



TOGETHER WE DELIVER 2014

From Knowledge and Partnerships to Results



TWD

TOGETHER WE DELIVER 2014

From Knowledge and Partnerships to Results



Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO)

© 2015 Asian Development Bank
6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines
Tel +63 2 632 4444; Fax +63 2 636 2444
www.adb.org; openaccess.adb.org
OARsupport@adb.org; publications@adb.org

Some rights reserved. Published in 2015.
Printed in the Philippines.

ISBN 978-92-9254-883-4 (Print), 978-92-9254-884-1 (e-ISBN)

Publication Stock No. ARM157116-2

The views expressed in this publication are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO) <https://creativecommons.org/licenses/by/3.0/igo/>. By using the content of this publication, you agree to be bound by the terms of said license as well as the Terms of Use of the ADB Open Access Repository at openaccess.adb.org/termsfuse

The CC license does not apply to non-ADB copyright materials in this publication.

Note: In this publication, “\$” refers to US dollars.










Printed on recycled paper



<http://bit.ly/1Flvn5m>

Contents

List of Partners and Contributors	iii
Foreword	ix
Introduction	xi
	
Azerbaijan A Big Boost for Small Businesses	2
	
Bangladesh Transforming Communities, Changing Lives	12
	
People's Republic of China Switching on to Clean Energy	22
	
People's Republic of China Saving a Vital Ecosystem	32
	
Cambodia, the Lao People's Democratic Republic, and Viet Nam A Welcome Change for Visitors	44
	
India From Surviving to Thriving	54
	
Mongolia A Teaching and Learning Revolution	62



Nepal
Washing Away Barriers

72



Pakistan
Building Back Better

82



Papua New Guinea
Banking the Unbanked

92



Tajikistan
A Road More Traveled

102



Viet Nam
Saved by Modern Medicine

110

Conclusion

120

List of Partners and Contributors

Project Teams

Azerbaijan: Private Banks and Leasing Companies in Azerbaijan

Private sector: AccessBank (Farida Pirverdiyeva, Michael Hoffmann, and Tatyana Maslova).

Development partners: European Bank for Reconstruction and Development, International Finance Corporation, KfW, Deutsche Entwicklungsgesellschaft, and European Investment Bank.

ADB: Todd Freeland, Michael Barrow, Christine Engstrom, Olly Norojono, and Rainer Hartel.

Bangladesh: Urban Governance and Infrastructure Improvement (Sector) Project

Government of Bangladesh: Local Government Engineering Department under the Local Government Division of the Ministry of Local Government, Rural Development and Cooperatives; and the *pourashavas* of Faridpur, Moulvibazar, Narayanganj, and Narsingdi.

ADB: Hun Kim, Diwesh Sharan, Kazuhiko Higuchi, and M. Rafiqul Islam.

People's Republic of China: Gansu Clean Energy Development Project and Gansu Heihe Rural Hydropower Development Investment Program

Government of the People's Republic of China: Gansu provincial government and Zhangye city government.

State-owned enterprises: Heihe Hydropower Development Company (Dagushan Hydropower Company, Erlongshan Hydropower Company, and Xiaogushan Hydropower Company).

ADB: Ayumi Konishi, Amy Leung, Hamid Sharif, Ashok Bhargava, and Xinjian Liu.

People's Republic of China: Sanjiang Plain Wetlands Protection Project

Government of the People's Republic of China: Heilongjiang provincial government (represented by Heilongjiang Provincial Forestry Department); county governments of Baoqing, Boli, Fuyan, Hegang, Huanan, Hulin, Jidong, Jixian, Linkou, Luobei, Mishan, Qitaihe, and Raohe (represented by the forestry bureaus); and Anbanghe, Dajiahe, Naolihe, Qixinghe, Xingkaihu, and Zhenbaodao nature reserves.

Cofinancier: Global Environment Facility.

ADB: Ayumi Konishi, Amy Leung, Hamid Sharif, Qingfeng Zhang, and Yoshiaki Kobayashi.

Cambodia, the Lao People's Democratic Republic, and Viet Nam: Greater Mekong Subregion: Mekong Tourism Development Project

Government of the Kingdom of Cambodia: Ministry of Tourism, Ministry of Public Works and Transport, Phnom Penh Capital City, State Secretariat for Civil Aviation, Department of Public Works and Transport in Siem Reap Province, and tourism departments of Stung Treng and Rattanak Kiri provinces.

Government of the Lao PDR: Ministry of Information, Culture and Tourism, departments of public works and transport in Luang Prabang and Khammouan provinces, Department of Civil Aviation in Luang Namtha, and provincial tourism departments.

Government of the Socialist Republic of Viet Nam: Viet Nam National Administration of Tourism, An Giang and Tien Giang provinces, and An Giang and Tien Giang provincial people's committees.

Mekong Tourism Coordinating Office.

ADB: James Nugent, Ramesh Subramaniam, Eric Sidgwick, Tomoyuki Kimura, Sandra Nicoll, Alfredo Perdiguero, Anupma Jain, Steven Schipani, Nida Ouk, Khamtanh Chanthy, and Do Nhat Hoang.

India: Karnataka Urban Development and Coastal Environmental Management Project

Government of India: State government of Karnataka, Karnataka Urban Infrastructure Development and Finance Corporation, and municipal corporations of Mangalore and Kundapura.

Nongovernment organizations: Mysore Resettlement and Development Agency for Karwar Region, and Shree Kshetra Dharmasthala Rural Development for Mangalore Region.

ADB: Hun Kim, Diwesh Sharan, M. Teresa Kho, Kanupriya Gupta, Saugata Dasgupta, and Yashpal Patwal.

Mongolia: Third Education Development Project

Government of Mongolia: Ministry of Education, Culture and Science (Tsedevdorj Chimedlkham, Ulziimend Ganbold, Jamts Narantuya, and Bandii Radnaa).

Civil society organization: Institute of Education.

ADB: Ayumi Konishi, Amy Leung, Robert Schoellhammer, Wolfgang Kubitzki, Eisuke Tajima, Jazira Asanova, and Asako Maruyama.

Nepal: Community-Based Water Supply and Sanitation Sector Project

Government of Nepal: Ministry of Physical Planning and Works, Department of Water Supply and Sewerage, district development committees of and village development committees in Achham, Baitadi, Bajhang, Bajura, Dadeldhura, Dang, Darchula, Dailekh, Dolpa, Doti, Gulmi, Humla, Jajarkot, Jumla, Kalikot, Kapilvastu, Mugu, Pyuthan, Rolpa, Rukum, and Salyan.

Civil society organizations: 174 CSOs including Neo-Nepal, Public Progress Social Development Center, and Rural Development Service Center.

ADB: Hun Kim, Diwesh Sharan, Kenichi Yokoyama, and Laxmi Sharma.

Pakistan: Earthquake Emergency Assistance Project

Government of Pakistan: Earthquake Rehabilitation and Reconstruction Authority, Provincial Earthquake Rehabilitation and Reconstruction Agency, State Earthquake Rehabilitation and Reconstruction Agency, Ministry of Finance, provincial government of Khyber Pakhtunkhwa, Peshawar Electricity Supply Company, and Islamabad Electricity Supply Company.

Cofinanciers: European Union; governments of Australia, Belgium, Finland, and Norway.

ADB: Klaus Gerhaeusser, Hong Wang, Werner Liepach, Mian Shafi, and Muzaffar Bukhari.

Papua New Guinea: Microfinance and Employment Project

Government of Papua New Guinea: Bank of Papua New Guinea.

Private sector: Papua New Guinea Institute of Banking and Business Management, Nationwide Microbank, East New Britain Savings and Loan Society, Kada Poroman Microfinance, Manus Savings and Loan Society, National Development Bank, National Farmers Savings and Loan Society, Niu Ailan Savings and Loan Society, PNG Microfinance, Sepik Savings and Loan Society, Ambumangre Catholic Women's Credit Scheme in Chimbu Province, and Bogia Cooperative Society in Madang Province.

Development partner: Department of Foreign Affairs and Trade of the Government of Australia.

ADB: Xianbin Yao, Noriko Ogawa, Andrea Iffland, Sabine Spohn, and Milovan Lucich.

Tajikistan: Dushanbe-Kyrgyz Border Road Rehabilitation Project (Phase II)

Government of Tajikistan: Ministry of Transport, Ministry of Health, and National HIV/AIDS Center.

Cofinancier: OPEC Fund for International Development.

ADB: Klaus Gerhaeusser, Hong Wang, Chang Ching Yu, Xiaohong Yang, Zheng Wu, Rika Idei, Farrukh Nuriddinov, and Nana Kvanchiany.

Viet Nam: Health Care in the Central Highlands Project

Government of Viet Nam: Ministry of Health (Nguyen Thi Kin Tien, Ha Van Thuy, Nguyen Thi Mai An), Gia Lai Province-Department of Health (Mai Xuan Hai), Kon Tum Province-Department of Health (Nguyen Thi Ven).

Development partner: Swedish International Development Cooperation Agency.

ADB: James Nugent, Ramesh Subramaniam, Tomoyuki Kimura, Gerard Servais, Nguyen Nhat Tuyen, and Randolph Dacanay.

Publication Team

This publication was jointly developed by the Department of External Relations and the Strategy and Policy Department under the guidance of Indu Bhushan, Satinder Bindra, and Xiaoqin Fan. The team was led by Kanokpan Lao-Araya and supported by colleagues from the Strategy and Policy Department (Bruce Heilbuth, Mark Blackwell, Norman Lu, Rosemary Atabug, Andrea Sunico-Bautista, Richard Vokey, Caroline Ahmad, and Cherry Zafaralla), and the Department of External Relations (ADB Headquarters: David Kruger, Andrea Stojanov, Giovanni Verlini, Graham Dwyer, Biggs Javellana, and Keech Hidalgo; Resident Missions: Lei Kan, Tatiana Evstifeeva, Gobinda Bar, Sally Shute-Trembath, Sevil Takhmazova, M. Ismail Khan, Binita Khadka, and Rajesh Deol).

Foreword

For almost half a century, the Asian Development Bank (ADB) has been helping developing countries across the world's largest and most populous region, Asia and the Pacific, grow their economies, build their institutions and private sectors, and provide income opportunities and essential services for their people. The results of this work must ultimately be measured in lives bettered on the ground—particularly those of the poorest and most vulnerable members of society.

The 12 stories in this book introduce people whose lives ADB has helped change for the better. They also illustrate the innovation and partnerships needed to meet the still huge and ever-evolving development challenges in Asia and the Pacific.

In Azerbaijan, a private sector loan to AccessBank provided fast and affordable credit to farmers and small businesses in the neglected rural areas, helping to quadruple the number of borrowers in the country during 2006–2010. Banking know-how provided by the project has helped hundreds of small rural businesses grow, creating work for thousands of people in the countryside.

In the northeastern part of the People's Republic of China, an ADB project helped revive the wetlands of Sanjiang Plain by halting the exploitation of a world-renowned ecological area and developing ecoagriculture and alternative occupations for hundreds of encroaching farmers. The project showed how precious ecosystem services can be restored without sacrificing the livelihoods of local people.

In Viet Nam, an ADB-supported health project introduced a range of initiatives including an innovative health card model that provides subsidized health care services to the poor in the central highlands. In this traditional region with a high poverty incidence, more people are now getting the medical care they need. As a result, the rates of communicable disease and infant mortality have fallen much faster here than in other parts of the country.

Transformations like these require vast human and financial resources. This is why, in addition to its own knowledge and experience, ADB relies on the expertise of governments and the private sector, as well as on partnerships with development institutions, civil society organizations, and the communities themselves.

These partnerships are essential for developing novel and pragmatic solutions to problems, testing and refining the approaches, and creating reliable models that can be scaled up to spread the benefits more widely.

I invite you to browse and enjoy the uplifting stories in this book, and to reflect on the partnerships and innovations that have made this progress possible.

My hope is that together, we can solve the great problems that remain and build a better future for all.

A handwritten signature in black ink, appearing to read 'Takehiko Nakao', with a large, stylized flourish at the end.

Takehiko Nakao

President
Asian Development Bank

Introduction

Solving development challenges through partnership and innovation

Since its establishment in 1966, the Asian Development Bank (ADB) has embraced an inspiring vision: to free the people of Asia and the Pacific from poverty. In support of this goal, in 2014, ADB mobilized \$13.5 billion in financing for the delivery of 128 projects in developing member countries. Partnerships with governments, the private sector, development institutions, civil society organizations, and independent specialists are crucial to ADB's efforts to improve the living conditions and quality of life of people in the region.

Though ADB's projects vary widely in scope, in every instance, ADB and its partners seek fresh, often bold answers to challenges facing developing member countries. Money alone can never suffice; funding must be combined with partnerships that bring knowledge, insight, and expertise to generate the broadest possible development impact.

The result, in some cases, can be systemic change. In Papua New Guinea (PNG), for example, a widow who grows coffee in the remote eastern highlands no longer has to hide her life savings in the ashes of her fireplace. She was among the 95% of PNG's five million people who, 15 years ago, had no access to financial services of any kind. Today, she has a bank account and can access microloans, which enable her to save up and secure her future.

The reason for this transformation is a project that laid the foundations for the microfinance industry in PNG by developing financial products for rural people, in turn generating jobs and boosting growth. The percentage of unbanked people has fallen to 80%, and

new products and other innovations tailored to the needs of people living in remote areas ensure that this number continues to shrink.

In other cases, a whole sector can reap benefits of a well-designed project.

In Bangladesh and India, more than three million people are safer and healthier. The two ADB projects introduced new approaches in urban governance and development that improved the living conditions of the poor in congested areas.

These include the formation of self-help groups that provide microfinance credits; increasing the participation of women and the poor in decision making; involving communities in operating and maintaining low-cost sanitation and water facilities; and targeting the poorest areas for health, education, and other services.

In Mongolia, an ADB-supported project contributed to an upswing in school enrollment and retention rates by introducing an innovative approach to improving teaching and learning.

The project modernized 68 primary and secondary schools to serve as models in particular subjects, share best practices, and provide support to raise standards in other schools throughout the country.

In other cases, new areas for collaboration can make a big difference in people's daily lives, as well as in extraordinary situations such as emergencies and natural disasters to which the region is extremely vulnerable.

In the People's Republic of China, for instance, multilateral collaboration helped the ADB-supported Xiaogushan hydropower plant become the first in the country to receive carbon revenue under the Clean Development Mechanism. The Xiaogushan and two other ADB-financed hydropower plants replaced polluting coal, earning a combined total of \$28 million by 2013 from the sale of carbon credits.

The revenues are being passed on to customers in the form of half-price electricity to 1.3 million households,

entrepreneurs, and medical professionals who are further benefiting from the reliable electricity supply the project helped provide.

In Pakistan, shortly after a 7.6-magnitude earthquake rocked its mountainous northeast region on 8 October 2005, ADB established the Pakistan Earthquake Fund and mobilized urgently needed additional resources from other development partners. This was later seen as one of the most successful and rapidly executed recovery efforts in an earthquake area ever.

Support for regional cooperation and integration remains central to the work of ADB. Its benefits transcend mere metrics, and can change people's lives for the better.

For many people in Tajikistan, life has become easier since the completion of a cross-border road project connecting its capital, Dushanbe, with the Kyrgyz Republic. The ADB project significantly cut travel time, eased access to health services in hospitals, and improved local and international trade. The road upgrades have reduced accidents and helped save lives. Production of vegetables, fruits, and livestock is up, and some villagers have reported a 30% rise in income.

A Greater Mekong Subregion tourism project in Cambodia, the Lao People's Democratic Republic (Lao PDR), and Viet Nam showed that community-based support for regional public goods such as the Mekong River and other natural resources in the area can permeate all aspects of life.

In the Lao PDR, for instance, the project found a way to enable low-income farmers and craftspeople to benefit from new marketplaces. Rather than charging the long-standing full-year-in-advance annual rental fee, the market initiated a daily rate. Soon these markets were full of local vendors and tourists alike, and the effects of vibrant tourism were felt quickly in local communities.

In addition to delivering basic infrastructure for people living in poverty, many ADB projects help break

down entrenched social barriers for the benefit of entire communities.

In Nepal, for example, women and other people from disadvantaged groups were included in the planning of a water supply and sanitation project that benefited over 90,000 households.

In a situation that would have been unthinkable a decade ago, high-caste people now share water and other facilities with their lower-caste neighbors. Because they planned and built the facilities together, sharing came naturally. Even after the project's completion, residents continued to build latrines on their own.

These and other stories in this book provide insights into how ADB, governments, people, and organizations can work together to deliver sustained and inclusive results.

Knowledge, innovation, and collaboration make a powerful combination that can help transform ADB's vision into reality.



Azerbaijan

A Big Boost for Small Businesses

A loan has enabled Elham Musayev to expand his cabbage-growing venture and employ 40 people for 4 months a year.

Elham Musayev's father had taught him well, and experience on the land had added to his farming skills. He loved growing cabbage, and by the time he started his own business on a one-quarter hectare plot in 2008, he knew everything there was to know about the leafy vegetable and several others. All he needed was equipment to boost productivity—and the money to buy it.

The 40-year-old now cultivates cabbage on 4.0 hectares, grows maize on another 2.5 hectares, and raises beetroot on an additional 2.0.

His success has had knock-on benefits for the Azerbaijan town of Ismayilli, where he and his wife live with their three children.

Elham pays rent in the form of a ton of wheat per hectare each year to the five villagers who own the land he farms. And while he sells mainly to wholesalers, he sometimes brings his cabbage and other fresh produce to the village market. “People already know me,” he says, “and they know my vegetables are 100% organic.”

In 2014, Elham employed about 40 people for 4 months to plant, water, and harvest his crops.

“My goal is to expand and increase the variety of vegetables,” he says. “One day I might be the first farmer in Ismayilli to grow red cabbage.”

A key to Elham’s success—and to that of thousands of other start-ups and micro and small and medium-sized enterprises (MSMEs) in the country in recent years—was lending support from Azerbaijan’s AccessBank. In Elham’s case, the credit financed the purchase of a minitractor critical to efficient weeding.

Much of this lending has been supported by a 2006 ADB loan aimed at helping private banks and leasing companies support MSMEs and thereby make economic growth in the country more inclusive.

Public confidence in the country’s banking system had been undermined by the successive economic crises that followed Azerbaijan’s independence from the former Soviet Union in 1991. In addition, financial services are still concentrated in the capital, Baku, leaving the rural regions—and entrepreneurs like Elham—largely out in the cold.

Diversification crucial

Azerbaijan’s rural regions and secondary towns account for 78% of the country’s population and 38% of employment, but only 10% of its gross domestic product (GDP) and 12% of bank lending.

Private Banks and Leasing Companies in Azerbaijan

Dates

- Approved: March 2006
- Closed: February 2011

Bank Services

- The number of private bank branches in Azerbaijan per 1,000 adults increased from 6.5 in 2005 to 9.9 in 2011

Business Growth

- The number of AccessBank microloan borrowers rose from 12,152 in 2006 to 88,492 in 2010

Economy

- AccessBank is now the fifth largest bank in Azerbaijan and has helped raise the proportion of bank credit going to the private sector from 9.5% of GDP in 2005 to 12.2% in 2011

“I believe ADB’s innovative approach to helping smaller enterprises is very important.”

Businessman Azer Abdullayev has built a flourishing business making wooden, plastic, and cardboard packaging.

Aside from the need to reduce the urban–rural disparities, the government sees the stimulation of rural income and employment as a crucial ingredient in its effort to diversify the economy away from overreliance on the volatile oil and gas industry. ADB’s partnership strategy for Azerbaijan has therefore emphasized support for more sustainable and broad-based growth in the private sector.

Based on due diligence and consultations with experts in the field, ADB selected three banks for what was to be its first venture in the country’s private sector. These were Azerigazbank, Bank Respublika, and AccessBank—then called the Micro Finance Bank of Azerbaijan.

On 31 August 2006, ADB and AccessBank signed an agreement for a \$4 million loan with a term of 4.5 years to support MSMEs. The loan was repaid in February 2011.



Businessman Azer Abdullayev is one of many rural entrepreneurs who have benefited from this initiative, which has directly or indirectly supported the creation of hundreds of new businesses and thousands of jobs. “I believe ADB’s innovative approach to helping smaller enterprises is very important,” he says. “Rural people need support to be able to work and earn money here and not be forced to the cities.”

With ADB-supported loans from AccessBank, Azer has created a flourishing business making wooden, plastic, and cardboard packing cases for the fruit industry. He has also built two refrigerated warehouses that can handle 3,500 tons of fruit and vegetables a year. He recently opened a shop that sells food, construction materials, and the fruit packing cases his factory makes in the village of Armudpadar in the Khachmaz region, where he lives with his wife and three children.

Azer employs about 80 people over the course of a year and gives preference to widows and wives whose husbands are disabled. He provides jobs for

As businesses ramp up operations, job opportunities are offered to women and other members of the community who are socially disadvantaged.



Micro and small and medium-sized enterprises provide jobs to local people in the village of Armudpadar.





single mothers and others in his community who are socially disadvantaged.

In many ways, Azer is a model for self-made advancement. He started making his fruit packing cases in his own home, then expanded to a rented shop, and finally built his own factory.

With the support of AccessBank, Azer's refrigerated warehousing has extended the storage life of locally farmed fruit from 3 to 8 months. He has also set up facilities for washing, grading, and sorting fruit grown by his region's farmers, and these products can now be shipped to neighboring countries for sale.

A dramatic rise in income

Together with favorable macroeconomic factors and major reforms—growing oil and gas revenue, strong public spending, and policy changes to develop a market-based economy—the energy and enterprise of people like Azer have helped to rocket Azerbaijan to upper middle-income development status in a little more than 2 decades.

According to World Bank figures, per capita average income in Azerbaijan rose from \$660 in 2001 to \$7,350 in 2013. The poverty rate declined from 49% to just 5% over the same period.

ADB has been helping MSMEs develop by promoting better banking practices. It has also supported sustainable banking operations that can cope with the inevitable ebb and flow of the business cycle.

ADB took special care to ensure that projects and businesses financed by AccessBank were environmentally and socially sound—a process that involved knowledge sharing with AccessBank. Arzu Gurbanova, a branch manager in Sumgayit, says that support from ADB and others, such as the European Investment Bank and the Symbiotics Investment Group, has greatly increased AccessBank's lending to farmers in a wide array of agriculture enterprises. "As we faced competition from other banks," she says,

“we reduced rates and made the process of securing loans easier and faster.”

Arzu says that one of the most exciting aspects of her work has been watching the involvement of women grow due to ADB’s promotion of gender equality. “At the start, we had very few female customers,” she says, “but now our statistics show that, in rural areas, at least 40% of our customers are women.” She says that the bank employs a large number of women “in keeping with the ADB philosophy.”

Paying it forward

With ADB’s support, AccessBank expanded its loan portfolio, increased deposits, and improved its banking standards. It has consistently recorded net profits since 2007. This has helped it build up its capital, which surged almost 16 times from its 2006 level to \$109 million in 2010.

The number of AccessBank microloan borrowers rose from 12,152 in 2006 to 88,492 in 2010, and its staff almost tripled in size from 451 to 1,243.

Private sector banks expanded their reach during the same period—from an average of 6.5 to 9.9 branches per 100,000 adults. The market share of the state-owned banks fell as private banks grew their assets, loans, and capital.

Bank credit to the private sector grew from 9.5% of GDP in 2005 to 12.2% in 2011.

Beekeeper Feizulla Jamalov is typical of the new breed of forward-looking, socially committed Azerbaijan entrepreneurs who have been supported and encouraged through the greater MSME lending that resulted from ADB’s partnership with AccessBank.

In 2014, Feizulla took a loan from AccessBank for his small beekeeping business. By using the money to

“People from the capital Baku and neighboring regions buy my honey. Those who buy always come back.”



renew old hives and buy new ones, he has been able to establish bee colonies in 49 hives. “People now come from the capital Baku and neighboring regions to buy my honey,” he says.

Once he pays off his current loan, he will apply for another to double his current production of 140 kilograms a year.

Feizulla teaches, trains, and helps people who want to become beekeepers for a year and then gives them a free hive. “Back in 1999, a colleague gave me my first beehive for free,” he says with a smile. He considers it a privilege now to be able to give back to the community.

Opposite: The project supports sustainable and broad-based growth for Azerbaijan’s rural regions, which account for the majority of the country’s 9 million people. Beekeeper Feizulla Jamalov is one of the project beneficiaries.



Bangladesh

Transforming Communities, Changing Lives

Former slum dweller Shyamoli Sutradhar lives with her husband, daughter, and two sons in a new housing complex that has provided the community with water, electricity, toilets, and paved roads.

Shyamoli Sutradhar remembers how things used to be as she sits contentedly on the bank of the Manu River in front of what was once a rubbish-strewn slum. What was a place of misery in the past—the place she called home—is now a glistening new housing complex in which she lives happily and safely with 450 other families.

The old slum had no water, electricity, or latrines, says the 32-year-old Bangladeshi. “When the river flooded, it contaminated the wells. But now we have paved roads and individual and public toilets; and in every house, concrete drains, electricity, and running water in every house, and individual and public toilets, thanks to the *pourashava*.”

The *pourashava*—or municipal township—of Moulvibazar where Shyamoli lives is one of 30 that have been transformed with the support of ADB's Urban Governance and Infrastructure Improvement (Sector) Project.

Begun in 2002 and completed in 2010, the project pioneered in tackling one of Bangladesh's most intractable problems: the rapid, uncontrolled, unplanned growth of its cities. It cost \$87 million, with \$60 million provided by ADB and the rest by the government and *pourashavas* themselves.

Bangladesh has more than 150 million people and is one of the world's most crowded countries. Its urban population is growing at a rate of 2.5% a year.

ADB designed the project with three goals—improve the financial accountability and management of cities, increase community participation, and overhaul the basic infrastructure.

Working together, representatives of the participating *pourashavas* and ADB solved several of the core problems by improving governance, tax collection, gender equity, and the quality of services. In many areas, the *pourashavas* played a large role in carrying out the reforms needed to improve services and living conditions for their citizens.

The project financed a broad variety of infrastructure, including 581 kilometers of improved roads, 264 meters of new bridges, 260 kilometers of improved drainage systems, 14 bus terminals, a truck terminal, and 10 kitchen markets. It also upgraded sanitation and facilities for solid waste management.

The project provided 35 trucks, 315 rickshaw vans, 145 transfer stations, and a new controlled dumping facility to enable proper collection and disposal of garbage.

It also generated much needed jobs, including about 800,000 person-days of direct and indirect employment created by the building of the roads, bridges, and culverts.

Urban Governance and Infrastructure Improvement (Sector) Project

Dates

- Approved: November 2002
- Closed: December 2010

Beneficiaries

- 1.85 million people in 30 towns

Transport

- 581 kilometers of improved roads and 264 meters of new bridges

Drainage

- 260 kilometers of improved drainage systems

Sanitation

- Improved domestic sanitary facilities for 20,000 households

Waste Disposal

- Efficiency increased 70%

Women

- Income-generating activities supported through microcredit facilities; far greater participation in municipal affairs



“Now, I can bring in truckloads of goods right to my doorstep.”

Auto parts dealer Abdus Shahid Tarafdar is one of many who have seen their small businesses prosper—his daily turnover has more than doubled.

Better infrastructure increased motorized traffic, which in turn vastly improved the performance and prospects of many local businesses.

Abdus Shahid Tarafdar, a shop owner dealing in motor parts and accessories, benefited from the widening and paving of a road in central Moulvibazar under the project. His turnover has more than doubled from \$84 a day in 2006 to \$192 as a result. “Now I can bring in truckloads of goods right to my doorstep.”

Free education for a brighter future

Pourashava authorities also used project funds to give poor areas better health and education services.

The *pourashava* in Bhairab now runs 25 elementary schools that provide free education to about 15,000

children, including those from disadvantaged social castes. Another 166 satellite schools were established in Bhairab. Working with nongovernment organizations, the project helped train 500 workers to deliver better primary health care in the community.

Kanti Lal Vasfor, a descendant of the Harijan social group that for centuries had been restricted by caste convention to working only as cleaners, has moved into a new project-financed housing complex in Moulvibazar with 31 other Harijan families. He speaks with some passion of the days when “we were leading a subhuman life with no permanent roof overhead, makeshift toilets, and often reduced to drinking water from a nearby pond. Our children suffered from all kinds of diseases and rarely received any education.”

His community now receives regular monthly visits from the *pourashava* medical officer, and the children can now go to local schools.

This has prompted some members in the Harijan community, such as Chanchala Vasfor, to volunteer and help expand the project’s coverage. Chanchala,

The *pourashava* in Bhairab now runs 25 free elementary schools for about 15,000 slum children.



mother of a 5-year-old girl, has set up and conducts a free preprimary class in her housing complex for 2 hours every day. “Almost all the children of nursery and preprimary age come,” Chanchala says, “thanks to the increasing awareness of the parents of the need for education.”

Empowered women

The project’s gender action plan sought to integrate gender considerations into development activities at both the central government and *pourashava* levels.

A total of 268 women have been given jobs in the *pourashavas* under the project, and women serve as either chairpersons or vice-chairpersons of 231 newly created slum improvement committees.

In Bhairab, broom-maker Mala Rani Das, a member of a women-only credit group, has been able to borrow funds and boost her monthly income to above the average pay level of Bangladeshi industrial workers.



“Women councilors now often take the lead in resolving social conflict such as marital strife, family problems, and divorce through social arbitration,” says Salina Hayat Ivy, mayor of Narayanganj City. The project helps her solve these problems and sustain harmony in her community.

Adds Tahmina Akhtar, a mother of four and an enthusiastic member of Moulvibazar’s town-level coordination committee, “We’re no longer just onlookers of the *pourashava*’s affairs, but play a prominent role in the annual budget.” She says that “everyone,” including the mayor of Moulvibazar, “listens to our views and, where possible, incorporates our suggestions.”

Small loans for big results

Some of the project’s microfinance initiatives made credit available specifically for women. Women in turn have been setting up more businesses in the project areas.

Mala Rani Das joined a 15-member, women-only credit group in Bhairab that allowed her to borrow \$240, which she used to expand the broom-making enterprise she runs with her husband. She now earns \$72 a month, which is higher than the average pay of Bangladeshi industrial workers.

Bhairab’s mayor, Mohammad Shahin, is amazed that such small lending operations have been set up and run so smoothly in a country “where such a large number of people live on only two American dollars a day.”

A project provision required each borrower to deposit \$0.36 a month in a savings account at a state-run bank. This was to provide funds in emergencies for families who often live one crisis away from destitution and hunger.

In total, the project loaned \$1.824 million to 15,200 families. The recovery rate at completion was about 93%.

Keys to success

The project's success is due partly to ADB's strict insistence that candidate *pourashavas* meet clearly defined performance criteria, including the empowerment of women. Some of the 30 *pourashavas* initially selected for the project were replaced when they failed to do so. Project funds were allocated based on each participating *pourashava's* commitment to and execution of clear, specific governance reforms.

This was highly effective, and governance in the participating *pourashavas* improved significantly. The reforms also established town-level and ward-level coordination committees. As intended, this increased participation by the citizenry overall, and the representation of women and the poor in decision making.

The 30 *pourashavas* are now viewed as models that show municipalities across the country how to provide the poor and other urban residents with better streets and footpaths, street lights, sanitation, garbage collection, and water. In addition, the project's concept of establishing coordination committees was adopted and formalized in the government's Local Government (*Pourashava*) Act of 2009.

Involving a community in operating and maintaining facilities and delivering services made it easier for all to benefit from an urban infrastructure project.

People in the communities, especially the poor and disadvantaged, have been given new opportunities to express their opinions. They have also been made more aware of their responsibilities as citizens to do so, and of their *pourashava* government's duty to deliver.

Each *pourashava* prepared a citizens' charter that detailed the services it is required to provide, the location of the facilities, and the fees. These were displayed on a large board in the *pourashava* compound and on smaller boards around town.

And the communities are demanding performance. As Tara Begum declared at a public meeting in Faridpur: "It's my *pourashava*. I belong to it, so it is my

responsibility to take care of it and make sure that it provides good services.”

The project’s success led to two follow-up projects. The first was approved by ADB in 2009 and cofinanced by Germany’s GTZ and KfW. The second, approved in 2014, is being cofinanced by the OPEC Fund for International Development.

ADB has used the performance-based approach to shape other projects, and the World Bank and

Before the project, children living in the slums had no clean water, latrines, or electricity.



the Japan International Cooperation Agency have adopted similar performance links in their own recent municipal projects.

The project's transformative effect on many of the disadvantaged is illustrated by the story of Surjo Moni.

The ADB-supported governance and infrastructure improvement project was a pioneering attempt to tackle one of Bangladesh's most intractable problems: uncontrolled urban growth.

"I remember the day I arrived as a bride," says the Surjo, who has 16 children and grandchildren and first came to the Narayanganj *pourashava* as a 15-year-old newlywed. "It was raining. The streets were overflowing with muddy water, and it was difficult for



my in-laws to find a dry place where I could stand for the wedding rituals.”

From that day until the project brought real change to her *pourashava*, she and her family had lived in often wretched conditions on the brink of poverty.

The project has since brought new hope for the now 90-year-old. “Now I know life can only get better for my family.”





People's Republic of China

Switching on to Clean Energy

Hydropower is the cheapest way to generate electricity in mountainous Gansu Province.

Farmer Qiao Shuai and his 53-year-old father Qiao Keqin had long nurtured a dream of bettering their family's lives by opening a bed-and-breakfast guesthouse for tourists in Linze County in the People's Republic of China (PRC).

The popular Danxia Landform Geological Park was nearby, so the location was right. But a key ingredient was missing—a reliable supply of power. Sooner or later, the area's erratic electricity service would likely doom their enterprise and cost them their precious investment savings. "Blackouts were very frequent," says Shuai, now 28.

It was the opening of an ADB-supported hydropower project on the Heihe River in 2007 that gave them the confidence—and the power—to go ahead. The project linked their part of the country's north to the grid and guaranteed that their guesthouse would always have electricity.

The guesthouse now has 13 rooms equipped with electric lighting, televisions, and kettles. Its kitchen has refrigerators, a freezer, disinfecting cabinets for dishes, and rice cookers. One hundred people can be served at any one time—reliably.

The family now expects to earn \$16,000 each year, a major step up from the \$4,900 they made from farming corn and producing seeds.

This is a direct result of two ADB hydropower development operations on the Heihe River. The Gansu Clean Energy Development Project helped finance the Xiaogushan plant, completed in 2007. The Gansu Heihe Rural Hydropower Development Investment Program funded the Erlongshan plant, which began operating the following year; and the Dagushan plant, finished in 2009.

Green power development

The PRC needs clean energy, and developing it is crucial to the government's efforts to minimize fossil fuel emissions and improve the country's air quality. Demand for electricity has grown faster than supply, especially in rural areas.

Coal-fired plants were providing about 81% of the electricity in Gansu in 2005, and 13 of the province's 14 cities were failing to meet the minimum air quality standards. The provincial capital, Lanzhou, had the worst air pollution of the 47 major cities in the country.

In 2009, the PRC's Ministry of Water Resources announced that hydropower would be a key component of rural infrastructure development. Small and medium-sized hydropower plants, such as the three funded by ADB, will deliver about 120 gigawatts of additional renewable energy by 2020.

Gansu Clean Energy Development Project and Gansu Heihe Rural Hydropower Development Investment Program

Dates

- Gansu Clean Energy Development Project
- Approved: December 2003
 - Closed: September 2008

Gansu Heihe Rural Hydropower Development Investment Program

- Approved: January 2008
- Closed: March 2012

Beneficiaries

- 1.3 million people

Jobs

- About 2,000 jobs created

Renewable Power

- 800 million kilowatt-hours produced a year

Environment

- Reduction of 630,000 tons of carbon dioxide a year

Income

- Per capita gross domestic product grew by 114% in Zhangye City during 2006–2011



A reliable electricity supply has enabled Qiao Shuai and his family to open a bed-and-breakfast guesthouse in Linze County.

“Providing energy to rural farming and herding families from plants like these is vital to reduce poverty and disadvantage in power-deficient areas,” says Xinjian Liu, a senior project officer in ADB.

Systematic processes and standards helped deliver high-quality finished project works ahead of schedule and within budget. The project company gained experience from ADB’s support and later began providing advisory services to other hydropower companies in Gansu and the rest of the PRC.

Cheap, plentiful power

The marvel of hydropower is that the energy source—flowing water, readily available in the Qilian Mountains where the Heihe River rises—is virtually free. Once the plant is built, the only costs are for maintenance and operation of generation stations. While the best fossil fuel plants are only 50% efficient, modern hydro

turbines convert as much as 90% of available energy into electricity.

This efficiency is benefiting millions in the homes and businesses of Gansu and making essential services more dependable.

Consider the experience of 42-year-old Zhu Huijun, a surgeon for 20 years at the Chinese Medicine Hospital in Zhangye City, a key economic hub in the province. Before the hydropower units were commissioned, blackouts hit the hospital more than 10 times a year, disrupting the 1,300 surgeries Huijun and his colleagues need to perform annually. The hospital has diesel-fueled generators for backup, but he says it is vital that the power supply to the operating room equipment be steady.

The supply is never interrupted now, and Huijun can perform the 18 operations he averages each month without feeling anxious that the lights or equipment may fail. "It takes about 2 hours for each surgery," he says, "and I have no worries while I'm operating."

Zhangye City surgeon Zhu Huijun can now operate without worrying about power interruptions.





Because the hydropower projects replaced coal-fired plants and their emissions, all three were registered under the Clean Development Mechanism (CDM). The CDM is an incentive scheme under the United Nations Framework Convention on Climate Change to promote clean power in developing countries. CDM-registered projects can sell their certified emission reduction units to generate additional revenue. By the end of 2013, the plants had earned \$28 million this way.

The Xiaogushan installation was the first hydropower plant in the PRC to receive carbon revenues under the CDM. Others have since followed its lead and have become eligible for CDM registration. The process also showed how multilateral development partners can collaborate to maximize a project's impact—the World Bank has purchased certified emission reductions under the scheme.

Savings for users

The additional carbon reduction revenue and the efficiencies of hydropower have allowed big savings to be passed on to end users. For example, the family of Zhang Huiping in the Tibetan ethnic minority village of Bajiaowan now pays about \$97 a year for electricity, less than one-half of its previous bill. At the same time, average annual income in the community soared from \$490 to \$4,900 during 2006–2012 after the new dependable hydropower supply enabled villagers to make more use of highly productive electric tools.

Before the project stabilized the power supply, Huiping, a 51-year-old mother of three, often spent 3 hours making the round trip to a distant township to get liquefied gas for cooking. "It was time-consuming and costly," she says. But these days she cooks in an electric oven and has a refrigerator, freezer, rice cooker, and washing machine that reduce her housework and leave her more time for herding sheep.

“The project management capacity of our company really improved.”

Opposite: About 1.3 million people benefit from reliable electricity supply made possible through green power development.

Environmental benefits

The project has had a major environmental impact. The plants have prevented an estimated 630,000 tons of carbon dioxide emissions a year, equivalent to replacing about 300,000 tons of standard coal use annually. The electricity they supply has also reduced the collection and burning of wood for fuel and provided an alternative to the use of coal for cooking and heating.

Reliable electricity has also stimulated industrial and economic growth and increased people's incomes. Per capita gross domestic product in Zhangye City rose by 114% during 2006–2011, from \$1,630 to \$3,500. The average annual income of rural farmers and herders in one project area, rural Sunan County, grew by a significant 11.1% each year over the same period, from \$775 to \$1,315.

Construction materials company worker Gao Chao's income has increased by 25%.





ADB as a partner

The provincial and municipal governments and hydropower companies involved in the PRC–ADB partnership have championed renewable energy development in Gansu since 2002 by piloting new technologies and financing mechanisms.

Government staff and employees of the plant operating companies speak positively of ADB's contributions and the short- and longer-term benefits.

ADB missions were frequent and gave full attention to issues affecting the project, including environmental and social factors. "Through the project and with ADB's help, the project management capacity of our company really improved," says Zhu Xingjie, president of the Zhangye Heihe Hydropower Development Company, the firm set up to develop the three hydropower projects. "We not only received financial support, we learned advanced project management."

He calls this a particular benefit of borrowing from an international financial organization for this kind of

Before being able to access a stable supply of electricity, Zhang Huiping, a 51-year-old mother of three, often spent 3 hours getting gas for cooking from a distant town.



Building materials company director Chen Leixin says the steady supply of power from the plants has improved the productivity of his firm, which employs 400 workers.

construction project. Collaboration with ADB on the project's implementation provided the company with invaluable experience, and the hydropower projects have become its "innovation flagships."

A better quality of life

With a stable supply of clean energy, people across the region have better prospects, and businesses have a greater chance of success.



Chen Leixin, a director of the Gansu Zhangye Julong Building Materials Company, says the steady supply of power from the plants has ensured his company's productivity and the quality of its products.

One of its 400 employees, Gao Chao, 38, who previously worked for a smaller building material manufacturer, is grateful to have a steady job. "My income has increased by one-fourth and I earn over \$485 here," he says. "My parents live with us, so now my wife and I can easily take care of them."



People's Republic of China

Saving a Vital Ecosystem

Lotus flowers in the Anbanghe reserve are among the 1,000 types of plants and 530 species of animals that depend on the wetlands and their forests for survival.

Li Yuanwen was anxious and unhappy when local government authorities told him to quit farming a piece of land in the Zhenbaodao reserve in Heilongjiang Province in the northeastern part of the People's Republic of China (PRC).

For 12 years, he had been earning \$3,300 to \$6,500 a year growing corn, soybean, and rice on a 20-hectare plot he had developed on vacant land, even though it was in one of 24 officially designated nature reserves on the vast alluvial Sanjiang floodplain.

He had done nothing more than other encroaching farmers, fishermen, herders, and gatherers had done over the preceding 50 years to sustain

themselves. The Sanjiang Plain was not only home to one of the world's most valuable and richly diverse ecosystems, it was also an important food basket for the PRC's growing population.

But now that so many rare plants and animal species have disappeared, and the ecosystem itself has reached a tipping point, Yuanwen feared that a concerted new drive to save and restore the Zhenbaodao reserve would cost him and his family their livelihood.

Yuanwen now works as a salaried custodian of a new ecotourism area in the Zhenbaodao reserve where visitors come from afar to fish, boat, hike, camp, and watch birds. His income, further increased by ecofriendly beekeeping and the sale of honey and mushrooms to tourists, is far greater than in even his best years of farming.

The ADB-supported Sanjiang Plain Wetlands Protection Project restored thousands of hectares in six nature reserves to their natural state. It also ensured that the standard of living of all those directly affected by farmland reclamation would be sustained and often improved—frequently in new ecosmart ways that nurture rather than destroy the region's natural heritage.

Before the project was approved in 2005, 80% of the wetlands and surrounding wetland forests had disappeared. The flocks of once plentiful ducks and geese had thinned, and the northeast tiger, red deer, and bear were gone. More than 20 of the species in what was one of Asia's most species-rich ecosystems—including cranes, storks, and swans—were now on the World Conservation Union's "globally threatened" list. And one of the world's most important breeding sites and stopover locations for migratory waterfowl was at risk.

The Sanjiang Plain wetland ecosystem was itself in danger of dying. Decades of deforestation, the massive draining, and dike and channel building by farmers had destroyed 4.32 million hectares of natural marshes and water meadows. Natural water flows had been altered. The wetlands and their forests had reached a point

Sanjiang Plain Wetlands Protection Project

Dates

- Approved: March 2005
- Closed: May 2013

Beneficiaries

- 8 million people

Income

- Farmers in the project area earn up to 40 times more than they would from traditional farming

Wetlands Restored

- 3,441 hectares of farmlands restored into wetlands

Forestry

- 10,090 hectares of trees planted
- 39,769 hectares of existing young trees treated and maintained

Birdlife

- Bird population monitored in six nature reserves increased from 510,559 in 2008 to 683,612 in 2011

Knowledge

- Wetland protection part of curriculum in many schools



Former traditional farmer Li Yuanwen, a custodian of an ecotourism area in the Zhenbaodao reserve, does some ecofriendly beekeeping and sells honey and mushrooms to tourists, further increasing his income.



where they could no longer renew themselves naturally, or be expected to continue harboring the 1,000 types of plants and 530 species of animals that depended on them for survival.

Sun Yao, vice-governor of Heilongjiang, says that protecting the freshwater wetlands—the country's largest—is enormously important. “Since many of its rivers and water systems reach the neighboring Russian Federation,” he adds, “action taken here has repercussions well beyond our country's borders.”

As a custodian, Li Yuanwen helps nurture and protect the region's natural heritage—the largest freshwater wetlands in the PRC.



Partnership for ecological protection

The Sanjiang Plain project was financed by \$15.00 million in ADB loans, \$12.14 million in grants from the Global Environment Facility, and funding from the provincial and local governments in Heilongjiang.

Its main aim was to protect the area against further man-made threats and achieve the most workable



balance between the sustainable use of natural resources and responsible agriculture.

The work included watershed and wetland nature reserve management, alternative livelihood programs for people living in the area, and public awareness campaigns. New forests were planted on reclaimed farmland and existing forests were improved to help the land retain water and combat soil erosion. Farmlands, such as Yuanwen's former plot, were also reconverted to wetlands. Awareness campaigns



New ecosmart ways of protecting the wetlands continue to revive the 4.32 million hectares of natural marshes and water meadows that had been destroyed.



Bird numbers are increasing.

helped generate community support and create new public attitudes on the value of the wetlands to the region and its people.

“ADB provided equipment, vehicles, computers, and cameras to protect the wetlands from illegal farming, hunting, fishing, and fire,” says Zhang Fulin, director of the protection division of the Zhenbaodao reserve. “These definitely helped us to develop our skills in wetland management, conduct scientific research, and monitor birds.”

Transferring knowledge

The project focused on pilot projects in the six nature reserves to work out best practices and pass this knowledge on to others for replication. Among these practices were programs to protect the well-being of farmers and herders who had to stop using the wetlands in the old ways once restoration began.

“Environmental protection needs the understanding and support of local people,” says Yoshiaki Kobayashi, an ADB senior water resources specialist. “Alternative livelihoods had to be provided for those directly affected to discourage farming and exploitation of natural resources.”

Smarter farming pays dividends

The project piloted alternative ecoagriculture that greatly reduced the farming areas in the nature reserves without reducing the farmers' income. For example, greenhouses were built in the Qixinghe reserve and leased to farmers. These farmers can now earn up to 40 times more than they would from traditional farming on much larger areas.

Zhiang Liang had been growing corn on 10 hectares of altered nature reserve for 6 years when his plot was incorporated into the project restoration. He now produces tomatoes in three greenhouses that occupy



“I realize the important part the wetlands play in climate change, protecting birds and other species.”

Seven times a year, up to 1,000 people attend awareness-raising events on wetlands protection at the education center in Anbanghe reserve.

no more than 1,050 square meters of space—less than 1% of what he cultivated before—but his income has risen from \$4,410 to \$6,860 a year.

Liang is happy about managing the smaller area and says the greenhouses are much closer to his home than his old plot was. He plans to increase production to raise his yearly income to \$10,290, more than twice what he earned before the project. “At one time I used to think the wetlands were just grass fields,” he says. “Now I realize the important part they can play in climate change, protecting birds and other species, and in increasing crop production.”

The partners in the project have made great efforts to communicate this awareness throughout the Sanjiang Plain. Posters, videos, and manuals have been produced for local communities; provincial television stations have showcased the project; and training programs were conducted for teachers and local government staff. Wetland protection has become a part of the curriculum in many schools.

Learning to love nature

Hu Yanmei has been teaching wetland education in elementary school for the past year. She takes her students on field trips to the nearby Qixinghe reserve at least twice a year. She says that “children who at one time had little chance of visiting the wetlands, I find, are now fascinated when I show them photographs of plants and birds in their natural habitat.”

Zhu Ranghai, who has taught at an education center in the Anbanghe reserve for the past 14 years, is particularly passionate on the subject of environmental renewal. She once worked as an analyst in a chemical factory in Jiamusi City in Heilongjiang and says she instead became a teacher partly “because I was so concerned about the effect of the pollutants produced by the factory.”

She has taken courses and training at the North East Forestry University in Harbin and in Hong Kong, China

Guo Gui, who has lived in the Anbanghe reserve since 1976, is moved when he speaks of the transformation that has taken place there.



to fully equip herself to teach wetland education. Seven times a year, Ranghua holds educational events for up to 1,000 people on the value of and the need to protect the nature reserves and their ecosystem.

Measuring real progress

In addition to providing a model and best practices for replication in the province and the rest of the PRC, the project made an impressive start on the actual work of restoring and protecting the country's wetlands. It reconverted 3,441 hectares of farmland into wetlands; established 10,090 hectares of new forestry plantations in the six nature reserves; and set in motion the proper treatment, care, and maintenance of another 39,769 hectares of existing young trees. It also helped prepare watershed- and nature reserve-level water resources management plans.

The income levels of those involved in the farmland-to-wetland schemes were either sustained or increased—by 12.9% in the Dajiahe reserve, for instance.

Guo Gui, 62, who has lived in the Anbanghe reserve since 1976 and was at one time director of its tourist division, still works there as a volunteer. He is visibly moved when he speaks of the transformation that has taken place.

“There’s far less pollution by farmers and other local people, and the water quality has improved greatly. The air quality is so much better than in the cities. There are far more birds, and we now often see rare species we have never seen before.”

Official monitoring of birds in the six nature reserves has shown an increase in their numbers from 510,559 in 2008 to 683,612 in 2011. In the Xingkaihu reserve, the number of stork pairs noted in nesting areas rose from nine in 2005 to 44 in 2011. In the Qixinghe and Xingkaihu reserves, the recorded numbers of red-crowned cranes had grown from 30 in 2004 to 44 in 2011. The figure for white-naped cranes was up to 58 from 17.

In the Qixinghe reserve, Cui Shoubin, who has been tracking the population of the egret, has seen it rise from 600 in 2011 to more than 1,000 in 2014. He has worked in the scientific research division of the nature reserve for the past 7 years. As part of the project, he helped develop a satellite monitoring map that has increased the accuracy and effectiveness of wetland management.

Shoubin is delighted that the six nature reserves are now being visited by both domestic and foreign tourists and scientists. "I'm convinced that what we're finding out in wetland management and the work we're doing on the habitats of rare migratory birds is important not just for the Sanjiang Plain and the People's Republic of China but for the whole world."



Cambodia, the Lao People's Democratic Republic,
and Viet Nam

A Welcome Change for Visitors

For women from the small villages of indigenous communities, sales of ethnic jewelry and handicrafts to tourists have opened a brand new avenue to greater incomes.

ADB helped turn a part of the world once ravaged by war into a booming tourist destination.

Along the way, a widow and her four children were lifted from near destitution to a life of self-sufficiency, with the promise of better things to come.

ADB began implementing the Greater Mekong Subregion (GMS) Mekong Tourism Development Project in 2003 in three countries that were still recovering from decades of armed conflict—Cambodia, the Lao People's Democratic Republic (Lao PDR), and Viet Nam—and completed it in 2011.

The three nations shared the \$35 million in project funding. ADB allocated \$15.6 million for Cambodia, \$10.9 million for the Lao PDR, and \$8.5 million for Viet Nam. The project is an example of ADB's promotion of regional cooperation and integration across Asia and the Pacific, including in the GMS countries through which the Mekong River flows.

The widow, Som Chit, was one of the millions the project has directly and indirectly benefited. She had moved with her four young daughters from the southern Lao PDR back to her birthplace of Ban Vieng Neua, where she tried to eke out a living from rice farming and raising pigs. The pig business failed, and she and her daughters were barely able to survive on the little rice she harvested.

Community-based ecotourism

As with all other ADB operations, the project sought to reduce poverty and boost economic growth in ways that are respectful of both the environment and culture.

This strategic approach led the GMS tourism project to Som Chit's birthplace. The project designated it a "culture village." Project funding first gave her work as a cleaner in a guesthouse in Ban Vieng Neua and then trained her in handbag design. With her confidence growing, she developed skills as a weaver.

These skills and her imaginative designs for traditional Lao women's skirts—or *sins*—raised her annual income by \$340. Sales of the *sins* she produces enabled her to feed her family and send all four daughters to school.

"The greatest reward for me," says Som Chit, "is the respect I get from my fellow villagers and my daughters because I have been able to support them."

Intrepid tourists trekking through the mountains of the northern Lao PDR can now stay in local homes or community-built lodges. They can also buy the

Greater Mekong Subregion: Mekong Tourism Development Project

Dates

- Approved: December 2002
- Closed: April 2011

Beneficiaries

- More than 300,000 people

Jobs

- About 60,000 jobs created

Impact

- Foreign exchange earnings from tourism rose by 415% in Cambodia, 237% in the Lao PDR, and 439% in Viet Nam during the project period

Poverty

- Poverty rates declined from 35.9% to 30.1% in Cambodia, from 38.6% to 27.6% in the Lao PDR, and from 28.7% to 13.5% in Viet Nam

Safeguarding the Future

- Pro-poor, sustainable, and community-based tourism policies have been enshrined in the tourism laws of Cambodia, the Lao PDR, and Viet Nam

colorful skirts and blouses woven by Som Chit and others.

Better tourist experiences

If they were to attract more tourists, the three Mekong River countries first needed to undertake major improvements to their infrastructure.

In the Lao PDR, the project constructed a new terminal and control tower and a 1,600-meter runway to allow larger planes and more passengers to use Luang Namtha Airport. It also upgraded the 26-kilometer access road to Kwangsi Falls, which has now become an attractive tourist destination. This reduced travel time from nearby Luang Prabang by more than one-half.

Repairs were made to the 36-kilometer road to the beautiful Konglor Cave in the country's Khammouane Province. In 7 years, the number of cave visitors each year jumped from a mere 300 to 6,700.

In Siem Reap in Cambodia, funding from the project enabled the city to replace its antiquated water system with new sewers, drainage canals, and storm-water chambers. This not only helped to reduce the risk of waterborne diseases for a population of 120,000 and ended serious flooding, it also made the city more welcoming for thousands of tourists who visit the world-famous Angkor Wat temple complex.

In Viet Nam, the project's My Tho Tourist River Pier Development built a landscaped public park at Tien Giang, reinforced the river embankment with floating steel wharves, and added a passenger terminal.

These interventions had an almost immediate impact. Siem Reap recorded a 47% rise in international tourist visits and a 46% increase in the number of hotels and guest houses even before work on the new sewerage system finished.

Improving even a few kilometers of road can have a major economic payback and social rewards. The upgrade of the 6.3-kilometer road linking Phnom Penh

Opposite: The Lao PDR is becoming more popular for trekking through the rough mountains and forests past interesting villages, caves, and archaeological sites in the Nam Ha Protected Area at Luang Namtha as a result of the road and airport upgrades that have improved access to tourist destinations.





ADB funding of \$10.93 million enabled the city of Siem Reap in Cambodia to replace its antiquated water system with new sewers, drainage canals, and storm water chambers.

with Cambodia's Genocide Memorial helped raise memorial visitor numbers from 25,000 in 2002 to 241,000 in 2010. It also generated the ripples and waves of improvements in employment, incomes, and standards of living that are associated with tourism growth.

In addition to upgrading the infrastructure of public markets in tourist destinations in the Lao PDR and Viet Nam, the project helped improve their operations.

It worked closely with market authorities to create rental agreements with reasonable daily user fees. These replaced the previous large advance annual lump sum payments and ensured that most local people could afford to lease space to sell products in the markets for short periods. The project also supported training for small vendors in business and hospitality skills and helped them understand what international tourists wanted.

Piloting new approaches

The project promoted social and economic inclusion and environmental sustainable growth by establishing public–private–community partnership agreements in the Lao PDR. The agreements formalized roles, responsibilities, and benefit sharing between public and private stakeholders in the operation of tourist attractions, such as caves and waterfalls. This gave nearby residents a stake in protecting and maintaining their own natural and cultural heritage.

The project helped the three countries to carefully and sustainably capitalize on their joint stewardship of one of the world's great rivers.

The 5,000-kilometer Mekong River ranks second only to the Amazon in the biodiversity of its riverine ecosystem. For nature lovers, this can mean sightings of such rare creatures as the Irrawaddy dolphin and the giant Mekong catfish, as well as trips to some of the

In Cambodia, ADB's \$1.19 million upgrading of the 6.3-kilometer road linking Phnom Penh with the Genocide Memorial helped boost visitor numbers from 25,000 in 2002 to 241,000 in 2010.





4,000 islands in the southern Lao PDR. Inland, a varied terrain of fast-flowing mountain streams, limestone karsts, grasslands, wetlands, and jungle provides the perfect enticement for tourists to bike, climb, trek, cave, and kayak.

Once the project had raised tourist arrivals in the Mekong River area, one entrepreneur devised a journey by aerial zip wire over roaring waterfalls and jungle canopy to reach accommodation in the dizzying heights of a bamboo tree house.

The adventures can also be culinary. In addition to their offerings of more traditional regional fare, some gourmet chefs in the Lao PDR are tempting the tourists with special menus of local delicacies.

ADB-financed investments have helped transform travel in the region.

When ADB's Steven Schipani, a senior portfolio management specialist, first visited the northern part of the Lao PDR in 1998, the 172-kilometer trip from the border town of Huai Xai to Luang Namtha took 2 days. "Now it takes just 5 hours," he says, "and the road is possibly the most scenic drive in the Mekong region—through mountains, forests, with interesting villages, caves, and archaeological sites along the way."

More tourists, higher income

Foreign tourist arrivals in the three countries increased from less than 17 million in 2002 to more than 30 million in 2010. Tourism is estimated to have generated \$22 billion in economic output in that year and provided employment for 4.2 million.

By 2015, the number of foreign tourists is expected to top 50 million and help sustain 7.3 million jobs in the project countries.

Remittances sent back to impoverished rural communities from tourism areas where family members have found work have grown. A 2010 ADB study found that more than 75% of men and women working in Siem Reap and Phnom Penh hotels remit

Opposite: ADB's support helped ensure that more tourists experience the delights of the 5,000-kilometer-long Mekong River and its tributaries, the second most bio-diverse river ecosystem in the world after the Amazon River.

wages of more than \$1.2 million per month to people at home.

Women now hold more than one-half of all jobs in the tourist industry in the three countries—which was a target of the project’s gender action plan.

Tourism and enterprises now provide crucial income for many people when poor harvests leave households short of cash. “People grasped the opportunities that the industry’s expansion is offering,” says Onechan Souvannakath, director of the Luang Prabang Department of Information, Culture, and Tourism, and have “learned to do business.”

At the Luang Namtha night market in the Lao PDR—one of those established in 2006 under the project—nearly all the vendors in the 65 stalls are women.

They sell food, handicraft, textiles, clothes, and jewelry. For women from the small villages of the indigenous Akha community, sales of ethnic jewelry and handicrafts to tourists have opened a brand new avenue to greater incomes.

Before the upgrading of the access road to the Kwangsi Falls in the Lao PDR, 52-year-old Bouaphan Chanthavady and her family lived in poverty. Her sales of food to visitors have vastly improved their lives.



Because tourism is labor-intensive and most business participants are micro or small-scale operators, the effects of vibrant tourism are felt quickly in local communities, and the benefits permeate all aspects of life.

Consider the people of Thapaen village, home of the Khmu ethnic group.

Before the road to the nearby Kwangsi Falls was upgraded, 52-year-old Bouaphan Chanthavady survived on subsistence farming. For 2 to 3 months every year, she and her husband seldom had enough food. They had no vehicle, and it took them all day to walk a muddy track to Luang Prabang town for supplies or medical help. Bouaphan gave birth to eight children at home unattended, and lost four of them.

When the new road opened, she began selling noodle soup and fruit at the entrance to the waterfall site. Business grew quickly, Bouaphan says, as the good road and tourism service facilities brought ever larger numbers of tourists and traders. The road made access to town much easier for Thapaen villagers. “My husband and son now work there and travel on their own motorbikes.”

Bouaphan’s business continues to do well and has raised her income by \$150 a month, which financed the purchase of the concrete blocks and tiles with which her husband built their new house. She can also pay \$1 per month for health insurance for the family and buy new clothes and books for a grandchild.

“Our life has improved,” says Bouaphan, “and the future looks bright.”



India

From Surviving to Thriving

Shakuntala, in the foreground, and her daughter, Shammi, opened a shop in the Bengare area of Mangalore with a self-help group loan.

By any measure, ADB's Karnataka Urban Development and Coastal Environmental Management Project was a huge undertaking—aimed at improving the lives of more than a million people. But for Vimala, a 31-year-old housewife in Mangalore city's Mulakad slum, it all came down to one basic necessity and a simple, life-affirming concept: dignity.

Vimala's home now has a toilet. "Building toilets has made our surroundings neat and clean," she says. "Women feel safer because they don't have to relieve themselves in the open anymore. That has given us dignity and privacy."

A 300-kilometer stretch of the southwest coast in India's state of Karnataka had long suffered from a shortage of basic infrastructure. A lack of storm drains meant frequent flooding during the monsoon season. Water supply was erratic, and many of the wells that people needed to draw from were being polluted and adulterated with seawater. Poor sanitation threatened public health.

Local governments in towns and cities such as Karwar, Mangalore, and Udupi could not provide the assets and services needed to make them new centers of commerce, trade, and industry. The region's prospects for healthy economic growth were dim.

In 1999, after the Government of India sought ADB's support to help fill the infrastructure gaps and tap the coast's potential, ADB approved a \$175 million loan for the project. Its goal was to improve living conditions in 10 towns and cities.

Saugata Dasgupta, a senior urban project officer at ADB, says the project reflected the integrated urban development concept advocated by the sector strategies of both ADB and India. "These strategies aim to expand and rehabilitate important infrastructure; develop the capacity of local governments so they can improve delivery of health, sanitation, and other services; look after the environment; and empower the poor."

Far-reaching results

Up to 1 million people have been given access to improved water supply, better drainage systems, and upgraded solid waste removal services under the project. In all, 2,000 kilometers of water supply pipes, 427 kilometers of sewer lines, and 59 kilometers of storm drains were installed. Landfill sites with a capacity of 187 million tons were created, and 172 kilometers of roads were upgraded. More than 56,000 slum dwellers received proper sanitation facilities—including Vimala.

The public's health is better. "With an improved city environment, there's been a drastic reduction in

Karnataka Urban Development and Coastal Environmental Management Project

Dates

- Approved: October 1999
- Closed: November 2009

Beneficiaries

- Up to 1 million people with improved water supply and wastewater and solid waste management
- 1.2 million people served by upgraded roads

Poverty

- 23.5% drop in poverty in project areas

Revenue

- Municipal property taxes increased by 14% a year during 2000–2010

Productivity

- Time previously spent on water collection is used to earn income and spend time with family
- Incomes have grown due to business loans from self-help groups



Life is much easier for residents in Kundapura now that they have round-the-clock water supply.

waterborne diseases,” says Gopal Krishna, the chief officer of Kundapura municipal council.

Thirty-year-old Vasanthi, who lives in the Karvikeri area of Kundapura, has a 2-year-old son and is one of many residents reaping the benefits. “Our children used to fall ill frequently by drinking untreated water from the well,” she says. “The clean water has reduced the waterborne diseases like diarrhea.”

Life in Ashray village in Kundapura has also improved. One hundred households now have 24-hour water supply. “In our large family, most of our time was spent fetching water from an open well,” says Chandu, the 65-year-old matriarch of an extended clan. “Since we got the water connections, life has become so much easier. We now have more time for household chores and attending to our children.”

Cleaning up the coastline

New sewage treatment plants installed under the project in Bhatkal, Karwar, Mangalore, and Udupi have

helped ease pollution along Karnataka's coastline. Thanks to its plant, which can treat 43.5 million liters of sewage a day and serves 30% of the population, Mangalore is now one of the cleanest cities in India.

Mangalore's city corporation has signed an agreement to sell treated wastewater for use by a cluster of industries in the Mangalore Special Economic Zone. This helps conserve limited water resources and brings in additional revenue for city services.

"The special economic zone uses the treated sewage after further treating it at a tertiary plant," says G.D. Naik, a joint commissioner of the municipal corporation. "Under the agreement, the special economic zone contributes 70% of the maintenance cost of the treatment plant, with the corporation contributing the rest. The corporation has also made arrangements for door-to-door collection of garbage."

The project also helped three coastal districts to develop conservation plans and set up air and water quality monitoring stations. As a result, 2,000 hectares of mangrove plantations were created to prevent coastal erosion.

Funding public services

One project objective was to bolster municipal services by improving the collection of taxes and fees.

Few people enjoy paying their bills, but the residents in places such as Ashray village can now see the connection between the money they hand over to the government and the services they receive. "Water connections are metered and everyone's happy paying their bills on time since they're getting a round-the-clock water supply," says Umesh, a municipal councilor in the coastal town of Kundapura.

Kundapura's income from water supply fees has grown from \$13,000 a year to \$158,000. Its market complex, which was funded by the project and houses the municipal council's offices, generates about \$24,000 a year in revenues through rental income. The council plans to use this windfall to build another market

complex for the benefit of local traders—which in turn will generate more revenues for municipal services.

In Mangalore, the biggest of the 10 towns and cities covered by the project, water meters have been installed in all households and generate revenue of about \$530,000 a year.

The project helped Mangalore bring more than 800,000 previously unassessed properties into the property tax system. This doubled income from property taxes in most parts of the cities. The tax systems were computerized, accounting standards were improved, and a public grievance system was put in place.

Help from within

Central to the project's economic development plan was the creation of nearly 2,500 self-help groups that covered about 30,000 low-income families.

With the assistance of two regional nongovernment organizations, the self-help groups distributed loans to local residents, businesses, and entrepreneurs. Of the \$1.9 million in total lending, \$800,000 came from the members' own savings. Each self-help group has 20 to 30 members who still meet once or twice a month and receive entrepreneurship training.

Fishermen in the Bengare area of Mangalore are among the many whose incomes and living standards have been elevated with the help of credit from the groups, usually set up in places where people could not qualify for bank loans. "We provide credit of up to about \$3,300 for activities like buying boats and fishing nets, building homes, or setting up small enterprises like grocery shops," says Pratibha, who oversees 60 self-help groups in the Bengare area.

Small loans of this kind have enabled women in Bengare to start their own businesses. Geeta, for example, borrowed \$600 to set up a beauty parlor. Shakuntala and her daughter, Shammi, opened a grocery store with a loan of \$1,160.

Targets exceeded

The project exceeded many of its original benchmarks. It added 305 million liters a day to the state's water supply, 44% more than the initial goal. Sewage treatment capacity was increased by 130 million liters a day—83% over the target.

Due in part to the stronger than expected results and to project efficiencies that reduced the expected costs, the Karnataka Urban Infrastructure Development and Finance Corporation took the unusual step of asking ADB to cut its loan from \$175 million to \$145 million.

The project also improved the operations of the participating municipalities, as well as the statewide management of urban development. The Karnataka Urban Infrastructure Development and Finance Corporation has grown to become the primary agency for all externally aided urban sector projects in Karnataka.

By supporting the state government's reform program, the project has raised the execution capacity and the revenues of local urban governments. The reform

Loans from self-help groups, such as the one in Bengare, provide much needed capital to help residents set up their own small businesses.



program has become a model for urban infrastructure projects across the country.

Other innovations included the engagement of self-help groups by urban local bodies for collection of municipal solid waste and extensive community participation in the design and implementation of slum improvement subprojects.

The project's innovative approaches taught important lessons.

One was that small investments in such areas as microfinance, the formation of self-help groups, low-cost sanitation facilities, and the upgrading of skills can have large social and economic impacts—and help build local support for projects at the same time.

Innovations reduce poverty

Most importantly, the project and the continuing activities it established have helped break the poverty cycle in disadvantaged communities. Research by the Karnataka Urban Infrastructure Development and Finance Corporation has found that the average daily income of self-help group members rose from less than \$0.50 before the groups began operating to more than \$2.40 afterward.

Fishing families, which are often among the poorest in the communities, are now able to give their children better education as a direct result of the project's help.

Forty-year-old Bengare resident Mallika, whose family's income has risen to \$500 a month due to a self-help group loan that allowed her husband to buy new fishing equipment, sends her daughter to a private school in Mangalore.

Small amounts of credit made available to families who could not get loans from banks have disproportionately large benefits, says Mallika—and create hope for their future.





Mongolia

A Teaching and Learning Revolution

Second grade pupils wait for their turn to use toilets at School Number 3.

Udelgarav Demberel became a teacher 40 years ago because she loved children and wanted to help them realize their dreams and succeed in life.

It has not always been easy. When she started teaching chemistry at the Ireedui Complex School in the Songinokhairkhan district of Ulaanbaatar in 1997, the only teaching aids she had were a blackboard and chalk. The pupils simply copied down everything she wrote—traditional “chalk-and-talk” instruction rather than the student-centered approach to teaching and learning that now often prevails in education.

These were chemistry classes, but the school had no equipment or materials for experiments.

All that changed in 2007 under the ADB-financed Third Education Development Project. The Ireedui Complex School received new equipment and facilities, including a chemistry lab; an information and communication technology center; and an e-library. The teachers were trained in new national education standards and curriculum and started using curriculum guides.

“Our teaching-learning activities are now laboratory-based,” Udelgarav says. “Students can do experiments, and students [who are being trained to become teachers] come to the school to practice teaching in the lab.”

Hands-on learning worked. In recent years, four of Udelgarav’s students have become teachers at the National University of Mongolia or the Medical Science University. Her students have won one gold, four silver, and two bronze medals in chemistry at Mongolia’s National Chemistry and Physics Olympiad.

Zoljargal Bayaraa is another educator who has seen major changes under the ADB project. She recalls that the Vocational Training and Production Center in Sainshand used to be so poorly equipped that students had to bring their own utensils to cooking classes. But the school received a major overhaul with project financing and has since acquired a fully equipped master workshop. “The students know all the standard equipment used in restaurants,” says Zoljargal, “and more and more of our graduates are getting jobs.”

“We used to conduct practical training outside the school because our workshops were almost empty,” says Delgerbat Luvsamtseren, principal of the center until 2013. “We had no equipment. The project enabled us to have the practical training in-house. And thanks to the master workshops for construction and cooking, enrollments have increased.”

Third Education Development Project

Dates

- Approved: June 2006
- Closed: March 2012

Beneficiaries

- More than 240,000 students
- About 21,900 teachers

Access and Retention

- Gross enrollment for primary education increased from 92% in schoolyear 2006–2007 to 99% in 2010–2011, and from 91% to 94% for secondary education
- The dropout rate at primary and secondary levels declined from 2.3% in 2007 to 0.8% in 2011

Quality

- National curriculum framework developed and approved
- New curricula and textbooks developed
- More than 3,000 teachers trained

Jobs

- More than 4,500 graduates from six model vocational schools obtained work within 6 months after graduation



Students conduct experiments with School Number 3's new natural science laboratory equipment.

The ADB project also supported a week-long session with local employers to develop training modules that met their needs.

Early transitions

In the early 1990s, after subsidies from the former Soviet Union ended and the country began a transition to a market economy, Mongolia's educators struggled to sustain remarkable achievements made in the 1980s. Educational spending and quality declined. Buildings and facilities fell into disrepair, and many schools closed. By 1996, enrollment had fallen to 94% at the primary level (compared with 100% in 1986) and to 63% in secondary schools (compared with the 1986 rate of 87%). Dropout rates also rose.

Especially hard-hit were remote and poor areas, such as Dornogovi Province in the southeast of the country. "There was a big gap between schools in rural and urban areas," says Tsetsegmaa Gelgee, a mother of four students who attended School Number 3 in the Dornogovi capital of Sainshand. "Our school was behind those in Ulaanbaatar."

At the start of the 21st century, more than one-third of Mongolians lived below the national poverty line—earning less than \$0.75 cents a day. Rural areas had not shared equally in the benefits of overall economic growth, and poverty rates in the countryside were significantly higher than those in the cities.

“High unemployment and underemployment caused by a mismatch between available skills and what the labor market needs have been a key cause of poverty,” says Bandii Radnaa, a project coordinator at the Ministry of Education, Culture, and Science.

Schools had stuck with central-planning-era curriculums that seldom gave students the knowledge or skills they needed to continue learning and find work in the new market economy. Teachers lacked the appropriate knowledge and used outdated techniques, especially in rural areas. Those qualified left teaching

The Vocational Training and Production Center in Sainshand now boasts of a fully equipped master kitchen for cooking.



to accept more attractive jobs in the expanding private sector. Making matters worse, the education system had not embraced modern learning methods.

Accelerating the pace of change

ADB has been the largest external supporter of Mongolia's education sector. This support has been critical in rebuilding its education system. By 2006, two ADB education development projects had helped reverse declining enrollment and improved the quality of education. Both had the assistance of other development partners, including the Government of Japan and the Nordic Development Fund.

ADB worked closely with the government under the Third Education Development Project approved in 2006 to accelerate the pace of change.

The project, financed by a \$13 million ADB loan and government funding of \$3.38 million, extended basic mandatory primary education from 10 to 12 years. It focused on developing a national curriculum and new education standards that would meet international benchmarks and make the education system more responsive to the needs of business and industry.

By the end of the project in 2012, the new national curriculum framework and updated education standards were in place, new textbooks had been written, and more than 3,000 teachers had been trained.

The project provided 68 model primary and secondary schools with teaching and learning materials, information and communication technology equipment and software, and school furniture. Their teachers received training. These schools served as models in particular subjects, shared their expertise and experience, and provided support for others.

Six model technical and vocational education and training (TVET) schools were renovated and received new teaching and learning materials. The project provided each school with training equipment to teach



students trades and skills that were needed and lacking in the labor market. The priority sectors included construction, farming, food production, and auto maintenance and repair. Dormitories at the six schools were rehabilitated so that students from remote areas could attend.

In all, more than 240,000 students and 21,900 teachers benefited from the project. The upswing in gross enrollment continued during the project's implementation period. In schoolyear 2010–2011, enrollment reached 99% at the primary level and 94% in secondary schools. The dropout rate declined from 2.3% in 2007 to 0.8% by 2011.

According to the teachers involved, much of the project's success was due to the learning and sharing of good practice. By establishing the 68 primary and secondary school models, the project helped create a system under which better endowed and modernized schools could share knowledge and resources with the other schools throughout the country.

Renovations at School Number 3 included the replacement of old windows that were difficult to open and close.

Better access for the disadvantaged

Another project achievement has been greater access to education for disadvantaged groups, including the disabled and youngsters from poor families in rural areas.

Oyunchimeg Bilegbayar , who grew up in a herding area with her parents and two brothers, decided to study construction to work in what was becoming a booming industry. She had to put her plans on hold for 2 years when she fell ill. By the time she could apply, two vocational schools told her she was too old.

However, the Vocational Training and Production Center in Sainshand, upgraded under the project, accepted her as a student. Oyunchimeg, now 20, graduated from the construction program at the end of 2014 and was impressed by the vocational center's combination of academic and practical courses. Her gender was not an impediment in what may be seen by some as a male-oriented industry—eight of her 30 classmates were female.

“I like to do things with my hands,” she says, “which helps me better understand the theories behind construction.” Oyunchimeg plans to study building engineering at university.

More opportunities

Employment opportunities are growing for young people with training and skills like Oyunchimeg's. In 2013, 60% of the graduates from her vocation center found work within 6 months of finishing school.

Students are enthusiastic about the school's approach to learning, the apprenticeships with local companies, and their own improved prospects. “I want to run a restaurant—owning, managing, and cooking at the same time,” says 16-year-old Bumchin Naranbaatar. “Tourism is growing in Dornogovi, and there'll be many business opportunities here.”

In the past, many Mongolians viewed TVET as a second-choice alternative to upper secondary education, as well as one that appealed mainly to poorer kids, according to Ulziimend Ganbold, a Ministry of Education, Culture, and Science senior specialist who worked as a TVET expert on the project. The project upgrades at the model TVET facilities have changed this perception.

“The trust and public image of TVET schools was boosted with the provision of teacher training, teaching–learning materials, and equipment,” Ulziimend says. “For example, many parents and master cooks wanted to see newly equipped master training workshops.” This helps explain why enrollment at the model schools jumped from 4,405 to 6,259 during the project period.

The students who have already come through Mongolia’s steadily improving education system may be in the best position to appreciate the benefits of the project. “I’m proud of it,” says

Children now start school at 6 years of age rather than 7. First grade classrooms have space for both study and play to help young pupils adapt to a new learning environment.



Nyambayar Sambalkhundev, who graduated from the Ireedui Complex School in 2012. “It gave us opportunities.”

Now studying Mining Machinery at the National University of Mongolia, Nyambayar is thinking about the future. “I want to run a big company in the metal processing and production industry,” he says. “Mongolia is rich in resources, but few companies produce metals for the international market. Running such a company would be good—for my country.”



“The trust and public image of TVET schools was boosted with the provision of teacher training, teaching-learning materials, and equipment.”

Opposite: “Our school has a good reputation, good facilities, and good teachers,” says Oyunchimeg Bilegbayar, a construction student at the Vocational Training and Production Center in Sainshand.





Nepal

Washing Away Barriers

Children who used to hike great distances to fetch water now have more time to play and study.

Every day when she was growing up in Nepal, Bipana Gharti Magar had to traverse rugged terrain to the nearest river and carry a heavy 5-liter container back home. This was the only way her family could get enough water to cook, clean, and drink.

It was exhausting. “We had to climb a long way from the river, which gave us backache,” the 14-year-old Bipana recalls now. “We were tired all the time.”

Bipana’s ordeal ended in 2010 when ADB’s Community-Based Water Supply and Sanitation Sector Project installed a modern water supply system in Kuirepani, her village in the Dang region. It pumps water to

a nearby storage tower and then on to public taps. Liberated from her difficult daily trek, Bipana now has more time for her studies and other household chores.

“Having clean drinking water in our homes and the nearby hospital has helped give us better hygiene and sanitation,” she says. “It has also freed up more time for education. Our houses used to be dirty and difficult to clean. Now it’s much easier.”

Nepal has an abundance of water, but Bipana’s story is a common one in many of its poor remote communities. Family members, usually women or children, must hike great distances to shallow wells, ponds, streams, or rivers and bring back clean water—work that can often take 4 or more hours each day.

The lack of easily available water means more than sore backs and tired legs. Cleanliness suffers, and crops cannot be properly nurtured. Without sanitation facilities, some residents practice open defecation in fields or forests, leading to pollution and waterborne diseases that are particularly dangerous for children. According to the United Nations Development Programme, diarrhea has in the past accounted for up to one-quarter of childhood deaths in Nepal.

In the early 2000s, 30% of Nepal’s people had no ready access to water, and fewer than one in five homes in rural areas (17.5%) had proper sanitation facilities—either an outdoor latrine or an indoor toilet.

Women bore much of the extra work burden, since they usually made the daily trudge to find and haul water. Members of disadvantaged castes and ethnic minorities were sometimes denied equal access to the more convenient water sources, and so they also suffered disproportionately.

Nepal looked for help to ease this problem. In 2003, after a feasibility study and discussions with the government and nongovernment organizations (NGOs), ADB approved a \$24 million loan. It accounted for nearly two-thirds of the project’s total costs, with the remainder funded by the government, local authorities, and residents. The project was in line

Community-Based Water Supply and Sanitation Sector Project

Dates

- Approved: September 2003
- Closed: April 2011

Beneficiaries

- More than 568,000 people
- More than 90,000 homes with access to improved water supply and 45,000 homes with latrines

Infrastructure

- More than 4,550 kilometers of pipes laid, and 1,390 water storage reservoirs built

Health

- Waterborne diseases, especially among children, reduced
- Vegetable growing introduced to boost nutrition

Productivity

- People spent an average of 2 hours less per person per day fetching water

with ADB's strategy for Nepal, which calls for strong community partnership in all operations.

Partnership in serving the unserved

The project was completed in 2011 and brought clean water and improved sanitation to more than 568,000 people. Most of the beneficiaries live in poor regions and Nepal's many remote areas.

More than 90,000 households gained access to basic water services, usually through community taps or pumps. Almost 45,000 homes and 354 schools have new latrines. In all, more than 4,550 kilometers of pipe were laid and 1,390 water storage reservoirs constructed.

The project used a performance-based design to ensure that its intended results were delivered. Each project community was required to achieve 50% sanitation coverage by the end of a designated development phase and 100% by the middle of the implementation phase. Payments to the


Rural people in Nepal, usually women or children, have traditionally trekked for long distances to get water, usually from shallow wells, ponds, or streams.





Bipana Gharti Magar (right) has more time and energy for her studies now that she does not have to walk long distances to provide water for her family.





“Children are cleaner, safer, and in better health.”

Dipa Ale no longer needs to worry that polluted water and poor sanitation will make her children sick.

NGOs who partnered in the project were tied to these benchmarks.

The project emphasized local initiative and participation. Employees of Nepal’s Department of Water Supply and Sewerage administered the work, and 174 NGOs were brought in to provide community education and technical assistance. Each community was overseen by water user and sanitation committees made up of local residents and community leaders.

The project went beyond the traditional approach. In addition to creating the physical infrastructure, it provided the broad, integrated community development and empowerment needed to support it. A decentralized service delivery approach was adopted, based on the recognition that strong community participation was vital to ensuring that the assets and the services would be affordable and maintained.

In Bipana’s village of Kuirepani, for instance, the water user and sanitation committee raised money and solicited free labor from residents to construct the

water system. The committee charges each household that draws water from a private tap \$1 per month. This pays for the electricity, repairs, maintenance, and other ongoing costs that keep the system operating well and in good repair.

Households drawing from common taps provided under the project pay about \$0.20–\$0.50 a month for their water—an amount that even the poorest families can afford. Families in the project areas now spend an average of 2 hours each day fetching their water, compared with about 4 hours before the project was completed.

These families consider the time saved to be as precious as the fresh water itself. Long daily trips for water kept mothers from their families. “We had no time to spend with our children,” Deva Khadka, a 27-year-old mother of a son and daughter says of the days before a water system came to her rural community. “The bond between us and the children

Families are feeling the benefits of readily available clean water.



was minimal. But now we can sit with them and help them with their studies.”

Boosting farming and improving health

Not surprisingly, more water has meant better farming. Farmers can irrigate fully now and have more time to tend to their crops.

“I’m cultivating cash crops like cauliflower, onions, garlic, spinach, and carrots,” says Sita Ale Magar, a 31-year-old mother of one in a village in the country’s midwest. Other families can now grow their own vegetables, which saves them money and improves their health.

With a ready supply of water, Sita Ale Magar can earn extra money growing cash crops.

Construction of latrines under the project has also made communities healthier and less vulnerable



to diseases, including the diseases that often led to childhood deaths.

Community leaders and water user and sanitation committee members received training from project staff on the importance of good hygiene and sanitation and ways to improve both. Residents were encouraged to become involved in the effort themselves. Poor families, who received payments for 50% of the time they spent working on the project, were given concessionary loans and subsidies to help them construct latrines. The agencies involved report that the incidence of diarrheal and other waterborne diseases have fallen substantially in the project areas.

“Having latrines near houses helped keep the environment clean and contributed to lessening of diseases, especially among kids,” says Kishor Shakya, a project manager. “That reduced women’s burden in caring for sick members of the family.”

Dipa Ale, 35, a farmer and mother of three, agrees. Health problems such as diarrhea, dysentery, anemia, and hookworm are no longer rife in her area. “We can take care of personal hygiene,” she says. “Children are cleaner, safer, and in better health.”

“Having latrines near houses contributed to lessening of diseases, especially among kids.”

Dismantling gender and caste barriers

The project encouraged women and members of ethnic minorities and groups traditionally regarded as lower caste in the project-supported communities to participate in the planning, construction, and operation of the local water systems.

ADB required that at least 50% of the water user and sanitation committee executive and general membership be female. The Dalit (“untouchable” caste) community and ethnic minorities that have suffered from discrimination had to be represented

proportionately in each community. Raising awareness of discriminatory practices at the local government and community levels has helped to rectify the historically inequitable access to many social services in Nepal.

“If we don’t get the whole community involved in this, it’s not worth it,” says Mishri Prasad Shrestha, gender and social development specialist with the Department of Water Supply and Sewerage. “It’s not enough to provide water without enabling inclusion.”

The village of Rajpur in southwest Nepal has a mix of castes and ethnic groups. These include a few Muslim families; indigenous Tharus and Dalits, who are placed at the low end of the Hindu caste system; and Brahmins and Chhetris, whom the system considers higher caste.

In a situation that would have been unthinkable in this village a decade ago, Bishnu Bista, a 25-year-old high-caste woman, shares a water pump in front of her house with her lower-caste neighbors. “Everyone uses this tap,” Bishnu says. “We built it together, we make decisions together, so naturally we share the water.”

Shanta Bahadur B.K., a Dalit who helped build pumps and toilets, says that community relations have vastly improved since the project started. “We all dug our well, then carried the cement,” says Shanta, 49. “We get along, and working together has helped.”

Lasting change

Water supply coverage in project districts grew from 72% in 2002 to 89% in 2010, and the number of households without latrine facilities dropped from 83% to 34% over the same period. Residents were continuing to build latrines on their own initiative even after the project was completed.

“We’ve seen more and more people living in villages becoming really aware of the need to take care of sanitation and hygiene,” says Laxmi Sharma, a senior project officer in ADB.



Clean water can wash away social barriers too.

“Access to water used to be a source of tension, even conflict,” says Mina K.C., treasurer of the Rajpur water user and sanitation committee. “High castes would stop low castes from using easy sources, and women walked for miles to get water. It caused resentment, gossip, even violence. That’s not happening to anyone involved in this program. Not anymore.”

Maya Pun Magar (right) earns a regular monthly income working as a caretaker for the Kuirepani water system.



Pakistan

Building Back Better

Asma Azeem, from the village of Nullah Chahli, loves her rebuilt school. “My dream is to become a teacher here,” she says.

Mushtaq Ahmed was collecting firewood when the earth began to shake. His legs gave way.

“It was the most horrific moment of my life,” he says. “I sat there, holding my head, watching houses on hillsides tumbling downward. My wife died in the rubble.” Almost everyone in his village lost someone. “In some cases, entire families were buried under debris.”

Mushtaq was among the millions who suffered on 8 October 2005 when Pakistan was struck by the worst natural disaster in its history.

At 8:52 a.m. on that day, a great swathe of the mountainous northeast regions of the country was rocked by a 7.6-magnitude earthquake. An estimated 73,000 people died, and more than 70,000 were injured. The disaster left 2.8 million without shelter, devastated the infrastructure of an area the size of Belgium, and put 324,000 people out of work.

Within weeks of the disaster, ADB was helping to lead what was later seen as one of the most successful and rapidly executed recovery efforts in an earthquake area ever.

On 14 November 2005, ADB established the Pakistan Earthquake Fund to help meet the country's most urgent emergency needs. The fund was dedicated to delivering emergency financial assistance for immediate reconstruction, rehabilitation, and associated development activities.

ADB mobilized support swiftly by designing and immediately implementing the Earthquake Emergency Assistance Project, approved on 13 December 2005.

The grants and loans eventually totaled \$448.3 million, with contributions from the European Union, and the governments of Australia, Belgium, Finland, and Norway.

ADB assembled a team to work with Pakistan's Earthquake Reconstruction and Rehabilitation Authority and regional bodies to assess the extent of the damage and identify priority reconstruction areas. A satellite office was set up close to the quake's epicenter to help channel funds to the worst-hit areas immediately. Guided by ADB's Build Back Better philosophy, many affected areas would eventually become more prosperous and resilient than they had been before the disaster.

Rebuilding roads

The earthquake triggered landslides and damaged vital bridges. An urgent priority was to restore road links so that recovery and relief missions could get through and help survivors cope with the Himalayan winter.

Earthquake Emergency Assistance Project

Dates

- Approved: December 2005
- Closed: June 2011

Beneficiaries

- More than 3.5 million people

Unemployment

- Unemployment in the affected area down from 35% in 2005 to 13% in 2011

Knowledge

- Reconstruction of 435 primary and middle schools
- Improved knowledge and skills among health and education providers

Transport

- Rehabilitation of 301 kilometers of major roads, 492 kilometers of link roads, 53 major bridges

Power

- Grid capacity doubled in earthquake-hit areas

Health

- Rebuilding of three major hospitals and 26 rural medical centers rebuilt

Housing

- More than 400,000 people received grants to rebuild homes



“All I need to do is call the suppliers when the goods run out.”

Ajab Gull, who runs a shop on a newly built road in Oghi, has goods delivered to his doorstep now instead of having to travel to nearby cities to buy goods himself.

“While our first task was to clear roads,” says Malik Israr, chief engineer in the State Reconstruction and Rehabilitation Agency in Muzaffarabad, “we never lost sight of the bigger challenge—repairing infrastructure that would enable people to start rebuilding their homes and businesses. ADB’s timely support was crucial.”

Over the course of the project—from December 2005 to June 2011—\$148.2 million of financing helped mend or build 301 kilometers of major roads, 492 kilometers of link roads, and 53 major bridges. The improved roads reduced travel times by an average of more than 50% from those experienced before the earthquake. This cut transport costs, fuel use, and the pollution caused by traffic congestion.

A typical beneficiary was truck driver Ashfaq Abbassi. Before the earthquake damaged the road between Muzaffarabad and Athmaquam, he owned only one vehicle. With the potholes and broken down surface

of the old route, his truck spent more time in the repair shop than on the road.

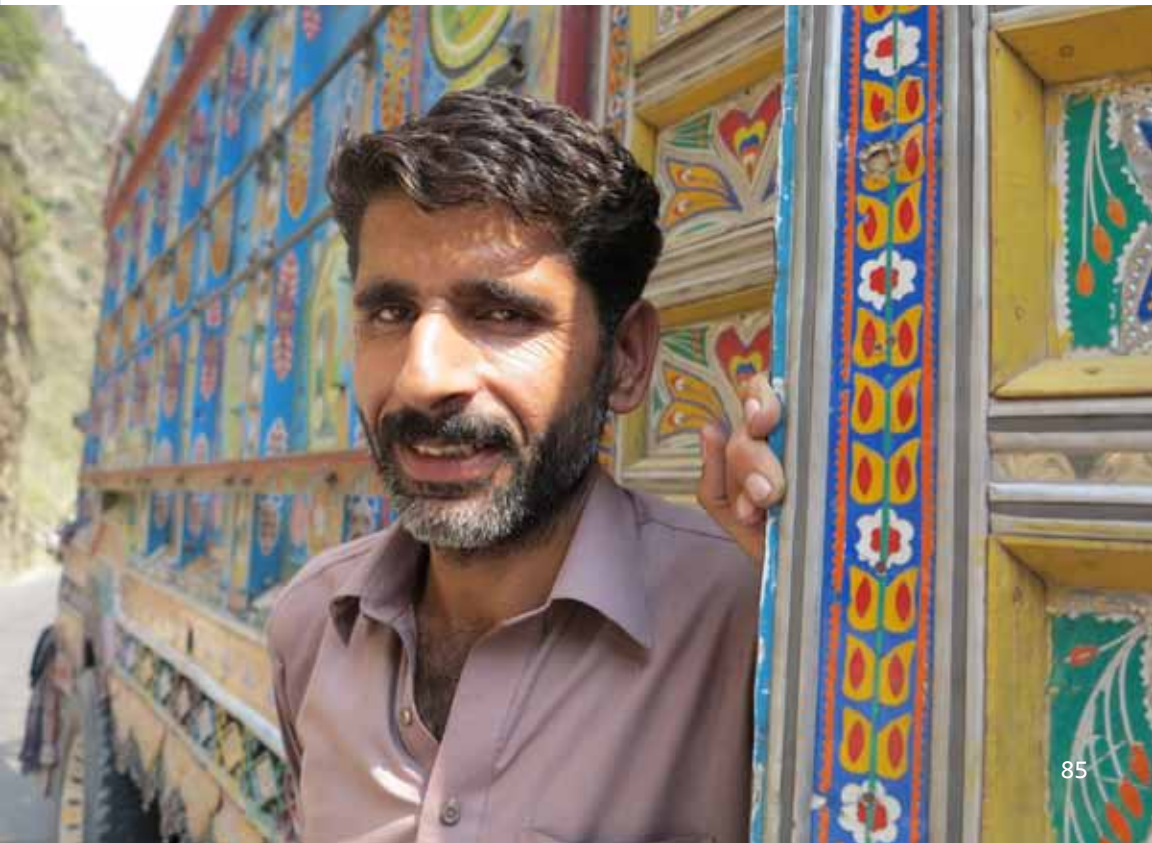
“It used to take me 7 to 8 hours to travel from Muzaffarabad to Athmaquam,” he says. The road’s rehabilitation under the project cut the time in half. “Naturally I’m better off,” says Ashfaq, who now owns three trucks.

Ajab Gull, who runs a shop on a newly built road in Oghi, is also content with the result. Rather than travelling to Islamabad and Lahore to buy goods, he can simply place an order, and suppliers can now deliver them right to his doorstep, with no delivery charge. “All I need to do is call them when the goods run out,” he says.

Turning the lights back on

The project played a key role in restoring and expanding other crucial infrastructure. Its \$24.8 million

It once took Ashfaq Abbasi 7 to 8 hours to travel from Muzaffarabad to Athmaquam, but this has now been halved. “Naturally, I’m better off,” he says.





A \$24.8 million investment in the restoration of power has paid dividends.

investment in restoring the electricity system started with emergency power supply to field hospitals, tent villages, and relief camps where people who lost everything sought refuge after the disaster.

The project rebuilt nine hydropower stations, including damaged turbines. It also rebuilt 10 grid stations, restored 450 kilometers of high-voltage lines, and installed 1,292 transformers and 84,587 service connections for consumers.

An additional goal was to make the electricity system resilient. “ADB helped us to build fortifications and water diversion walls to protect the electrical plant from flash floods and cloudbursts in the future,” says Malik Abdul Basit, deputy director of operations and maintenance at the Kathai hydroelectric plant in Hattian Bala.

Better schools, brighter future

In rebuilding 435 primary and middle schools, the project used pre-engineered materials both for quality control and to speed up construction. Schools were built in less than 60 days, and the earthquake-resistant technology avoided the need to move them from

their original locations. The light, flexible, and resilient materials used are safe for buildings in seismic zones.

The project also trained 656 teachers and 328 school management committees in health and hygiene, disaster management, and first aid. Since its completion, school enrollment in the disaster-hit areas has increased from 46,007 before the earthquake to 52,213 students. Literacy has risen by 4%.

The project has brought some hope into lives shattered by the disaster. Twelve-year-old Sanwal Maqbool lost his mother and two sisters in the earthquake, and his father died of a heart attack 6 years later. He is now able to go to a safe, well-equipped school where he can try to build a better future. Sanwal's marks place him second in his class. "The school has waived my fees and gave free books to students like me," he says.

Fourteen-year-old Asma Azeem thinks of the future while walking from the village of Nullah Chahli to her new school in Chattian every day. "I love my school," Asma, who is the top student in her class, "and my dream is to become a teacher here in my village one day so I can help other girls to succeed in life."

“My dream is to become a teacher here in my village one day so I can help other girls to succeed in life.”

Reconstructing hospitals and homes

ADB's emergency assistance also helped restore health care services in the earthquake area. ADB funding of \$25.6 million financed the reconstruction of three major hospitals and 26 rural health centers. The average number of consultations in these centers each year has risen from 25,000 before the quake to 125,000, and the number of hospital outpatients and referrals has grown by 41%.

“At one time,” says Saeeda Haider, a resident of the village of Chakaar in the district of Hattian Bala, “I had

The rebuilding of schools and houses allowed children to continue their studies and families to stay together in their own homes.





73

دشمنوں سے بڑا حسرت ہے کہ ان کی خدمت میں شکر کی بات نہ ہو
لے کر ملازمین اور ان کے اولاد کے لئے اللہ تعالیٰ سے دعا ہے کہ ان کے لئے

to travel some 40 kilometers to Muzaffarabad for treatment. But since we have a good hospital and medical staff closer to Hattian Bala, my family and I feel more secure.”

Another important achievement was the reconstruction of more than 400,000 houses. The project enabled thousands of people to take charge of constructing their own homes, benefited the local producers of building materials, and created jobs for workers. Unemployment in the affected area fell from 35% in 2005 to 13% in 2011.

Help for those who need it most

The project’s innovative outreach feature incorporated the special concerns of vulnerable groups of women, children, and the physically challenged into the disaster response.

The earthquake had left many women widows. They and their children often faced destitution in a traditionalist society where women have often been denied education, mobility, and access to resources and services.

Funding under a special livelihood support project component provided 6-month grants to 282,000 of the most vulnerable families headed by women. Free land and the land titles were given to 1,316 women. The health and education facilities provided under the project all had dedicated areas for women, children, and the physically challenged.

Teams of experts, many of them women, fanned out through the disaster areas to teach female survivors a wide set of skills—from better farming techniques to bookkeeping. About 18,000 women from 5,666 village reconstruction committees were trained in construction techniques. The project later established a mobile legal service of 13 female lawyers that assisted women and others handicapped by their lack of identity papers, land title documents, and



banking experience, as well as those who needed legal representation in court.

“When the earthquake struck,” says Shahida Maqsood, who has a family of five in Rara, near Abbottabad, “we lost our house, our farm, livestock—everything.” With help from the project, Shahida and her neighbors started raising chickens and selling eggs at the local market. They were also taught to plant small fields of wheat to produce their own bread. Says Shahida: “Without this help, we’d still have nothing but our clothes.”

Shahida is also the head of her women’s community organization, set up under the project. She deposits money that she and 22 other women earn from their home-based ventures at the local branch of Habib Bank, and these funds are then used to provide microcredit to other women to start their own businesses.

Today, life in Rara shows no trace of the devastation that killed 17 local people and destroyed most of the houses. It has been built back better, and many of its most vulnerable people face the future stronger and more resilient than before.

Power plants have been upgraded and protected from future flooding, says Malik Abdul Basit, deputy director of operations and maintenance of the Kathai hydroelectric power plant in Hattian Bala.



Papua New Guinea

Banking the Unbanked

Thousands of villagers, including Leap Elijah from Enga Province, learned saving, budgeting, and other skills to manage their finances and build their businesses.

Banking was once the privilege of a fortunate few in Papua New Guinea (PNG). In 1999, only about one out of every 20 citizens had access to financial services of any kind. Banks believed people would not repay their loans, so they provided none. Small savings accounts were also uncommon—they were considered too costly to service.

Poverty was growing, formal sector jobs were scarce, and yet the kind of small-scale financing that would have supported the only income opportunities available to most people—smallholder agriculture and microenterprises—was nowhere to be found. Many parts of the country still used a barter system. Since no bank would have them, people hid their money in their gardens.

Things have changed. Maino Trudi, for example, does her banking today by mobile phone. She is one of a rapidly growing number of beneficiaries of the Microfinance and Employment Project, supported by ADB and the Government of Australia.

Among its achievements, the project helped lay the foundations for a flourishing microfinance sector in the country. Five microbanks now serve people with low incomes, because the project helped develop financial products for rural people. It also trained banking staff to deliver these products and instructed bank customers how to use them.

Maino, a 66-year-old widow, has five children and eight grandchildren and earns a living in a small village in the capital of Port Moresby by selling fish and growing tomatoes and corn.

She once had to travel many kilometers into town and lost valuable work time to use a branch of Nationwide Microbank. Today, she can access her account through a mobile phone—another technology that is new to her. She found this challenging at first but now considers it “a real joy.” Says Maino: “It means I can do my banking from my vegetable garden.”

Nationwide Microbank was first established under the project as Wau Microbank. It was named after the remote town of Wau in which it was set up specifically to pilot the provision of banking and financial services to people like Maino.

The project ran for 8 years until 2010 and was supported by a \$9.6 million ADB concessional loan to the government and a \$909,000 grant from the Government of Australia.

Aimed at reducing poverty by integrating rural communities into the mainstream development process and expanding the financial services available to them, the project generated jobs and spurred economic growth in some of the country’s poorest and most isolated regions.

After ADB approved the project, it helped the government establish the Microfinance Competence Centre within the PNG Institute of Banking and

Microfinance and Employment Project

Dates

- Approved: October 2000
- Closed: November 2010

Beneficiaries

- 509,000 depositors
- 184,000 borrowers

Training

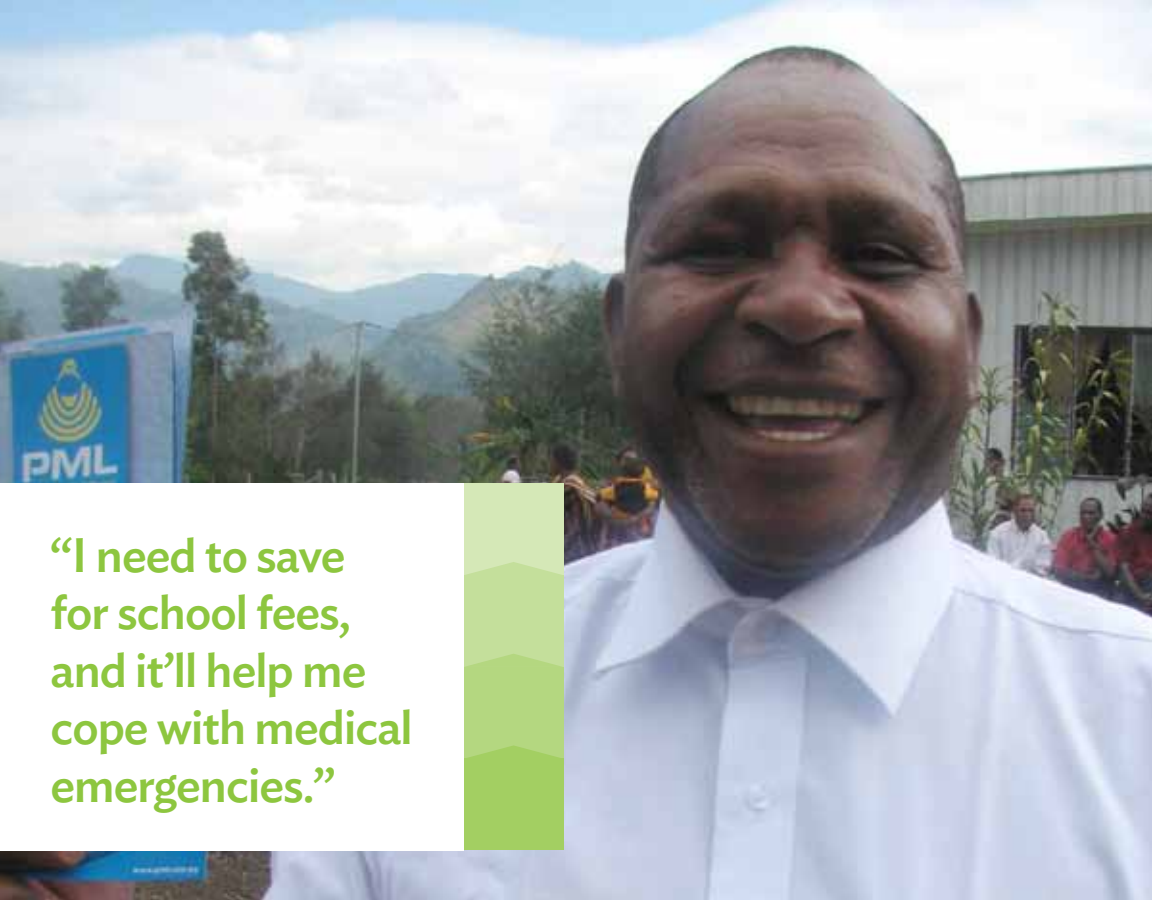
- More than 7,000 people in remote areas trained in financial literacy

New Products

- 37 savings and loan products tested and offered by microfinance institutions during 2002–2008

Banking

- Number of unbanked people in PNG fell by around 10%



“I need to save for school fees, and it’ll help me cope with medical emergencies.”

Issac Dian from Enga Province was excited to open his first bank account.

Business. The center linked existing microfinance service providers in a network. Through the center, the project institutionalized training to give these microfinance providers the technical skills they needed to expand their services.

From pilot to a bank

ADB and local banking officials tested new savings and loan products to make certain they suited the needs of low-income people. The products were also tailored to the specific requirements of male and female clients. ADB then helped microfinance institutions put the innovations to work.

The pilot Wau Microbank was established with project capital and technical advice, expanded quickly, and was given a full banking license and its new Nationwide Microbank name by PNG’s central bank in 2008.

It now has 12 branches. “It’s hard to believe we’re 10 years old now and in a relatively short time became the largest microfinance institution in the South Pacific,” says its chief executive officer (CEO), Tony Westaway. “It would not have been possible without support from ADB.”

The Nationwide Microbank CEO believes that, in addition to access to credit, the new microfinance sector is providing people with a sense of security and well-being that was missing before. “Unbanked people in PNG bury their money in bamboo pipes in the garden and hide it under fireplaces,” he says. “Some won’t leave their village homes, too scared to go to town in case their life savings are stolen.”

Issac Dian, 45, was one of those who hid money in the garden. He was excited to open his first account when bank agents came to the Tsak Valley in Enga Province and glad he no longer had to worry about keeping his money safe. “I have two kids and need to save for their school fees,” he says. “The bank account will also help me cope with medical emergencies.”

A new generation of Papua New Guineans can now benefit from financial literacy to help improve their lives.



Financial education

The project provided more than 7,000 unbanked people in rural and remote regions with training in financial literacy. The instructors had first-hand experience of work in these areas.

Leap Elijah, a mother of four from Enga Province, recently completed one of the courses. “Before, I knew nothing about budgeting and saving,” she says. “With the financial knowledge I’ve gained, I plan to open my first bank account.”

A specialist trainer employed under the project, Jill Pijui says one of the best parts of her job is being present when students graduate at ceremonies in their villages. “I feel moved by their passion and hunger for education,” she says.



Women have been major beneficiaries of the project. They especially appreciate “Micash,” which is what Nationwide Microbank calls the product it developed to allow customers to access their accounts through mobile phones. Bank clients can use it to save, earn interest, and make payments without leaving their communities.

“We realized we didn’t have enough capital to extend our branch network so we had to be innovative and use a technology like branchless banking to meet our objectives,” says CEO Tony Westaway. “This was a deliberate strategy borne out of the Microfinance and Employment Project—we had to use technology to deliver services, since costs in rural areas for providing them were otherwise too high.”



Nancy Kila, Tau Egi, Maino Trudi, and Kobo Davana use Micash to save, earn interest, and make payments through mobile phones. They find it safe, secure, and convenient for trading.

Safety for women

Research shows that women—particularly those involved in trading—view Micash as safe and secure. Women hold 30% of the bank accounts in PNG, and 80% of Nationwide Microbank’s mobile wallets—as the cellphone accounts are called—belong to rural people who were previously unbanked.

The country’s central bank was responsible for the project’s overall coordination and implementation. The central bank governor, Loi Bakani, was chairman of the project’s steering committee. “Before this project, 95% of PNG people had no access to financial services,” he says. “Afterwards, the percentage of unbanked people in PNG went down to about 80%, which is quite an achievement.”

The remoteness of villages in PNG has hampered people’s access to financial services in the past.



Demand-driven products

The project has also helped the country's microfinance institutions develop demand-driven products and redesign existing ones to make them more sustainable and customer-friendly. In the first 6 years of project implementation, 30 new savings and loan products were created and tested, and seven were redesigned. Many were first launched through the pioneering microbanking pilot scheme in Wau for potential replication in other microfinance institutions.

In September 2002, only about 20,000 borrowers and 45,000 depositors were being served by the microfinance institutions in PNG. As of June 2010, these microfinance institutions had about 184,000 borrowers and 509,000 depositors.

“The Microfinance and Employment Project helped change the perception and thinking of stakeholders, practitioners, and regulators,” says the central bank governor. “What’s happening here in PNG in microfinance could be used as a model for other Pacific countries.”

“What’s happening here in PNG in microfinance could be used as a model for other Pacific countries.”

Maintaining the momentum

In 2010, in response to a request by the Government of PNG, ADB and the Government of Australia approved a new cofinanced project to help further expand access to financial services in rural communities.

ADB's \$24.06 million Microfinance Expansion Project launched in 2012 is building on the earlier project's experience. This includes a 7-year program to deliver financial literacy training to more than 120,000 people in some of the most inaccessible areas of the country. At least 40% of the trainees will be women.



Women's Microbank

Experience from the project has led to the creation of Women's Microbank, a milestone in women's development in PNG. Licensed in August 2014, this is the first bank in the Pacific established specifically to serve women. Led by female CEO Thushari Hewapathirana, Women's Microbank provides savings products and loan facilities, and conducts financial literacy training. It emerged from a nongovernment institution called PNG Women in Business, which has provided it with almost 10,000 customers, and is opening many new accounts.

One customer is 54-year-old mother of five Anna Goi. Along with her children, Anna runs a store that deals in food, secondhand clothes, toys, and jewelry, and offers tailoring and sewing services as well. Anna is illiterate, but that did not stop her from opening an account with Women's Microbank. Now she is applying for a loan to help grow her tailoring business.

Anna personifies the customers that Women's Microbank is targeting, says Thushari Hewapathirana. "The new bank is a progressive step toward the development of women," Thushari says. "We know women are better money managers than men in this country and have special needs when it comes to banking services and finances—we know their heartbeat. That's why they come to us."



Anna Goi



Thushari Hewapathirana

Opposite: The establishment of Women's Microbank, a milestone in the country, was made possible under the project.



Tajikistan

A Road More Traveled

A car passes along a road in Jirgatal District that has been rehabilitated as part of the project.

The success of ADB's project to upgrade the road between Tajikistan's capital of Dushanbe and its border with the Kyrgyz Republic can be quantified by kilometers upgraded, traffic flows increased, and financial and economic rates of return. But for 45-year-old Rupiya Karimova, the benefits transcend mere metrics. The project has changed her life.

Several years ago, Rupiya was jobless and struggling to support herself and her three children. When she traveled from her home in Rasht Center to the capital Dushanbe for supplies or for health care, it could take her 10 hours one way on a dusty, bumpy track.

Then, 2 years ago, with the upgraded road promising easier access to customers and supplies, Rupiya decided to open her own fabric store in Rasht Center's market. The venture was a success. Now, she travels to Dushanbe in a taxi every 2 weeks to buy goods for her store and is able to make the round trip in a single day.

“Not only does the new road cut travel time, it makes it easier for my family to visit the district hospital in Rasht Center when they need to,” says Rupiya. “When one of my nieces was pregnant with twins, she had a complicated delivery but was brought to the district hospital within 15 minutes. It used to take over an hour.”

Rupiya is one of a growing number of individuals and entrepreneurs in Tajikistan who find traveling faster, safer, and easier thanks to the ADB-supported Dushanbe–Kyrgyz Border Road Rehabilitation Project (Phase II). Two sections of the border road totaling 89 kilometers in length and another 60 kilometers of rural roads were upgraded during 2005–2013 at a cost of \$60 million, \$51.7 million of which was financed by ADB through a \$31.2 million loan and a \$20.5 million grant. Another \$3.5 million was cofinanced by the OPEC Fund for International Development, and \$4.8 million came from the Government of Tajikistan. Work included strengthening road foundations, resurfacing, improving drainage systems and bridges, and shoring up retaining walls against landslides.

The project was part of a larger government initiative to improve road transport in landlocked Tajikistan with support from development partners. The government's transport sector strategy includes developing international road corridors to facilitate trade and transit traffic across Central Asia. ADB first approved assistance for repairs to the Dushanbe–Kyrgyz border road in late 2003, and since then has provided more than \$118 million in loans and grants to improve it.

Dushanbe– Kyrgyz Border Road Rehabilitation Project (Phase II)

Dates

- Approved: November 2005
- Closed: August 2013

Beneficiaries

- More than 260,000 people directly benefited

Outcome

- Traffic on the border road has nearly tripled to 2,071 vehicles a day

Savings

- Savings per 1,000 kilometers traveled of \$45 for a car, \$105 for a light truck, and \$194 for a heavy truck

Trade

- International freight traffic has increased more than eightfold since 2006

The more, the merrier

The private sector also chips in and plays an important role in ensuring that the benefits from the upgraded roads will last. Tajikistan is the first Central Asian country to begin contracting public road maintenance out to private companies. The Tajikistan Ministry of Transport introduced a maintenance outsourcing scheme under which service payments are tied to the performance and timing of output delivery. ADB financed the preparatory works related to the company selection process, while the government provided \$4 million for the performance-based maintenance contracts.

Travel to the Tajikistan capital of Dushanbe from the center of the Rasht District used to take taxi driver Saidmukhsin Saadiev over 10 hours in each direction. Now he can make the two-way journey in 6 hours.

The approach was first piloted along two segments of the Dushanbe–Kyrgyz border road—a 76-kilometer section between Vahdat and Obi-Garm and a 73-kilometer stretch between Nurobod and Nimich. In 2013, following open bidding, the Ministry of Transport



signed 3-year contracts with two successful bidders, Gayur-1 Company and Innovative Road Solutions. They are now responsible for maintaining the sections and meeting the performance targets agreed with the government.

The project's road improvements enabled about 260,000 residents in the Rasht Valley to access distant markets, promoted small and medium-sized businesses and social networking, and gave a boost to the agriculture and processing industries.

The project helped increase trade in the region, as well as economic growth in the Rasht Valley and Dushanbe, and created a sustainable regional and national road network, according to a 2014 Central Asia Regional Economic Cooperation (CAREC) Program report, *CAREC in Tajikistan, Building a Global Future*. "New businesses are opening as traffic increases on completed sections of the road, and locals are finding jobs in gas stations, cafés, and repair shops."

As an example, the report cites the fact that the manager of a Tajikistan company, Zargar Transport Service Complex, hired 20 previously unemployed local people. Nearby communities are also benefiting. Their residents can now buy cooking gas and other supplies closer to home and at lower prices.

Before the upgrade, drivers on the 340-kilometer road between Dushanbe and the Kyrgyz border had to make their way over long stretches of unsealed, rock-strewn surfaces. The journey, often along winding switchbacks through the mountains, took 13 hours as recently as 2007. With smoother driving on the upgraded asphalt and an increase in the average speed range from 25–35 kilometers per hour to 50–70, average travel time was reduced to 8 hours by 2012.

Not surprisingly, traffic has increased, nearly tripling from 777 vehicles a day in 2005 to 2,071 in 2013. Tajikistan's Ministry of Transport forecasts healthy growth in the years ahead. More than 80% of vehicles on the road are freight trucks.

Easier access to markets

The upgrade of rural roads has made it easier for farmers to get to markets, particularly in the Rasht and Nurobod districts. Production of vegetables, fruits, and livestock is up, and some villagers have reported a 30% rise in income.

Despite the increased traffic and higher speeds, safety on the road has improved. “The number of accidents decreased by almost 80% since 2006,” says Muhtor Negmatov, a former director of the project team in the Ministry of Transport.

Safety remains an issue, nonetheless, in part because local residents are not yet fully aware of the risks from the greater traffic and speeds and how to take precautions. Dushanbe-based ADB senior project officer Farrukh Nuriddinov says road safety initiatives therefore remain part of ADB’s ongoing partnership and knowledge sharing with Tajikistan’s government.

Aside from reducing accidents, the road upgrade has helped save lives in other ways. Ambulance attendant Yunus Ibrogimov, 61, who has worked at the district hospital in Rasht Center for more than 10 years, refers to the rehabilitated section as “the road of life.”

After the hospital received an emergency call for a man who had had a heart attack in Mujakarb village in the Darband District, previously an hour’s drive away, the ambulance crew reached the patient in 12 minutes. “We provided emergency care and brought him to the hospital,” says Yunus. “The road helped to save him, and there have been many similar incidents.”

Far-reaching effects

The Dushanbe–Kyrgyz border road is part of a trade route that links Tajikistan to Afghanistan and the Kyrgyz Republic and beyond to the People’s Republic of China, the rest of Central Asia, and South Asia.

Daily international freight traffic along the route increased to 82 trucks in 2012 from 10 in 2006. Tajikistan's foreign trade turnover in 2012 amounted to \$5.137 billion, or 15.1% (\$674 million) more than in 2011.

The costs of operating vehicles on the border road fell by about \$45 per 1,000 kilometers for a car, \$105 for a light truck, and \$194 for a heavy truck.

More improvements heralded

The Dushanbe–Kyrgyz border road is one of the six priority corridors identified for development under the CAREC transport and trade facilitation strategy

Truck driver Esanali Urumbaev, who transports onions and coal from the Kyrgyz Republic, says business and his life in general have improved thanks to the road upgrade.



adopted in 2013. The strategy aims to establish efficient economic corridors that will benefit the entire region by 2020.

One ongoing concern is maintenance. If the newly upgraded roads fall into disrepair, transport will again become slow and dangerous, and many of the gains of the past decade will be lost. “Regular maintenance and controlling overloaded vehicles are key to maximize the sustainability of the project,” says project officer Nuriddinov. “That is why ADB supports the government in piloting the performance-based road maintenance scheme and installing vehicle weighing systems.”

“The road saved lives,” says ambulance driver Yunus Ibrogimov, who praises the upgraded thoroughfare for allowing quicker emergency care.

Meanwhile, projections of continued project benefits remain bullish. The 2013 completion report estimates that the economic internal rate of return is 23.1%,



well above ADB's benchmark minimum of 12.0% for similar projects. That will translate into a net benefit of \$82 million by 2031, thanks largely to lower vehicle operating costs and savings in time.

For these and other reasons, Tajikistan's Minister of Transport Hayrullo Asozoda stresses the critical importance of good roads to the country's future. "Such ADB-funded projects help us in rehabilitating major regional highways and rural roads, promoting social and economic development of the country, as well as regional cooperation and trade," he says.

On a practical and personal level for many of Tajikistan's people, the journey to an easier and happier life has already begun. Sixty-three-year-old Sangak Makhmadov, who lives in Navdi Village in the Rasht District, would seldom see his son and grandchildren before the road upgrade. It would take him 10 hours or more to reach Dushanbe, where they live and where he sometimes had to travel to buy supplies for his mini supermarket.

"My son's family easily visits us these days, and we go to him," says Sangak. "We can make it within 3 1/2 hours, spend less time and fuel on the road, and need to do less maintenance on the car. My family now has a steady income. My grandchildren study well at school. They learn Russian and English, and our hope is to send them to a university."



Viet Nam

Saved by Modern Medicine

Nguyen Thi Luyen, a 41-year-old nurse at Dak Ha District Hospital, has made local patients aware of the importance of hygiene and benefits of modern medical care. Today, she oversees 105 nurses in her district.

In the early 2000s, doctors and nurses at the Dak Ha District Hospital were wrestling with an obstacle more complex than their lack of resources.

Some people in the rural communities in Viet Nam's Central Highlands they served still often sought treatment for themselves and sick children from untrained traditional village practitioners. They also preferred herbal remedies over modern medicines. The belief that diseases came from ghosts or spirits was also too common, and it exacerbated a lack of awareness about the threat of poor hygiene to good health.

Nurse Nguyen Thi Luyen, 41, says patients at the hospital and their relatives “would throw litter everywhere—out the window, in the hospital grounds. They just didn’t know where to put it.”

Thi Luyen says attitudes to medicine and health issues in general changed with the implementation of the ADB-supported Health Care in the Central Highlands Project during 2004–2010. An important result: local communities now report lower rates of disease and infant mortality.

Medical staff used project funds to set up an information, education, and communications center in the hospital to make people aware of the importance of hygiene. The center also informed local families of the benefits they could reap from modern medical care.

Villages in surrounding areas were provided with at least one health worker each to encourage residents to seek care at hospitals and medical centers when they needed it. Nurses were also trained in patient management techniques.

Since then, the hygiene and litter problems have been resolved, says Thi Luyen, now a head nurse. “People put their trash in dustbins now.”

Thi Luyen and her patients are among the 5.1 million people in Viet Nam who have benefited from the project in five provinces: Dak Lak, Dak Nong, Gia Lai, Kon Tum, and Lam Dong. The project built hospitals and medical schools in Central Highlands areas where infrastructure needs had been largely neglected. It trained doctors and medical staff and increased public investment in primary health care to improve the well-being of the poor and disadvantaged.

The project also introduced an innovative health card system for the poor. Based on the government’s poverty assessment, nearly 1.7 million people in the Central Highlands were identified as potentially eligible for subsidized services.

This support included a food allowance for inpatients, reimbursement of patient transport costs and of medical costs not covered by insurance, and primary

Health Care in the Central Highlands Project

Dates

- Approved: January 2004
- Closed: December 2011

Beneficiaries

- More than 5 million people

Infant Mortality

- Declined from 60 to 41 per 1,000 live births

Incidence of Disease

- Decreased by 10%

Infrastructure

- New facilities included two preventive health centers; three social disease centers; four information, education, and communications centers; and two secondary medical schools

health care outreach services that were delivered to remote communities.

The project cost was \$28 million, \$18.6 million or 66% of which was financed by a loan from ADB. The Government of Sweden provided a grant of \$5.6 million and the Government of Viet Nam contributed \$3.9 million.

“There have been substantial reductions in diseases in project provinces,” says Nguyen Thi Ven, director of the Department of Health in the province of Kon Tum.



“Since 2006, the decrease in illness has been 10% higher in project provinces compared with nonproject provinces, and infant mortality in the project area has declined from 60 to 41 per 1,000 population.”

Thi Ven has seen the results at Ngoc Hoi District Hospital personally. “More than 20 specialists were trained with the help of ADB funds in fields such as obstetrics, pediatrics, and infection control,” she says. “The money was also invested in information centers and social disease centers, wastewater treatment

In Viet Nam’s Central Highlands region, rates of poverty have historically been far higher than the national average.





Help with travel costs has made her life easier for Y H'Vang, shown here with her 2-year-old daughter at the Dak Pxi commune health station.

plants, and vehicles, including seven ambulances. It had a great influence on our province.”

Supporting the poor

Previously, when any of her three children fell ill, 29-year-old Y H'Vang of the Xe Dang ethnic group in Dak Pxi commune would have to leave her husband's side in their rice and corn fields, pay for referrals, and take the kids to the Dak Ha District Hospital. Public transport would cost her \$20. If the child's condition worsened, she would have to pay an additional \$15 to travel to the provincial hospital.

The system established under the project covered the transportation expenses for local people such as Y H'Vang, provided a food allowance, and paid for referrals. The government has now put similar support in place.

This help was badly needed in the Central Highlands where more than 4 million ethnic minority people live in scattered, remote communities and the rates of gross poverty have long been far higher than the nationwide average of 13.4%.

Matching strategies

The project directly supported the national government's socioeconomic development plans for 2001–2005 and 2006–2010. It was also aligned with a major government policy, Decision 139, which seeks to ensure that the poor have access to basic health care.

“The government really appreciated ADB's flexibility in accommodating changes in the scope of the project and budget allocations on an ongoing basis,” says Thi Ven. This included reallocation of funds for additional civil works and waste management systems.

Working in partnership, staff from the Ministry of Health and the provincial health departments were

“I've had the chance to see more, know more,” says Nay Lin Da, shown here in the delivery room of the Pleiku Health Center.





The project has allowed coffee farmer Siu Thit and his family to have regular health check-ups.

responsible for implementing and overseeing a vast array of initiatives. Twelve district health centers were provided with new facilities and inpatient wards, and solid waste management and water and sanitation systems were upgraded. The project funded the construction of two provincial preventive health centers, three social disease centers, and four information centers. Secondary medical schools were also built in Gia Lai and Dak Lak provinces.

Improving service delivery

The project provided equipment for schools, district and preventive health centers, and secondary medical colleges. It trained frontline health workers and other staff and upgraded the skills of doctors.

More than 200 medical staff members at district and provincial health centers received training in internal medicine, emergency care, surgery, pediatrics,

obstetrics, gynecology, infectious diseases, and public health.

The project also supported training in quality of care at secondary medical schools in the five provinces for nearly 1,600 commune and district health workers, including 330 ethnic minority trainees and 902 female trainees.

One medical professional who gained valuable skills was 40-year-old Nay Lin Da, who works as a doctor at the Pleiku Health Center in Gia Lai Province. Lin Da is herself from a poor family and worked day and night on her studies for 6 years in her determination to get her qualifications.

After completing her medical degree, she received a scholarship from the project for a specialization course in Ha Noi and became an obstetrician. She then returned to her province, determined to do more to help the women of her Ja Rai ethnic minority community.

“Coming from an ethnic minority myself helps me understand and answer the needs of local women so much better,” she says. “I wanted to do more to help them. Many ethnic groups were not aware of the health services available, and would ask for help from fortunetellers and shamans.”

After the course, Lin Da, who each day examines about 30 patients and oversees the deliveries of up to 10 babies, realized that her technical skills had dramatically improved. “I had a chance to see more, know more,” she says.

She also observed a change in the attitudes of local people to medical care. In the past, many mothers would do nothing to prepare for the arrival of newborns—they feared it would bring bad luck. Some would suddenly leave the hospital while still in labor. Today, with her help and support from midwives,

“Coming from an ethnic minority myself helps me understand and answer the needs of local women so much better.”



mothers are generally doing what they should to take care of themselves and deliver healthy babies.

Proud list of achievements

The list of improvements attributable directly and indirectly to the project is impressive, as everyone involved proudly acknowledges.

In household living standard surveys, the health outcomes for 2004, 2006, and 2008 in the project provinces were compared with those of a set of nonproject provinces that previously had similar scores on the United Nations Development Program's Human Development Index.

Government hospital outpatient services increased by 37% in the project provinces, compared with 22% in the comparison set.

Access to prenatal care increased from 45% to 67% for one clinic near Da Lat, and the proportion of the poor seeking outpatient care in the provincial government hospitals grew by 37%.

The Gia Lai Secondary Medical School in Pleiku City in Gia Lai Province maintains a garden to teach pharmaceutical students about medicinal herbs.



The project's subsidies for the food, travel, and treatment costs of poor women and their children helped raise the proportion of infant deliveries attended by trained health workers to more than 90% in four of the five project provinces. The rate improved to 79% in Kon Tum, which had faced by far the biggest challenges. Overall, the proportion of pregnant women who received prenatal care was 83%.

As a result of the project achievements, the Government of Viet Nam changed its health care finance and insurance laws to ensure that services for the poor continued to be subsidized in all provinces.

The success and the project's health card model also encouraged the government to test strategies that will allow it to realize an even more ambitious goal—universal health care coverage.

Conclusion

Asia and the Pacific's rising share of global GDP in purchasing power parity—from 23% in 1990 to 38% in 2013—has hastened the dramatic decline in poverty experienced in the past half century. By ADB's estimation, this progress is set to continue apace, and by 2050, the region will account for at least half of global GDP.

Clearly, ADB's developing member countries will continue to change profoundly, bringing new challenges into focus as old ones recede. As the region's needs evolve, so too will the emphasis of ADB's work.

A 2014 midterm review of ADB's strategic blueprint took stock of these developments and highlighted the need for ADB-supported projects to emphasize inclusiveness, promote innovation and resilience, and strengthen support to middle-income countries.

The review also emphasized that, with 1.6 billion people in the region still living on less than \$2 a day, ADB's vision of an Asia and Pacific free of poverty is still a work in progress. The three agendas of ADB's Strategy 2020—inclusive economic growth, environmentally sustainable growth, and regional cooperation and integration—will therefore remain central to its work.

This book aimed to show, through 12 project snapshots, how ADB pursues these important agendas. The stories describe people across the region whose lives have been transformed by the application of not just financial resources, but also knowledge and innovative ideas in collaboration with a range of development partners.

The money ADB commits from its own resources—\$13.5 billion in 2014—is a small fraction of what is required to meet the needs of the region. By mobilizing cofinancing from development partners—\$4.9 billion in 2014—ADB is able to achieve considerably more. ADB is therefore stepping

up efforts to leverage external sources of finance, including from bilateral official sources and the private sector.

Several projects described in this book attracted substantial cofinancing, including from the Government of Australia for expanding financial services to rural communities in Papua New Guinea; from the OPEC Fund for International Development for the renovation of the CAREC highway connecting the Tajikistan capital with its neighbor, the Kyrgyz Republic; from the Global Environment Facility for reviving the People's Republic of China's largest freshwater wetland; and from the European Union, as well as the Governments of Australia, Belgium, Finland, and Norway for the earthquake recovery and rebuilding efforts in Pakistan.

The project examples also show how the experience, knowledge, and innovative ideas of ADB and its partners can be brought together to develop effective solutions. Several promising innovations are showcased that could be replicated or scaled up, including a health card system to help poor people access medical care, model schools to spread good practices in teaching and learning, ecoagriculture as part of wetland restoration, branchless banking for customers in remote rural areas, and performance-based road maintenance by private sector contractors.

By being both a source and a catalyst of finance, knowledge, and innovation, ADB is helping its developing member countries achieve more and better results for their people.

Together We Deliver

From Knowledge and Partnerships to Results

The book highlights successful projects that demonstrated development impacts, best practice, and innovation. They were implemented through the hard work of ADB's developing member countries, with support from ADB project teams and other partners. The results of the projects have changed and will continue to change the lives of many, especially the poor.

Together We Deliver is jointly produced by ADB and its developing member countries as a companion publication to the 2014 Development Effectiveness Review report.

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 reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to the majority of the world's poor. 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.



ASIAN DEVELOPMENT BANK

6 ADB Avenue, Mandaluyong City

1550 Metro Manila, Philippines

www.adb.org



9 789292 548834 >