads ensure that local farmers can use the railway to transport their products.

Reducing Bottlenecks, Raising Rail Safety

By Lei Kan

As the PRC expands its rail network and adds high-speed trains, an ADB loan is helping upgrade technology and increase security.
A review of three completed railway projects shows that GDP, per capita GDP, rural incomes, and average income per farmer all increased because of the improved access to markets, new jobs, reduced costs of travel, and cheaper goods. GDP increased in the first 3-5 years by 10-12% annually and by about 18% annually over 10 years after project construction in three ADB railway project areas.

Higher personal incomes and increased investments are directly related to the jobs created during the railway construction and to better transportation. For example, before the projects started, 46% of the people were living below the poverty line along the Guizhou–Shuibai railway. The number of poor people decreased by 54.2% over 5 years in the three counties traversed by the Guizhou–Shuibai railway. Along the Shenmu–Yanan railway, the incidence of poverty in the five counties and one district served by the line dropped by 46.5%.

Safety Issues

The government plans to extend and upgrade the rail network—which carries over 1 billion passengers a year— as well as provide more high-speed trains. Along with this rapid expansion, it seeks to increase security and enhance safety.

The safety issue is a challenge as the trains encounter difficult operating conditions amid varying geological features as they crisscross the length and breadth of the country.

The Ministry of Railways wants to attract foreign technology and expertise to meet its needs. In 2007, ADB approved a $100 million loan to help the ministry bring foreign technology and expertise to meet its needs. In 2007, ADB approved a $100 million loan to help the ministry bring foreign technology and expertise to meet its needs. The crew works in three shifts on a 24/7 basis.

Within 30 minutes of receiving an emergency call, the crew must be on their way to the base with an 11-coach rescue train and two rescue cranes. An additional 17 rescue bases will be established across the country.

Because the speed of the rescue trains will increase from 100 km/hr to 120 km/hr, the coverage of each rescue station will be expanded from a 200-km to a 250-km radius.

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Wu says his base has carried out rescue missions more efficiently since receiving a new large-tonnage rescue crane. On average, the new crane has reduced the time spent for rescues by 20% to 30%.

“A strengthened safety management system will include effective and speedy emergency rescue plans and the ability to distribute relief aid properly.”

The project includes a capacity development program to lift staff skills critical for the success of the project.

A few serious train accidents have occurred in recent years that reflect the need for an upgraded safety management system. The worst accident in a decade occurred with a train collision in eastern Shandong province in April 2008, which killed 72 and injured 416. During an earthquake the following month, a 40-car freight train, which included 12 tankers full of gasoline, derailed inside a tunnel and caught fire.

Even as rail capacity increases in the coming years, passengers like migrant worker Huo can expect to travel reliably, conveniently—and safely.

Project Information

COUNTRY: People’s Republic of China

PROJECT NAME: Railway Safety Enhancement Project

APPROVED: November 2007

FINANCING:

• Loan—ADB ordinary capital resources: $100 million
• Counterpart financing—Ministry of Railways: $40 million

POVERTY CLASSIFICATION: General intervention

SECTOR: Railways

THEME: Sustainable economic growth

SUBTHEMES: Promoting economic efficiency and enabling markets, fostering physical infrastructure development

ENVIRONMENTAL CLASSIFICATION: Category C

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Critical to Success

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Seventeen years is not a short period. Citizens in Meihekou City in northeastern People’s Republic of China’s (PRC) Jilin Province—one of the PRC’s poorer provinces, lagging behind in the provision of basic social services—must have never imagined they would have to wait so long to satisfy their thirst for clean drinking water.

As early as 1991, the city’s government identified improved water supply and quality in Meihekou as a top priority. The citizens were faced with tap water that was smelly and foul tasting, especially in springtime.

Frequent Water Shortages

“We used to buy barreled water to wash fruits and vegetables, brew tea, and cook meals because the tap water’s quality couldn’t be safely relied on,” says Wang Sulan, a 63-year-old retiree who heads a family of six. “Besides, the tap water was not supplied 24 hours a day, and we often sat up until midnight to collect a tank of water for washing clothes and taking baths.”

But lack of funds impeded the government’s efforts to construct the needed water plant and pipeline. “Frequent water shortages and poor water quality scared away potential investors and hampered the smooth development of the city,” notes Vice Mayor Bai Tiejun.

The situation remained unchanged until 2003, when a leadership group was set up by the city’s government to collect funds for the project.

On 19 July 2005, ADB approved a $100 million loan package for the province to increase wastewater coverage, boost the supply of potable water, and improve management and use of water resources in the upper Songhua River Basin.

For Meihekou, ADB funded $14.62 million of the total CNY297 million ($43.4 million) needed to improve water supply and treatment. The Meihekou project includes a 40-kilometer water transmission pipeline from the Hailong Reservoir to downtown—running through seven townships and districts, as well as the construction of a water treatment plant.

While constructing the pipelines, constructors had to overcome difficulties caused by bad weather and price fluctuations on building materials. A Meihekou Water Treatment Plant was built to meet local residents’ demand of 100,000 tons of tap water per day and fuel the requirement in the city’s future development.
As a countermeasure, ADB’s Jilin Urban Environmental Improvement Project is also expanding the inadequate wastewater treatment and sewerage system to its capital city of Changchun. The project will significantly reduce pollution in the Yitong and Yongchun rivers that flow into the Songhua River, while helping control floods from the Yongchun River.

Funded by ADB’s loan, a wastewater treatment plant has been established and expanded in Changchun to handle 390,000 tons of urban wastewater each day. "After establishing and expanding the No.1 Wastewater Treatment Plant in a northern suburb of Changchun, we can treat more than 80% of the wastewater produced by the city before discharge," says Duan Guoguang, deputy manager of the Drainage Company under the Changchun Water Affairs Group.

Of the 390,000 tons of treated wastewater each day, 290,000 tons is drained into Yitong River, which is one tributary to the Songhua River, that runs into Russia. The rest of the 100,000 tons will be further treated as intermediate water for a thermal power plant as cooling water.

"The wastewater treatment project is helping to restore the paddy fields and fish again," Sun says. He adds that the improved water quality enables his wife to raise more than 200 geese, chickens, and ducks at home.

Drastic Improvement

Water quality in the Yitong River has improved drastically after the wastewater treatment plant was put into operation more than 1 year ago.

In the past, the paddy field was changed into a corn field due to the water deterioration caused by the drainage of wastewater from the urban area," says Sun Youcheng, another farmer-turned-worker, who lives in a small village along the Yitong River.

He says he had made a living on a 7-mu (0.5 hectare) rice field, irrigated by the nearby river water. "We also raised fish, but they were sparse, and we dared not sell the fish in the market because of the polluted water," Sun says.

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Higher Quality Tap Water

“All 34 indexes of the tap water process have reached national standards, and citizens in Meihekou are assured of enjoying safe, clean, and quality tap water 24 hours a day from now on,” says Li Xiumin, an engineer of the water plant.

The quality of the tap water is much better than that of the groundwater, which contains levels of iron and manganese dozens of times higher than the national standards, she explains. Li’s labs analyze the water and record water samples collected from the water resources, water plant, and residents’ homes.

Meihekou’s situation is better compared with the overall water situation in the PRC, where more and more cities are beset by environmental problems and water shortage and deterioration.

According to estimates, the PRC suffers from an annual water shortage of about 60 billion cubic meters, with water supply not meeting the increasing demand in more than 400 of its 655 cities. At the same time, wasted water and untreated wastewater are ruining the PRC’s water resources in many cities.

The water quality in Yitong River has improved drastically after the wastewater treatment plant was put into operation.
It is 6:30 on a Saturday morning and the Capitaine Tasman, loaded with a cargo of timber and taro, is about to leave Suva’s King’s Wharf, the Fiji Islands’ busiest international port. As the ship glides across the glassy ocean on its voyage to New Zealand, it passes the Pacific Islander II, a car-carrying vessel arriving from Japan. The transition between one cargo ship loading and leaving, and another vessel arriving and unloading appears seamless, but the efficient turnaround is largely due to the Fiji ports development project, funded by ADB and the Fiji ports corporation.

“The project has made Fiji’s two main ports, Suva and Lautoka, the best in the region, comparable with Australia and New Zealand,” says Waqa Bauleka, head of the engineering department at the Fiji Ports Corporation, the executing agency for the project.

Rehabilitated Wharf

Both King’s Wharf in Suva and Queen’s Wharf in Lautoka are located on Viti Levu, the largest of the Fiji Islands. Both ports were built more than 40 years ago, and about 1,000 vessels berth at the ports each year. Back in the 1960s, Fiji Islands’ ports were not protected from earthquakes or other natural disasters, cargo was not moved in containers, and heavy loads were unheard of. Before the project, Suva port’s deck was extremely corroded, riddled with concrete cancer; lighting was poor; and the deck’s ability to withstand heavy cargo loads was also in doubt.

The Queen’s Wharf is the country’s biggest export wharf. Walking along the wharf’s rehabilitated and extended deck, the sharp smell of pine fills the air as wood chips are
Ships are now safer as a result of the project's seismic protection processes.

Impact Stories

Efficiency now, but it was not always like

Lautoka's port may seem a model of infrastructure across the Pacific, and Pacific island countries rely on efficient transport services that will lead to better pricing structures for exports and imports, improved conditions for private sector investment, more jobs, and poverty reduction.

Suva and Lautoka ports are now well positioned to accommodate future growth in trade and guard against natural disasters.

The Fiji Ports Development Project was completed in late 2006. Suva and Lautoka ports are now well positioned to accommodate future growth in trade and guard against natural disasters.

Project Information

COUNTRY: Fiji Islands

PROJECT NAME: Fiji Ports Development Project

APPROVED: March 2002

FINANCING: ADB ordinary capital resources: $16.8 million

CLASSIFICATION: Economic growth

THEME: Sustainable economic growth

ENVIRONMENTAL ASSESSMENT: Category B

PROJECT COMPLETION REPORT: October 2008

PROJECT RATING: Successful

When it was approved back in 2002, she says ADB and the Government of the Fiji Islands decided that extending the life of the Suva and Lautoka ports was a good interim solution to the problems they faced. The Fiji Ports Development Project aimed to extend the life of Suva's port by 15 years, protect the port from earthquakes, improve the wharf deck and container yards to efficiently handle the increasing cargo loads, and extend Lautoka Port to allow three vessels to berth at any time.

The project has significantly enhanced Suva and Lautoka ports' productivity and capacity. Ships can enter and leave the ports faster, both ports are much more organized and streamlined than before, and Suva Port can now withstand earthquakes due to the seismic protection processes that were built into the project.

“We want to mainstream climate-proofing or climate change-adaptation features in infrastructure across the Pacific, and we are hoping to have some additional resources to finance the incremental cost,” says Jarvenpaa.

Mechanized Stevedoring

Once both wharves were upgraded, the conditions were right for the government to invest in mobile cranes that facilitated mechanized stevedoring and raised productivity. The commissioning of the cranes has made Suva and Lautoka ports four times more efficient. On average, 20 containers per vessel are lifted per hour. Ten years ago, the average lift rate was only about five containers per vessel per hour. Security at both ports has also increased due to the government's purchase of 24/7 surveillance cameras.

Now that the harbor cranes are in operation, heavy loads are no problem, thanks to the newly strengthened deck. “The heaviest thing we ever loaded off a ship in Suva was a 180-ton electricity generator,” says Bauleka. “We loaded it on to the newly rehabilitated deck and brought in a specialized trailer from Australia with 40 or 50 axles. It took 3 days for us to deliver it to the Kinoya Power station, 15 kilometers away, traveling mostly at night.” The generator now supports Suva's power supplies.

Transport infrastructure is a major focus of ADB’s work in the Pacific. Geography poses a significant challenge for development in the region, and Pacific island countries rely on international connectivity made possible by international aviation and shipping services. The vast majority of trade in the Pacific is carried by international shipping with countries outside of the region. Suva and Lautoka ports facilitate outbound access to international markets for agricultural and marine products, enabling rural producers to expand their businesses and provide local jobs. The continued development of the Pacific region depends on efficient transport services that will lead to better pricing structures for exports and imports, improved conditions for private sector investment, more jobs, and poverty reduction.

Parmesh Chand, now permanent secretary of the interim Prime Minister's Office, was the chief executive officer of the Public Enterprises Ministry during the project. He says ADB has a long history of working on port infrastructure in the Fiji Islands, and in the future he would like to see more private sector engagement in port operations, particularly in the area of loading and unloading cargo.

Jarvenpaa says the ADB has a long history of working on port infrastructure in the Fiji Islands, and in the future he would like to see more private sector engagement in port operations, particularly in the area of loading and unloading cargo.

The director of ADB’s Pacific Operations Division, Sirpa Jarvenpaa, was the project officer and mission leader on the ports project.
Boosting India’s Wind Power

By Ian Gill

ADB is helping Tata Power become a major player in the increasingly important sector of clean, renewable energy

With their 73-meter “stalks” and 26-meter “petals,” the windmills look from afar like giant plants sprouting atop a mountain plain in a remote corner of India’s Maharashtra state. From this isolated location, these steel towers with rotary blades and turbine engines are helping meet a statewide need. They feed over 100 megawatts of electricity—enough to power several thousand households—into the state grid.

Like most rural areas in energy-starved India, villages around here commonly experience power outages of up to 12 hours a day. Without electricity, such villages are virtually cut off from the outside world, among other deprivations.

The Tata Power Company Limited, part of the diversified Tata conglomerate, is one of the major power producers trying to reduce electricity shortages in a land where demand outstrips supply by some 20% during peak hours.

With encouragement from the state government and assistance from ADB’s private sector operations, Tata Power recently raised its profile in the wind sector—and is now aggressively bidding to become a major player. The company

Like most rural areas in energy-starved India, villages around here commonly experience power outages of up to 12 hours a day.
aims to raise its wind-power capacity substantially by 2017. This is part of Tata Power’s strategy to considerably lift its overall power capacity—it is already active in thermal and hydro power.

Though not firm, wind is a renewable and clean resource that will become increasingly important as countries strive to lower carbon emissions to mitigate climate change and meet Kyoto Protocol commitments.

### Encouraging Business

But wind technology is still relatively costly and remains of doubtful attraction to some commercial enterprises. India is encouraging business to develop abundant renewable energy sources—solar, biomass and small hydro, as well as wind—as part of its goal to provide “power for all by 2012.”

In the highly industrialized state of Maharashtra, the state government is adopting a stick-and-carrot approach. It requires power distributors to procure at least 6% of their input from renewable energy sources by 2010. Failing to do so attracts a stiff penalty. On the other hand, it pays well for wind-provided electricity.

In support of this clean energy program, ADB provided and syndicated a 13-year loan of Rs3.52 billion (about $73 million), or 70% of the project cost, to help Tata Power set up wind farms at two locations, Khandke in Ahmednagar district and Bramhav in Dhulia district. “We provide long-term, fixed interest rate financing that is provided by a few institutions in India,” says Takeo Koike, ADB’s team leader for the project. “Since the tariff is set uniformly by the state for all wind-power projects without reflecting project-specific cost factors, Tata Power wanted to fix all the financing costs for the long run to avoid any risk of higher interest rates. This choice has been proven right in the current global market environment.”

Through its carbon market initiative, a financing scheme that supports the development of clean energy, energy efficiency, and greenhouse gas abatement, ADB is helping the Khandke project qualify as a clean development mechanism project under the Kyoto Protocol with the United Nations Framework Convention on Climate Change.

To strengthen the project’s financial viability, ADB is also prepared to provide upfront financing by purchasing up to 50% of Tata’s anticipated certified emission reductions, says Nishant Bhardwaj, an ADB clean development mechanism consultant. Once approved, Tata expects certified emission reduction payments to form a significant amount relative to the revenue of Rs1.52 (56.07) per kilowatt-hour that it currently earns in sales to Maharashtra’s electricity body.

### Protecting Consumers

To encourage development and protect consumers against rising electricity charges, Maharashtra has set a ceiling of 14% on returns for power development companies. “At the same time, commercial banks are unwilling to finance renewable energy projects with a return of less than 16%,” notes ADB’s Koike, underscoring the role of ADB’s financing.

The global economic uncertainties are impacting India’s economy, but less on its power sector. A huge gap exists between supply and demand, and falling demand is the least of India’s problems.

Tata Power expects to benefit in time from both lessons learned and lower costs resulting from wind technology advances.

Through its carbon market initiative, ADB is helping the Khandke wind-farm project qualify as a clean development mechanism project under the Kyoto Protocol.
On 26 January 2001, India’s most severe earthquake in a century struck India’s Gujarat state. Thousands died and 2 million people lost their homes. Today, several badly damaged towns have been partly reconstructed—with safer homes and better civic amenities.

The painful memories remain, especially as residents have rebuilt their homes on the same land. In Bhachau, for example, where 8,000 people are believed to have died, Bharatpuri Goswami is still coming to terms with losing loved ones as well as his home. “In just 1 day, our lives became a shamble,” he says. He and his family lived in a makeshift tent after the earthquake.

Although parts of Bhachau—and other towns like Bhuj, Anjar, and Rapar—still show signs of damage, other aspects of the rebuilt towns, such as wider roads and better water supply facilities, have improved lives for residents. The surrounding villages, too, have benefited from the reconstruction effort in terms of improved roads and electricity supply.

To assist the effort, ADB approved a $350 million Gujarat Emergency Rehabilitation and Reconstruction Project soon after the quake. The project supported the state government in financing housing, rebuilding urban and rural infrastructure, and restoring power supply and livelihoods, especially in the districts of Kutch, Jamnagar, Surendranagar, and...
Rajkot. To speed up project implementation, ADB set up an Extended Mission in Gandhinagar.

One main challenge of reconstruction was to preserve the culture and ethos of the towns. From the outset, plans were discussed with stakeholders to keep the towns’ former characteristics, particularly historical sites. People were consulted on each aspect of the plans, including the location of public amenities, commercial areas, religious buildings, and road alignments protecting historical sites. Perhaps as a result of this approach, there has been no litigation against the town plans, which is unusual for India.

Capacity Building of the People

The project also succeeded in training people on how to incorporate seismic safety features in rebuilding structures and how to get quality construction materials in these remote locations. The state embarked upon a huge capacity-building exercise that included sending 750 teams—with local engineering students trained by experts—to educate people on seismic and cyclone safety features. This effort was backed by an extensive campaign through media, street plays, demonstrations using models, and establishing quality-testing laboratories, including mobile audit-testing units to make sure building materials adhered to specified standards.

Nearly 42,000 out of the 172,000 homeowners who received financial aid from the government to rebuild houses are today living in homes with earthquake-resistant features. Numerous nongovernment organizations (NGOs) and local voluntary organizations have been partners in the rebuilding.

Improved Infrastructure

Water supply systems were also improved under the project. Drinking water, which had previously been a once-a-fortnight luxury for the people of Kutch, is now being distributed more regularly under systems carried out by communities in partnership with NGOs. As a result, women and children who used to trek for several hours every 2 days to fetch drinking water now have more time for income-generating activities and school. Men, too, spend far less time than in the past searching for water for their cattle. Nearly 80% of households have access to piped water supply, compared to 30% before the earthquake. Others draw water from public fountains.

In all, 925 out of the 949 villages in Kutch now have electricity. Some 3,600 kilometers of all-weather rural roads were established, linking quake-affected villages to a state or national highway. Increased access to markets has led to industry-type investments, which, in turn, has generated jobs.

The improved infrastructure, which includes sewerage and sanitation facilities and public buildings as well as potable water and power, has paved the way for more opportunities for economic development.

More Opportunities for Women

Just as importantly, the project facilitated social and economic activities for women, many of whom are artisans, weaving or making handicrafts for sale. As the earthquake left many of these women with little or no assets, the project provided the funds to help restore their enterprises. Such measures helped over 16,000 women in five earthquake-affected districts. As a result, the level of employment among women rose from 34% soon after the earthquake to 93% today. Incomes have also increased, according to most respondents in a benefit and monitoring survey.

Yet out of tragedy has emerged another intangible, yet palpable, force: a binding community spirit, evident in people’s affection for one another and willingness to help each other out. People have taken opportunities arising out of catastrophe to make a better life.

Project Information

COUNTRY: India
PROJECT NAME: Gujarat Earthquake Rehabilitation and Reconstruction Project
APPROVED: March 2001
FINANCING: ADB ordinary capital resources: $350 million
POVERTY CLASSIFICATION: Poverty Intervention
SECTOR: Multisector
THEME: Economic growth
ENVIRONMENTAL CLASSIFICATION: Category B
PROJECT COMPLETION REPORT: September 2008
PROJECT RATING: Successful

• More than 16,000 women in five earthquake-affected districts were provided with funds to help restore their enterprises
• Nearly 42,000 out of the 172,000 homeowners who received financial aid from the government to rebuild houses are today living in homes with earthquake-resistant features
• Improved infrastructure, which includes sewerage and sanitation facilities and public buildings as well as potable water and power, has paved the way for more opportunities for economic development
For several decades, when farmers and traders from the agricultural district of Kulon Progo had to bring their produce to the market in the city, they had to stop by a transit area at the foot of a bridge that crosses the Progo River, which divides the eastern and western sides of Yogyakarta province, in south-central Java, Indonesia.

There, they had to wait as their load was transported, batch by batch, by two-wheeled transportation, as the bridge could not carry anything larger.

“People would pile chickens, eggs, and coconuts onto bikes or motorbikes,” recounted the head of Srandakan village. “Because of this, accidents were common.”

Though the bridge, which was built in 1929, has become as much a part of the local people’s culture as the produce they bring to market and the bikes on which they pile seemingly improbable volumes of goods, in 2003, it gave way under the weight of its age. Though wooden remedies were applied, it was clear that the bridge had already outlived its purpose.

By Jet Damazo

Part of a $250 million road rehabilitation project in Indonesia, a new bridge is boosting trade and helping preserve social and cultural connections.
“I think it was a blessing in disguise that the bridge finally gave way,” says Bayudana, an engineer from the Provincial Public Works for Srandakan Bridge.

Thus, in 2006, work began on the new Srandakan Bridge—a 626-meter long, 11-meter wide structure just a few meters away from the old one—as part of an ADB-funded road rehabilitation project.

Part of History

The $250 million project, 76% of which was funded by the ADB loan, supported national and provincial road networks in 17 provinces throughout the country. While the Government of Indonesia recognizes the importance of infrastructure, the 1997 Asian financial crisis had left it with limited funds and preoccupied it with urgent issues such as macroeconomic stabilization and corporate sector restructuring. Spending for roads and bridges, therefore, needed external aid.

In May 2006, however, tragedy struck. A 6.3-magnitude earthquake rocked Yogyakarta, leaving more than 5,000 dead and 36,000 injured. Hundreds of thousands more were left homeless and roads and bridges—including the old Srandakan Bridge—were damaged.

The task at hand became even more urgent. For about a week after the earthquake, the old bridge was completely unusable and residents had to take a 2-hour long detour. The provision of immediate aid was hampered as well. The fateful incident served to further highlight the importance of the new bridge.

On 26 May 2007, exactly 1 year after the earthquake, the new Srandakan bridge was inaugurated.

Today, traders in trucks and commuters in buses cruise along the new bridge daily, within a stone's throw away of the old one where children and bicycles still pass—a step into modernity without forgetting the legacy of the past.

“I’m grateful for the new bridge but the old bridge must be kept,” says Manto, a resident who lives and sells bird cages and bird feeds at the foot of the old bridge. “It is part of our history,” he adds. Even though fewer people pass by his store now, he has his regular customers, he says, and he appreciates the relative quiet.

Farmers and traders, too, appreciate the faster and easier means of transporting their goods. Sutrisna Prasetya, a coconut oil producer in Bantul, says he is able to order more coconuts now from farmers in Kulon Progo.

Commerce and Learning Linked

New buildings have also cropped up along the roads leading up to both sides of the bridge, with village shops opening up to take advantage of the traffic.

But the village head says the benefits brought about by the bridge extend well beyond farmers and traders, and beyond Bantul and Kulon Progo—the two districts it connects.

“This bridge has been very beneficial not only to the economy of our village but also to our social and cultural welfare as well,” he says.

Yogyakarta City, for instance, is considered a center of art, culture, and learning in Indonesia and the bridge has made it easier for local students and teachers from the eastern side of the province to take advantage of this.

The bridge has significantly improved access to health-care facilities and to the airport in Yogyakarta City as well. “The impact is even felt on the southern side of Java,” says Bayudana. “The Srandakan bridge is proof of the theory that to open up an isolated area,” he says, “build roads and bridges.”

Project Information

COUNTRY: Indonesia
PROJECT NAME: Road Rehabilitation Sector Project
APPROVED: December 2000
FINANCING: ADB ordinary capital resources: $190.0 million, Government of Indonesia: $60.0 million
THEME: Economic growth
SECTOR: Transport and communications
SUBSECTOR: Roads and highways
ENVIRONMENTAL CLASSIFICATION: Category B
PROJECT COMPLETION REPORT: August 2008
PROJECT RATING: Successful
Hydropower Helps
Lift Rural Communities

By Floyd Whaley, Edvard Baardsen, and Somkiao Kingsada

The $1.25 billion Nam Theun 2 Hydroelectric Project in central Lao PDR is improving the economic landscape in one of Asia’s poorest countries.

In the remote jungles of central Lao People’s Democratic Republic (Lao PDR), a landmark experiment has been going on. A vast array of hard hats and heavy machinery has been working on a project that has been changing the lives of thousands of families and boosting the economy of one of Asia’s poorest—and most promising—countries.

The $1.25 billion Nam Theun 2 Hydroelectric Project (NT2) has set the standard for the construction of “good dams”—those that address environmental and social impacts, and steer revenue toward a country’s neediest people.

NT2—as the project is often called—is the result of studies beginning in the late 1970s of the hydroelectric power potential of the Nam Theun River, a tributary of the Mekong. The potential was there, but in the 1980s and 1990s, few major investors were willing to back large hydroelectric projects.

The World Commission on Dams renewed the debate on such megaprojects by recommending that they be undertaken in conjunction with extensive public consultations on environmental and social impacts. NT2 represents an attempt to live up to the high standards set by the commission.
The innovative financing partnership brought together 27 different financial institutions—both public and private—from around the world.

“With a total project cost equivalent to more than 80% of the country’s annual gross domestic product, this is the single largest foreign investment in the Lao PDR’s history,” says John Conney, a former director of Infrastructure for ADB’s Southeast Asia Department. “But this is also the world’s project, with partners from around the globe.”

NT2 will export about 5,354 gigawatt-hours of electricity annually to Thailand and provide revenue to the Lao PDR through taxes, royalties, and dividends. This will generate about $1.9 billion in foreign exchange earnings for the government over the 25-year operating period, expected to begin in December 2009. This will bring in about $80 million a year. After 25 years, the project will be turned over to the Lao PDR Government at no charge, and with low operational costs. It is expected to continue operating and generating revenue for the Lao PDR Government for another 75 years after the turnover.

An economic impact study conducted in advance of the project estimated that the Lao PDR’s gross domestic product will increase by 3.2% (without an increase in inflation) as a direct result of NT2.

Once operational, the project’s revenue is expected to make up 7–9% of the government’s annual national budget.

The money generated by the project will be sourced through a carefully designed and monitored revenue management plan that will work toward reducing poverty and developing the country. To deal with the influx of foreign exchange, and with the assistance of its development partners, including ADB, the government is instituting extensive reforms of the country’s public finance and expenditure management systems.

Pristine Area Preserved

Ten percent of the project’s total cost will go toward funding the environmental protection and social safeguards built into NT2. The company will give significant assistance for the duration of the concession period to the government for the conservation of the Nakai-Nam Theun National Protected Area, a pristine area in the Annamite mountain range upstream of the dam that contains some of the most natural areas in Southeast Asia.

Today, about 1,240 affected households have moved to permanent resettlement sites where they benefit from better houses, better roads, clean water, schools, and regular health checkups, and have permanent agricultural land and livelihoods provided by the project.

In the Nakai Plateau in Khammouan Province, 16 villages were isolated in the jungle, home to more than 6,000 ethnic groups living in dilapidated huts with leaking roofs. The villagers—many still illiterate—used and drank unclean water from the Nam Theun River. They hunted for food and relied on a slash-and-burn method of farming.

Selling Forest Products

A few years ago, Kham Sy, a 14-year old boy, lived in one of these villages, named Bouama, with his family of seven in a tiny bamboo house. “When the rain came we had to use big leaves to cover holes in the roof,” he says.

Their home had no toilet, and the one room they had served as the bedroom, kitchen, and living room. “My two brothers stopped going to school to help my parents search for food and to sell forest products to buy me a school uniform,” he adds. “I had to wash my school uniform in the river every day so I could wear it again the next day.”

He walked 2 hours to go to school every day. “When it rained, I couldn’t attend my classes because the walking path to town went under water.”

In a new home built through livelihood provided through the project, Kham Sy can now read his school books with electric light. “I can now reach my school in 15 minutes on a motorbike that my parents bought,” he says.

His mother earns 150,000 kip ($17.58) per month selling vegetables that she grows in their backyard. “Now, I have three school uniforms. My younger brothers can now go to school, only 5 minutes to a school provided by the project in the village.” He adds, “We have rice, chicken, and vegetables the whole year round and my parents don’t have to worry anymore about selling vegetables in the market of a nearby village because of the new paved road.”

By April 2008 more than 6,000 people in 16 villages had been resettled. To make sure that the lives of those resettled are improved, and that the programs being implemented that will do this reflect the peoples’ wishes, more than 300 consultations and workshops were conducted with the people in the project area. In addition, a development program is being implemented for about 200 villages in the downstream areas affected by the project.

Many villagers are getting healthy and child mortality rate has been reduced,” says Chan Thone, chief of Bouama village.

Despite an unprecedented level of safeguards built into the project and a high level of public scrutiny as to how they are developed, implementing the project has been a challenge for development professionals who hope that “good dams” of the future can become a powerful tool for fighting poverty while addressing critical energy needs.

**Project Information**

**COUNTRY:** Lao People’s Democratic Republic

**PROJECT NAME:** Greater Mekong Subregion Nam Theun 2 Hydroelectric Project

**APPROVED:** March 2005

**FINANCING:**
- Equity—Government of Lao PDR: $87.5 million, Electricité de France International: $112.5 million, Electricity Generating Co.: $87.5 million, Italian: $212.5 million

**POVERTY CLASSIFICATION:** General Intervention

**SECTOR:** Energy

**SUBJECT:** Hydropower generation

**THEME:** Sustainable economic growth, private sector development

**SUBTHEME:** Public-private partnership

**ENVIRONMENTAL CLASSIFICATION:** Category A

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![Image of resettled villagers are becoming healthier and child mortality rates have fallen.](image-url)
An innovative partnership between ADB and the Fauji Foundation helped establish Pakistan’s first and only oil terminal and distribution facility in the private sector—Fauji Oil Terminal & Distribution Company Limited (FOTCO).

In the early 1990s, a technical study conducted by ADB highlighted the need for an oil handling facility in Pakistan. Later, ADB provided a loan of $19 million for the establishment of an oil terminal and distribution facility on a build-operate-own basis. In 1993, ADB also approved an additional equity investment of $1 million, and arranged a complementary cofinancing loan of $25 million for the FOTCO project.
An Environment-Friendly Facility

FOTCO is located in an environmentally sensitive area, comprised of lush green mangrove forest and an array of marine life such as fish and shrimp. In winters, the site is also a favorite destination of trans-Siberian migratory birds.

“We are conscious of the environmental significance of the area, and have been working with many local and international conservation organizations, like the International Union for Conservation of Nature, to preserve the sensitive natural surroundings. In addition to protecting the existing mangroves, we have set up a nursery to grow mangrove plants which are being planted in the vicinity to contain soil erosion,” says Hassan Sobuctageen, senior manager, operations and technical services.

The facility is maintaining high standards in environmental safeguards, and follows a zero-spill record policy. "You can see, although our jetty has been in use since 1995 and has been handling large volumes of oil, it is as clean as a slate. We receive tremendous appreciation from our clients and captains of visiting ships for the hygiene and maintenance standards," Sobuctageen adds proudly.

Fully operated by local engineers and technicians, FOTCO is an ISO-certified organization for quality management, safety and operational standards.

ADB's investment has now matured into a flourishing oil distribution facility that is handling about 4 million tons each of high furnace oil (HFO) and high speed diesel, and three quarter of a million ton of crude annually.

"ADB played a critical role, not only in financing the project but with facilitating the dialogue between investment partners," says Ali Abbas, secretary of the FOTCO board of directors. "ADB's strong relations with the Government were instrumental in driving the project forward through difficult negotiations to the stage where it stands at the moment."

Located at Port Qasim about 35 kilometers to the east of Karachi, FOTCO—currently the largest petroleum handling facility in the country—serves as the front-end of Pakistan's entire thermal power sector.

Presently, it houses a jetty capable of handling up to 75,000 ton vessels, and has one 36-inch diameter product pipeline for HFO and one 30-inch diameter pipeline for handling high speed diesel and crude oil, three 16-inch diameter-loading arms, and a 4-kilometer long trestle connecting the jetty with the shore.

Equipped with state-of-the-art fire sensing and/or extinguishing technology, the terminal and staff are fully capable of mitigating risks. FOTCO is currently owned by Fauji Foundation of Pakistan and INFRATECH Limited of Hong Kong, while National Bank of Pakistan and Banker’s Equity Limited owns partial equity.

FOTCO is capable of handling 9 million tons of oil per annum with a growth potential of more than 27 million tons. It has the capacity to handle various types of petroleum products including diesel, HFO, and crude, but to build on its overall oil handling capacity, FOTCO is planning to add a new berth, with a price tag of about $65 million, in anticipation of growing oil handling demands.

"Presently, FOTCO is handling white oil and HFO for transportation to northern parts of the country and for power plants respectively. In addition to this, it is also catering to crude oil handling needs of the country. FOTCO is working closely with partners, particularly with the government departments concerned to enhance its infrastructure and service capabilities. This, FOTCO believes, can be done by maintaining a robust business development strategy aimed at promoting investment on commercial basis," adds Bhatty.

FOTCO terminal is set to play an important role in Pakistan’s maritime operations by providing a safe, efficient, and smooth handling of the country’s fuel requirements.

Timely completion of the project and operational success enabled FOTCO to repay ADB loans before the actual maturity date. ADB has now divested its equity, and the facility stands out as another successful model for ADB’s private sector investment in Pakistan.

The Way Ahead

“We are optimistic about future prospects. The terminal is designed to provide for three additional berths and four product pipelines that can be built in a short span of time to meet future oil handling requirements. We feel that FOTCO is well positioned to maintain its leadership in the sector in foreseeable future,” says Masood A. Bhatty, FOTCO’s business development manager.

FOTCO is located in an environmentally sensitive area, comprised of lush green mangrove forest and an array of marine life such as fish and shrimp. In winters, the site is also a favorite destination of trans-Siberian migratory birds.

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Fully operated by local engineers and technicians, FOTCO is an ISO-certified organization for quality management, safety and operational standards.

"ADB played a critical role, not only in financing the project but with facilitating the dialogue between investment partners”

—Sali Abbas
Secretary, FOTCO Board of Directors

Project Information

COUNTRY: Pakistan
PROJECT NAME: Fauji Oil Terminal and Distribution Company Limited
APPROVED: September 1993
FINANCING: ADB Loan: $19 million (without Government guarantee), Equity: $1.6 million
THEME: Economic growth
SECTOR: Energy
For the 194 students of Rizal National High School, going to school even under normal circumstances involves daily hardship as they trudge through mud and up rugged hills.

Some students live as far as 5 kilometers away and spend an hour walking to school. Once inside, they exchange their muddy rubber slippers for proper shoes, which they do not want to ruin in the mud outside.

As many are the children of poor farmers, malnourishment is widespread. The school boosts attendance through a daily feeding program where parents take turns bringing a simple lunch for the entire school. This way, students will not have to leave school at lunchtime or drop out because of hunger.

Their daily grind is not helped by living in one of the 10 most disaster-prone provinces in the Philippines—Southern Leyte. A landslide disaster that hit the province in February 2006 was the worst in a decade, killing more than 1,000 residents, and causing the relocation of about 5,700 families and damage estimated at more than $3 million, including abandonment of 52 school buildings.

Yet, despite these hardships and just 1 week after the landslide disaster, this school topped the league in the National Achievement Test (NAT). The province was also home to the top three finishes at freshman level in the NAT, while eight of its national high schools were in the top 30.

**Topping the Exams**

Rizal National High School teacher-in-charge Margarita Badeo says she initially thought it was a school in Metro Manila with the same name that topped the exam. “I was shocked. I did not expect it,” Badeo says, feeling happy at their achievement but overwhelmed by the responsibility of now keeping up with people’s high expectations.

Helping create such success has been the dedication and hard work of the students, staff, and education establishment in the province. In addition, an ADB project approved in 1998 has been working in the province to boost access to and quality of education.

The Secondary Education Development and Improvement Project (SEDP), backed by an ADB loan of $53 million, has helped a million high school students.

“**The project played a very significant role in influencing learning. It has revitalized learning in the classroom**”

— Violeta Alocilja
Division Superintendent, Southern Leyte schools

**Students Top Class Despite Disaster**

By Rita Festin

A hardship-prone province in the Philippines topped rankings in national secondary school exams through an innovative curriculum and alternative approaches.
school students in 26 of the country’s poorest provinces with low enrollment, completion, and student performance levels.

“SEDIP played a very significant role in influencing learning,” says Southern Leyte schools division superintendent Violeta Alocilja. “It has revitalized learning in the classroom.”

Alocilja adds that the project has significantly developed the competence of head teachers to lead the schools and has ensured teachers are properly trained.

Under the project, school heads have been trained in planning and management while teachers were trained in their subject and teaching skills. The project has provided textbooks for all students in core subjects. Under the project’s secondary schooling innovative schemes had to be developed, including the school feeding systems, such as the one in use at Rizal.

Under the project’s secondary schooling alternatives component, students at risk of dropping out are assisted. Some principals and teachers adopt their own “scholars,” generally with funds from their own pocket. For some of those that could not attend school regularly, the project designed an alternative secondary education program.

In second-place Marayag National High School, a beachfront establishment a few meters from the sea in San Francisco town, students face different challenges of access to those of the Rizal students. Children cannot wear shoes to go to school because it makes their feet swell when walking through the sand. Some wake up at 4 a.m. every day to catch the school bus.

Best Practices

The school nonetheless has many best practices, not just in the scholastic field with its conducive learning atmosphere but also in the arts as well. It has classes in painting, pottery, and bonsai gardening.

“We are very happy that we got second place because our hard work in the daily reviews did not go to waste,” says Marayag second year high school student Daryl Aure, who was one of the students who took the NAT.

For the exams, teachers and students pumped in months of intense review and extra school hours that spilled over into the weekends. When the landslide occurred, then Education Secretary Fe Hidalgo gave the district the option to cancel the exams but the teachers decided to go through with it.

Students started reviews as early as the previous July for the exam, which was held in March. “By doing this preparation, we can improve more... move higher,” says Rico Amper, principal of third-placed Pintuyan National High School, which is located on a hill in the heart of Pintuyan town, overlooking the sea. The last time the school placed high in a national exam was the 1990s when he was still a young teacher.

Parents and students at Pintuyan sign a learning contract where they vow not to let the children miss school, even the special weekend classes when they are supposed to be farming, fishing, or doing household chores.

Parents and students see the extended school days since they know it is for their children’s sake.

“Parents should also spend time with their children so that their children will be guided during study hours, ideally after dinner at least 1 hour a day, doing their assignments,” says Indalecia A. Sumulat, school principal of Marayag National High School. “Because education starts at home, parents play a major role.”

With an average ratio of 40 to 50 students in a class in this province, teachers are actually better off than in many areas of the Philippines, where class size can be double that number.

Hands-On Supervision

A few years ago, the Southern Leyte schools ranked second to last in the region. But within a year of Alocilja’s appointment to Southern Leyte in 2003, the area climbed up the list of SEDIP schools to number 3 in the whole region. By 2005, it already ranked 4 among SEDIP divisions in the Eastern Visayas region.

The school heads attribute their schools’ performance to the hands-on supervision of their division superintendent. “Her words are very powerful,” Badeo says of Alocilja who, despite recovering from multiple strokes, has a reputation for being strict. Sumulat also cites the superintendent’s guidance and motivation. “She is always telling us to review, review, and make strategies to sustain and maintain that rank.”

But for her part, Alocilja is quick to give credit to her teachers and school heads. “I really got the best of them all.,” she says.

The superintendent emphasizes the need for students to develop good communication skills. “If you are weak in English, you are weak in all subjects,” she says. “You can’t compete in the world if you’re not well-grounded in English and reading. It opens up a whole world of adventure, building the confidence of children to face the world and meet its challenges.”

The project has helped a million high school students in 26 of the country’s poorest provinces with low enrollment and student performance levels.
About this publication

Since 1968, the Asian Development Bank (ADB), through its ordinary capital resources (OCR), has supported projects that have enabled a dynamic set of countries build the right infrastructure and create the proper environment for development.

Over the years, ADB, through OCR, has modernized urban and rural transportation systems, brought electricity to poor households, provided poor people access to clean water and sanitation facilities, installed transmission and distribution lines, helped mitigate environmental degradation, and improved the quality of national and local public administration that impacts citizens every day.

In this publication, we tell stories of how OCR projects have bridged gaps, connected lives, and made successful investments for the future.

About the Asian Development Bank

ADB’s vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries substantially reduce poverty and improve the quality of life of their people. Despite the region’s many successes, it remains home to two thirds of the world’s poor. Nearly 877 million people in the region live on $1.25 or less a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance. In 2008, it approved $8.7 billion of loans, $811 million of grant projects, and technical assistance amounting to $275 million.