RESULTS IN THE LATIN AMERICA & CARIBBEAN REGION
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As a direct consequence of the COVID-19 pandemic, 2021 was a year of enormous challenges in Latin America and the Caribbean (LAC). The region faced a daunting health emergency, for which it was ill prepared, and then endured the devastating social and economic costs of the crisis. LAC’s daunting challenge was to begin its social and economic recovery while still battling the pandemic. The World Bank supported these efforts and made a record contribution to the region’s countries, helping to mitigate the damage, protect the most vulnerable and support reconstruction efforts.

The road to full recovery will still be long, and the region must continue to move toward more inclusive and resilient growth, deepening its capacity to absorb shocks and offering a greater well-being to its population.

According to our estimates, regional GDP is expected to grow 6.3 percent in 2021, after the worst drop (-6.7 percent in 2020) ever recorded. Although the region is recovering from the crisis, large sectors of its societies still suffer from the consequences. For the recovery to translate into inclusive growth, a sustained effort and a firm commitment to building a better future, with more solid foundations, will be necessary. At the World Bank, we are committed to helping this vision become a reality.

Thanks to the social protection measures put in place during the crisis, many countries in the region were able to prevent millions of people from falling into poverty. Still, 233 million were in a vulnerable situation in 2020, 12 million more than a year earlier. In addition, some 20 million jobs were lost, and the human capital costs will have long-term consequences. Together with our development partners and in collaboration with governments, civil society, and other stakeholders, we are helping to make a difference.
The briefs contained in this book showcase the many ways that both active and recently closed World Bank-financed projects are supporting the region’s efforts to overcome the current health crisis, and helping to lay foundations for long-term development, with inclusive growth, human capital creation and greater resilience.

To promote inclusive growth, efforts were made to ensure that the benefits of investments in key sectors reach everyone. In the Brazilian state of Pernambuco, for example, a US$190 million loan helped finance investments in water supply and sanitation infrastructure, reducing water rationing for 900,000 people in Recife and connecting 70,000 people to the sewerage network. In northern Argentina, with a US$358.8 million loan from the Bank, investments were made along 418 kilometers of provincial roads, improving access and mobility for the area’s rural populations and indigenous communities.

Human capital investments are fundamental for development. They help provide people with the tools they need to prosper and take advantage of available opportunities in a time of uncertainty and deep transformation in the world of work.

In Peru, for example, we helped foster agricultural innovation through institutional reforms and capacity strengthening activities. Nearly 32,000 farmers adopted innovations that boosted their incomes by an average of 34 percent, and more than 75,000 training days were provided to researchers and extension professionals. And in Brazil, a US$130 million program designed to improve education quality helped 80,000 children, most of whom are living in Recife’s poorest households and attending municipal schools, attain higher levels of learning.

Climate related events, increasingly frequent and destructive in recent years, have devastated the homes and livelihoods of many, but especially of society’s most vulnerable. This growing concern must be addressed even while we simultaneously face both the challenge and the opportunity of building forward and fostering a green recovery from these multiple crises.
With a US$60 million grant from the World Bank, Haiti strengthened its national and local disaster risk management capacity and financed investments to improve the resilience of its road network, which benefited 150,000 people. This improved emergency preparedness was key to Haiti’s coordinated and effective response to the August 2021 earthquake. Similarly, in Bolivia we helped implement a new integrated river basin management for the Rio Grande basin, where forecasting, flood management and irrigation infrastructure now benefit more than 6,500 families, protecting them from droughts and floods.

Indigenous peoples and local communities throughout the region faced particular challenges during the COVID-19 pandemic. In Mexico, to meet these challenges and strengthen resilience among these communities, we helped expand sustainable natural resource management projects led by indigenous peoples themselves and financed capacity-building workshops to help further the development of income-generating projects based on natural resources. In Paraguay, we promoted the adoption of sustainable agricultural practices in rural areas, helping to increase the productivity of 3,200 farms by at least 25 percent. The project was financed by two World Bank loans, totaling US$137.5 million, and it directly benefited 249,662 small-scale farmers and indigenous communities in the two poorest departments of the country’s Eastern Region: Caaguazú and San Pedro.

These are only a few of the many projects we carried out in the region to promote the well-being of its people. I am very grateful for the enormous effort made by all who worked tirelessly to achieve this goal, including our partners in the countries. Together, we helped improve the lives of millions of people. Today’s challenges will require a similar commitment in the future. I am confident that we will rise to the challenge and help build a stronger, more inclusive Latin America and Caribbean.

Carlos Felipe Jaramillo
Vice President
Latin America and Caribbean Region
The World Bank
Improving Access to Economic Opportunities and Strengthening Women’s Empowerment through Road Investments in Argentina

Argentina has reduced transport costs in the Norte Grande region by upgrading 418 kilometers of provincial roads and improving access for rural populations and indigenous communities. Improved road asset management practices applied by the provinces in the Norte Grande region lay the foundation for sustainable management of the road network.
Population

45,376,763

Land

8,515,770 (sq. km)

IBRD/IDA lending commitments approved in FY20+FY21: 2,472 million

Active projects: 24

New and supplemental projects approved in FY20+FY21: 11

Beneficiaries of the Norte Grande infrastructure project. Photo: Leandro Hernández / World Bank.
In 2010, the highest poverty level in Argentina (48 percent) was in the north of the country, in an area called Norte Grande, which also had the lowest ratio of paved provincial roads (1.15 km per 1,000 inhabitants versus 2.36 km for the rest of the country). Although the region has great potential for agricultural and industrial activities, increased congestion and high transport costs (50 percent higher than in the rest of the country in 2006) hindered Norte Grande’s economic development, which relied heavily on exports and distribution to national markets. The share of the rural population with uninterrupted access to all-weather roads was 24 percent for the region and as low as 10 percent in some of the region’s provinces (i.e., Tucumán). Furthermore, the region’s Provincial Road Directorates lacked the necessary management tools to effectively plan, administer, and maintain the road infrastructure.
APPROACH

The Norte Grande Road Infrastructure Project was designed to reduce transport costs over the provincial roads within the Norte Grande region by two methods aimed at strengthening the investment planning capacity and management capabilities of the Provincial Road Directorates: enhancing road quality (as part of Argentina’s strategic priority for infrastructure investment and territorial development) and introducing road asset management tools and methods (e.g., road maintenance plans, improved road data collection equipment and systems, etc.).

The project was also designed to improve living conditions for residents along these roads. For example, the project financed the Qom Cultural Route, consisting of various investments aimed at improving the connectivity, entrepreneurial skills, visibility, and accessibility of indigenous Qom artisans in the province of Chaco.

RESULTS

The project laid an essential foundation for reducing transport costs over the medium to long term through more cost-effective investment programming and maintenance. Between 2011 and 2019, the project contributed to the following key outcomes:

- Generalized travel costs on targeted roads were reduced by 28.6 percent by the end of 2019, compared to the 2010 baseline.
- A total of 418 km of rehabilitated (277 km) and upgraded roads (141 km) are regularly used by 10,232 vehicles, and their traffic volume...
(based on measures of Annual Average Daily Traffic) has increased from 871 vehicles in 2010 to 1,461 vehicles in 2019.

- Driving quality and comfort have improved, with declines in the roads’ roughness index (1.76 in 2019 from the 5.86 baseline in 2010) and end-project satisfaction rates between 77 and 97 percent among surveyed road users.

- The share of the rural population with access to an all-season road (persons living 2 km from a route all year) increased from 24 percent in 2010 to 34 percent by the end of 2019, representing an increase of more than 43,000 citizens (from 79,864 to 123,511 people).

- Improvements in 43 km of gravel roads have led to greater connectivity for indigenous communities, particularly for Qom women.

- Two female-managed community artisan centers were constructed along Route 3 and now benefit approximately 300 Qom women. These centers offer a space for the women to become economically active; the centers help promote the women’s artisan products, allowing them to earn an income, and
offer training on business and community organizing and family planning workshops in the Qom language, thus fostering the women’s capacities for action and decision and strengthening their agency.

• The project supported the development of Multi-annual Road Maintenance Plans for five provinces, which have allowed the Provincial Road Directorates to analyze overall network investment and maintenance needs. The implementation of Chaco’s Multi-annual Plan resulted in an increase in the share of provincial network roads in good condition from 30 percent in 2014 to 63 percent in 2018.

• The Provincial Road Directorates now have the tools necessary to regularly collect and use road data (including equipment to measure traffic levels, roughness indexes, etc.) and to confirm the quality of civil works (pavement analysis and bridge capacity software).

BANK GROUP CONTRIBUTION

The World Bank, through the International Bank for Reconstruction and Development (IBRD), provided an initial loan in the amount of US$358.8 million to help finance project expenditures. Beyond providing funds, Bank supervision helped enhance the institutional strengthening component and the environmental and social compliance of the road infrastructure by providing road maintenance knowledge and engaging all relevant stakeholders.

PARTNERS

The government of Argentina provided counterpart funds in the amount of US$65.9 million. The National Road Directorate and the Provincial Road Directorates of Catamarca, Chaco, Corrientes, Formosa, Jujuy, Misiones, Salta, Santiago del Estero, and Tucumán partnered with the World Bank to implement the project and benefited from the resulting institutional strengthening. Through these partners, local communities, indigenous peoples, and other stakeholders provided their relevant inputs for designing and implementing the project.
Access to all-weather roads now benefits 43,000 additional citizens, representing an increase of 10 percentage points. Road connectivity has increased women’s access to economic opportunities, reducing gender disparities.

**BENEFICIARIES**

The reduced transport costs benefited the population of the Norte Grande region of Argentina by providing greater connectivity and accessibility to health, education, and economic opportunities. Access to all-weather roads now benefits 43,000 additional citizens, representing an increase of 10 percentage points. Road connectivity has increased women’s access to economic opportunities, reducing gender disparities.

Provincial Road Directorates have also benefited by having improved road design and management tools placed at their disposal through the project, allowing them to better serve the citizens within their jurisdictions.
MOVING FORWARD

Rehabilitating and upgrading roads in the Norte Grande region has increased accessibility and reduced transport costs. For these improvements to endure, it is essential that the Provincial Road Directorates efficiently manage the road infrastructure funds they receive from the central government budget. The tools and knowledge acquired by these institutions throughout the lifespan of the project have already improved road planning and management. Implementing the project has shown that rural roads projects can contribute to women’s empowerment and access to economic opportunities. During the design of future infrastructure projects, women’s active participation is highly recommended. Design solutions that include animal passages, first used in Argentina in this project, have now been adopted for road projects elsewhere in the Norte Grande region. The Northwestern Road Development Corridor Project serves as a continuation of this project’s goals, with a focus on connectivity and road safety.
Unleashing Productive Innovation in Argentina

The government of Argentina improved the competitiveness of the Argentine economy by supporting the country’s innovation potential, thereby increasing the value-added of goods and services. These efforts included a range of productive innovation mechanisms and related infrastructure, as well as science and technology start-ups and public-private partnerships to leverage Argentina’s strong but underused research and development capacity for improved socioeconomic outcomes.
**Population**

45,376,763

**Land**

8,515,770 (sq. km)

IBRD/IDA lending commitments approved in FY20+FY21: 2,472 million

Active projects: 24

New and supplemental projects approved in FY20+FY21: 11

Innovar 2018, Argentina. Photo: MINCyT.
CHALLENGE

In 2008, Argentina was experiencing strong growth: the economy grew by 8.7 percent in 2007, the fifth straight year of 8 to 9 percent growth since the financial crisis of 2001–2002. Argentine long-term growth performance remained vulnerable to macro-fiscal crises, however, and depended on a limited number of sectors strongly affected by external factors, such as droughts, global trade shocks, and commodity price fluctuations. Argentina thus had to invest in diversification and promote innovation-led growth in its private sector to achieve sustained and inclusive growth. While most exports remained low-value, pockets of innovative small and medium enterprise (SMEs) and promising frontier sectors such as information, communications, and technology (ICT) and biotech had emerged, which suggested potential for further growth and increased value-added. The human capital underpinning these opportunities displayed favorable trends, with plenty of talent and compelling business opportunities fueling such sectors; however, Argentine start-ups constantly faced a short supply of financing opportunities. A huge untapped potential in new business growth indicated that future entrepreneurs were limited by various factors including a challenging macro context, limited entrepreneurial access to finance infrastructure, and lack of management capabilities. Other primary factors holding back innovation were (i) inadequate human capital; (ii) difficulty accessing financing for innovation, especially for start-ups; (iii) insufficient linkages among relevant actors; and (iv) weak incentives for public research and technology centers.

APPROACH

The Argentine government requested World Bank support for its science, technology, and innovation (STI) policy agenda, particularly the promotion of a new knowledge economy to diversify and strengthen sources of growth for the Argentine economy. The requested support would help develop new technology ventures and innovation funds, increase commercialization of existing research capacity, and expand human capital, among other benefits. The resulting Unleashing Productive Innovation Project invested in various channels to support innovation, including technology transfer, public-private partnerships, relevant skills, and entrepreneurship. The approach included support for (1) new technology-based companies, (2) results-oriented public-private research consortia, (3) knowledge-based small and medium innovation-based
enterprise projects, (4) skills and business capability development for tech absorption and transfer, (5) upgraded public research infrastructure, and (6) an improved enabling business environment. The underlying objective of these investments was to enhance Argentina’s ability to better leverage its existing assets (e.g., high quality research institutions and education) and investments in innovation to help drive productivity and growth led by the private sector. As such, the project supported diversification and bolstered resilience against Argentina’s volatile and commodity dependent growth cycles.

The project design was novel and forward-looking, although complex and broad in scope. To leverage maximum impact, it identified specific, important entry points to support innovation across a diverse public and private landscape. The unprecedented project design also included support to a new ministry and aligned incentives for public, private, and academic actors. In particular, the project aligned with the National Strategic Plan for STI 2006–2010 (Plan Estratégico Nacional de Ciencia, Tecnología e Innovación).

RESULTS

The project was implemented between 2008 and 2019 and contributed to the following key outcomes:

- New knowledge-based companies were created through EMPRETECNO, a program promoting entrepreneurship: of 126 subprojects, 76 became new registered businesses with positive revenues, and most have broken even within the first two years of operations. Among these newly created technology-based firms (TBFs), more than half developed a new product or service, obtained private
capital contributions, and hired staff; 75 percent reported sales revenues and were profitable within two years of operation; and 44 percent exported a portion of their production. These statistics are high relative to global standards for new and small firms across both developed and developing countries, and especially in the Argentine context, where many sectors experienced a net decrease in real annual sales of 5 to 10 percent.

- Two quasi-experimental independent impact evaluations also showed positive results from project support in EMPRETECNO and FSAT (Sectoral Funds). Specifically, impact evaluations showed that beneficiaries of EMPRETECNO had a significantly higher rate of TBF creation and ability to obtain private capital. Results also confirmed that beneficiary firms’ participation in FSAT positively affected their innovation efforts. Innovation intensity per employee grew more intensely than would have been the case in the absence of a program. Results showed that participation in any beneficiary consortium led to greater growth, in both employment and sales. In other words, firms not participating in the program would have shown less accentuated growth.

- Students supported by the project improved in academic and professional performance. A 2017 impact evaluation found that students involved in the project improved their academic performance and increased their likelihood of being hired by an ICT firm by 24 percent.

- Under the project, 1,004 CONICET (National Scientific and Technical Research Council) researchers were trained, improving CONICET’s institutional capacity for technology transfer and commercialization.

- Over US$60 million in additional private investment was generated to support innovation and commercialization of firm projects. This figure represents financing raised immediately after the project interventions and thus drastically underreports private investment made during subsequent rounds of funding. By addressing bottlenecks in product development, financing start-up costs, and providing technical and managerial support, the project helped mobilize almost an additional 50 percent in private investments for these research consortia and individual firms. For some beneficiaries, this impact was especially pronounced. For example, one beneficiary was able to generate US$8 million in subsequent private financing following an initial project injection of US$0.6 million.
• Over half (88) of the firms, labs, and research consortia supported by the project introduced new or improved products or services to new or existing markets, exceeding the original 40 percent target, and a majority were able to raise private financing after validating their performance following project interventions. Such a high level of new innovative products brought to market clearly illustrates the project’s impact.

• The project supported 232 knowledge-based SMEs in biotechnology, nanotechnology, and ICT, increasing research and development investment. A 2017 impact evaluation found that this subprogram’s beneficiaries increased in both specialized employment and total sales, by 10.3 percent and 19.1 percent, respectively.

• Upgrades were made to 49 research laboratories and technology centers, in excess of the project target of 30, improving important equipment and scientific facilities.

• The project strengthened and further aligned with government institutions through the science, technology, and innovation policy agenda. For example, the MINCyT (Ministry of Science, Technology, and Productive Innovation) has become an important institution in the government’s focus on the economic and social impact of science, innovation, and firm support initiatives. The ANPCyT (Agency
The project supported 232 knowledge-based SMEs in biotechnology, nanotechnology, and ICT, increasing research and development investment. A 2017 impact evaluation found that this subprogram’s beneficiaries increased in both specialized employment and total sales, by 10.3% and 19.1%, respectively.

for the Promotion of Science and Technology), an established player in Argentina’s knowledge-based economy, was recently given more independence and budget autonomy within the government. CONICET, the largest public research institution in Argentina, has moved toward more commercialization, including productivity-enhancing firm support—a major shift (designed and supported by the project) away from pure siloed research.

**BANK GROUP CONTRIBUTION**

The World Bank, through the International Bank for Reconstruction and Development (IBRD), provided US$195 million (an initial loan of US$150 million and additional loan for US$45 million) to support the project. The Bank also contributed expertise in fostering innovation, which originated from previously financed innovation projects in Chile, Korea, Mexico, Russia, Turkey, and Uruguay, and elsewhere.

**PARTNERS**

Argentina’s national government, via ANPCyT, provided US$80 million to cover the remaining project costs. In addition to ANPCyT’s financing, the project also greatly benefited from the nonfinancial participation of a variety of public and private organizations that aided in coordinating and implementing project efforts. These partners included MINCyT, CONICET, research institutes, universities, and the private sector. The project design was coordinated with the Inter-American Development Bank (IDB) to ensure complementary support with IDB-financed projects such as the Program for Technological Modernization (PMT III).
BENEFICIARIES

EMPRETECNO launched three calls for proposals in 2009, 2016, and 2017 to support entrepreneurs in building viable and knowledge-based business. Of the 304 projects submitted, 126 were selected to receive financial and related technical support. The program provided a non-reimbursable matching grant of up to 75 percent of the total project cost (or a maximum amount of $2.5 million per project), with at least the remaining 25 percent of project cost financed by the beneficiaries. The program’s success rate in all stages was high, with 75 percent early survival rates, relative to the 60 percent of venture-backed start-ups that fail in the United States.

Beneficiaries also showed strong growth rates, with more than half becoming exporters within a few years. On average, businesses reached US$80 to $100 thousand annually in revenues in their first one to three years. This suggests a potential to generate over US$6 million annually within the median band of beneficiaries, assuming a consistent growth rate in sales. Also worth noting are the outliers (“money makers” in venture capital terms), which are expected to generate sales ranging from US$10 to $30 million annually, with strong export potential. Based on these sales estimates, the program’s economic rate of return is calculated at 45 percent. These figures are especially impressive compared with the rest of the Argentine economy, which experienced a net decrease in annual sales across all sectors based on the 2017 Enterprise Survey.

A wide range of applications of and derivations from the original research ideas resulted in new products and services not previously possible or contemplated. Some examples include (1) new drought-tolerant alfalfa variants with significant implications for agricultural productivity; (2) a vaccine for aphthous fever; (3) a unified, computerized, remote access database for knowledge sharing; (4) new light manufacturing products, such as antiparasitics for pets, anti-cellulite socks, flame-retardant textiles, etc.; and (5) new products to improve heavy manufacturing competitiveness.

The project also created a total of 29 associative consortia (public-private and private-private, with the participation of over 80 private companies and 50 public organizations) across different fields, resulting in new products and contributing to value-addition in their respective industries. The program invested
an average of US$1.2 million in each partnership, with two-thirds of the financing allocated to public institutions and the remaining third to the private sector. Capital goods acquisition and infrastructure spending accounted for 64 percent and 13 percent of the budgets, respectively.

One project involving the Italian Hospital of Buenos Aires (HIBA) and the Multidisciplinary Institute of Cell Biology launched the Map of Actionable Genome in Tumors from Argentina (MAGenTA). The consortium develops a map of actionable tumor genomics on adult subjects diagnosed with solid tumors in Argentina. With the financing from FONARSEC, a cost-effective device was purchased, in line with the volume of HIBA patients. MAGenTA provides information about 52 clinically relevant genes, the mutations or cancers from many of which can be treated by a specific drug. Evidence shows that precision medicine significantly improves the survival rate in cancer patients.

Another project beneficiary, MABXIENCE ARG, develops cancer drugs and has two new products available at 30 percent below the cost of equivalent products on the market. In addition to capturing 70 percent of the national market share of the existing treatment, MABXIENCE ARG expanded the number of total cases

Lab funded by the project, Argentina. Photo: Tugba Gurcanlar / World Bank.
treated by 15,000 a year. The company’s success with this successful, lower-cost cancer drug has saved the government US$91 million per year. The company obtained the drug’s patent in its primary markets, including the United States, and currently has promising sales and export figures. This company later produced one of the major COVID-19 vaccines for the Latin American continent in partnership with Oxford University and AstraZeneca.

MOVING FORWARD

The project supported upgrades to research laboratories and technology centers that will continue past the life of the project. Furthermore, innovation has become more front-of-mind as a driver of the Argentine economy due to project support; stakeholders are now clear on the need for this effort to continue. Both the MINCyT and Agencia have become more established and important players in supporting the STI policy agenda within the government, especially since the STI Center in Buenos Aires was established. The Argentine government has prioritized the innovation agenda, as demonstrated by the recent change in status supporting Agencia’s increased independence.

Building on lessons learned from this project, a new operation to support inputs required to diversify and unleash sources of growth in Argentina via productivity and innovation-led growth and focused on SMEs, efficiency, and financial sustainability is under discussion. The Bank has been working diligently to design a structure to scale up the EMPRETECNO and FSAT programs originally supported under this project. The new project would widen support to expand the available entrepreneurship and innovation finance infrastructure and promote a stronger entrepreneurship ecosystem to ensure that entrepreneurs are better equipped to access and leverage private financing.
Operationalizing Bolivia’s Climate Resilience through Integrated River Basin Management in Three Subbasins of the Rio Grande

Bolivia improved its development of guidelines, planning instruments, and interoperability protocols and successfully implemented a new integrated river basin management approach in three pilot subbasins of the Rio Grande basin. The improved hydrometeorological forecasting, together with flood management and irrigation infrastructure, now benefit over 6,500 families across the basin, protecting them from droughts and floods.
Population

11,673,029

Land

1,098,580 (sq. km)

IBRD/IDA lending commitments approved in FY20+FY21: 324 million

Active projects: 7

New and supplemental projects approved in FY20+FY21: 2

Micro-watershed management measures, such as this weir, contribute to control erosion and water discharge.

Photo: Martin Albrecht / World Bank.
In Bolivia, droughts and floods jeopardize the fight against poverty. Climate change—through effects including accelerated glacier melt, changing precipitation patterns, and increased drought—increases water scarcity in some river basins, affecting water availability for drinking, agriculture, hydropower, mining, industries, and ecosystems. The negative impact of these trends on the economy, the ecosystem, and human livelihoods and well-being is already being felt, particularly among vulnerable groups such as the poor, women, children, and the elderly.

The Bolivia Climate Resilience - Integrated Basin Management Project, the first large climate change project in Bolivia financed by the World Bank, aimed to turn climate-smart, integrated river basin management theory into practice.

The project focused on strengthening institutional capacity and ensuring timely and reliable hydrometeorological data and forecasts by establishing a National Climate and Water Information System and by integrating climate change adaptation into planning and investment tools. The development of a National Drought Monitor was added to the project after severe droughts hit the country in 2016. The newly developed integrated river basin planning methodology was piloted in three subbasins (Mizque, Rocha, and Arque-Tapacarí) of the Rio Grande river basin and included subprojects designed and implemented to enhance climate resilience in those subbasins.
RESULTS

Between 2014 and 2020, the project supported the following key results:

• A climate resilience strategic program was adopted and operationalized that included developing actionable guidelines, planning instruments, and protocols for relevant government agencies to integrate climate change adaptation into their work. Pilots in three subbasins demonstrated the usefulness and effectiveness of the underlying methodology and guidelines developed for the project, smoothing the way for adoption in other locations.

• Fifty-five additional hydrometeorological data stations were financed and installed. Together with inter-agency data exchange and coordination agreements, these have strengthened forecasting and modeling capabilities for more accurate sector planning.

• Financing for 61 infrastructure and river basin management subprojects in three pilot subbasins has benefited more than 6,500 families. Specifically:
  ◦ Nineteen subprojects, covering 1,034.4 hectares, developed irrigation and drainage systems.
  ◦ Twenty-five subprojects, covering 988.45 hectares, protect areas from erosion.
  ◦ Seventeen subprojects equipped 17,313.16 meters of waterways with flood protection infrastructure.
BANK GROUP CONTRIBUTION

The World Bank, through the Climate Investment Funds’ Pilot Program for Climate Resilience (PPCR), provided US$45.5 million (US$36 million as a concessional loan and US$9.5 million as a grant) to finance this project. The US$1.2 billion PPCR supports developing countries and regions in building their adaptation and resilience to the impacts of climate change. First, the PPCR assists governments in integrating climate resilience into strategic development planning across sectors and stakeholder groups. Second, it provides concessional and grant funding to put those plans into action and pilot innovative public and private sector solutions.

PARTNERS

A strong partnership exists among key development partners in Bolivia’s water sector. Periodic meetings led by the Ministry of Water and Environment helped coordinate investments and analytical work. While the Inter-American Development Bank financed the implementation of a pilot project to improve climate resilience of the city of La Paz–El Alto, the World Bank supported implementation of three pilots in the Rio Grande basin as well as the capacity building of key national and subnational level institutions. The World Bank coordinated related activities with the German Corporation for International Cooperation, the Swedish International Development Cooperation Agency, and the Swiss Cooperation Agency. Further, Japan’s International Cooperation Agency helped with activities related to water quality control in the Rocha subbasin.
BENEFICIARIES

“The project constructed cement walls at both sides of the Cárcel Mayu river to protect communities and agricultural fields. For many years, the area suffered from floods. With these walls, we will be able to protect our properties, homes and farmers.”

Cecilio Paniagua, Organización de la Gestión de Cuencas de la Comunidad Cárcel Mayu, Municipio de Capinota.

Small rural villages in the upper areas of the watershed are considered to be among those most likely to experience the effects of projected future climate change scenarios. Higher intensity rainfall, increased erosion, and interrupted water availability will increase the cost and effort required to maintain the scarce land and its resources. To increase community resilience, the project introduced micro-watershed management practices ranging from reforestation to small water storage systems.
ranging from reforestation to small water storage systems. In urban areas of the basin, flood defenses and irrigation infrastructure increased the resilience of families suffering under too much or too little water.

MOVING FORWARD

Adoption of the new Integrated River Basin Methodology, with its mandated national application, is set to be formalized through a Ministerial Resolution by the Ministry of Water and Environment. Several development partners, such as the German Corporation for International Cooperation (GIZ), have already applied the new methodology in their respective projects.

Construction of riverbank protection against flooding in the Cárcel Mayu community. Photo: Servicio de Cuencas (SDC), Cochabamba.
Pan flute made by indigenous people from Bolivia. Photo: Julio César Casma / World Bank.
Improving Education Quality and Public Management Capacity in Recife, Brazil

The municipality of Recife, a large Brazilian city with one of the nation’s highest poverty levels, has put forward two significant educational reforms, benefiting mainly the city’s children. Recife has improved the quality of basic education, measured by student learning and progression rates, and has also considerably increased early childhood education coverage.
Population

212,559,409

Land

(sq. km)
8,515,770

IBRD/IDA lending commitments approved in FY20+FY21: 1,879 million

Active projects: 31

New and supplemental projects approved in FY20+FY21: 9

Children playing at school playground. Photo: Andrea Rego Barros / City of Recife / Handout.
The high rates of illiteracy in the early grades made achieving a quality education in later grades almost impossible. The education system’s ineffectiveness was directly linked to inefficiency in the municipal public sector.

CHALLENGE

With over 46,000 children aged 0–5 enrolled in early childhood education (ECE) in Recife, the municipality lagged behind both the region and the country in terms of coverage. Nursery school coverage was 12 percent of the 0–3 population, significantly below the national and northeast regional coverages of 18 percent and 16 percent, respectively. Coverage at the preschool level (ages 4–5) was 80 percent, slightly higher than the national average, but below the regional coverage. The quality of primary and lower secondary education was also weak, with Recife seriously underperforming compared to other state capitals in national learning assessment results. Recife also faced high age-grade distortion rates, which is strongly associated with low student learning performance and high dropout rates. The high rates of illiteracy in the early grades made achieving a quality education in later grades almost impossible. The education system’s ineffectiveness was directly linked to inefficiency in the municipal public sector.

APPROACH

The Recife Swap Education and Public Management Project used results-based financing under a sector-wide approach, as well as a technical assistance component, to support the municipal government in tackling the main challenges associated with education quality and ECE coverage. The supported activities under the results-based component included constructing and rehabilitating ECE centers, training teachers in improved classroom practice (for both ECE and basic education levels), expanding full-time schools and accelerated learning classes, and providing technical support to improve school management and accountability. Activities
under the technical assistance component focused on improving teacher effectiveness and the municipal government’s management capacity, as well as producing analytical work to guide Recife’s education policy.

RESULTS

The project’s activities contributed to meaningful improvements in education outcomes in Recife, as measured by the Ministry of Education’s Basic Education Development Index (Indice de Desenvolvimento da Educação Básica, IDEB). These included the following:

- Recife exceeded the IDEB target established by the federal government for grades 1 through 5 in 2017 (the target was 4.9 and the municipality reached 5.0).

- Recife had the highest percentage growth in IDEB among Brazil’s capital cities for grades 6 through 9, jumping from 3.5 in 2015 to 4.1 in 2017, an increase of 17 percent. When the comparison is made between 2011 and 2017, Recife had the ninth largest increase in IDEB in the early grades and the third largest in the final grades.

New school classroom, Recife. Photo: Andrea Rego Barros / City of Recife
BANK GROUP CONTRIBUTION

The World Bank, through the International Bank for Reconstruction and Development (IBRD), provided a loan in the amount of US$130 million to help finance the project. Of these loan proceeds, US$120 million was used to support Recife’s overall municipal budget of approximately US$850 million during the life of the project, and US$10 million supported activities under the technical assistance component.

PARTNERS

Key partners helping to support Recife’s municipal government to implement project programs included Ayrton Senna Institute (accelerated learning) and Lemann Foundation (professional development for teachers and principals).

Children at school in Recife. Photo: Andrea Rego Barros / City of Recife / Handout.
BENEFICIARIES

Each year, more than 80,000 children, most living in Recife’s poorest households, have benefited from activities supported by the project. Following project activities, students enrolled in municipal schools in Recife attained higher levels of learning, and more children aged newborn to five — particularly those from poor households — are enrolled in ECE centers. In addition, the teachers and principals of Recife’s municipal early childhood, primary, and lower secondary schools now have more effective professional skills as well as development opportunities that enable them to better promote their students’ learning.

MOVING FORWARD

Given the operation’s sector-wide approach, all activities supported by the project under the results-based component are expected to continue into the future, since they are fully integrated into the municipal government’s education policy and budget.

The teachers and principals of Recife’s municipal early childhood, primary, and lower secondary schools now have more effective professional skills as well as development opportunities that enable them to better promote their students’ learning.
Since the 1990s, São Paulo has formulated and pursued an agenda focused on improving urban mobility. One central achievement has been the expanded metro network, notably the extension of Line 5, which has significantly improved mobility, reduced travel times, provided high-quality service, and increased the number of users, especially low-income passengers.
LandPopulationLand

212,559,409

IBRD/IDA lending commitments approved in FY20+FY21:
1,879 million

Active projects: 31

New and supplemental projects approved in FY20+FY21: 9
In 2009, the São Paulo Metropolitan Region (SPMR) faced tremendous urban mobility challenges aggravated by limited access to public transport infrastructure and by a dense and rapidly growing population. Access to educational, employment, and other opportunities as well as to social services for low-income households, most of whom lived in the peripheries, was hindered by the inefficient and unreliable public transport options. Average commuting time was about 43 minutes, the highest among cities in Latin America, and even higher for low-income populations, with over 26 percent of low-income travelers commuting for more than 60 minutes for each trip. For some travelers, commuting time in SPMR exceeded 2.5 hours daily. Low-income households, the main users of the metro, bore the brunt of its low-quality service, including overcrowded trains, high costs, and limited availability of rapid transport options. This was particularly true for Metro Line 5, which carried only 150,000 passengers a day in 2009, approximately one-fourth the average ridership per kilometer (km) of the other metro lines, mostly because of its poor connectivity with the main employment areas in the city of São Paulo.
APPROACH

Financing provided by the São Paulo Metro Line 5 Project was designed to improve mobility for public transport users in the Capão Redondo–Largo Treze–Chácara Klabin corridor in a cost-efficient, environmentally sensitive manner by extending the existing Line 5 approximately 12 km from the southwest of the city to the expanded center, constructing 11 new stations, and procuring and supervising the use of new metro trains.

RESULTS

By supporting the construction, train acquisition, and installation of systems for Metro Line 5, the project improved the mobility of public transport users along the Line 5 corridor. Metro Line 5 is now one of the most modern metro lines in Latin America due to several innovations including (i) the Communications-Based Train Control system, which automates communications between trains and track, resulting in more efficient and safer rail traffic management; and (ii) numerous service-enhancing features, including low noise levels, air conditioning, universal accessibility for persons with disabilities, high energy efficiency in stations, CCTV cameras in all trains, station monitoring from a dedicated control center, and platform doors that open when the train arrives to enhance safety, speed, and regularity in boarding times. The following key outcomes were supported by this project:

• Travel and waiting time for public transport from Largo Treze (the last station on Line 5 before the extension) to Chácara Klabin (the last station on Line 5 after the extension) dropped from 72 minutes in 2010, before the project, to 26 minutes in 2020.
• Travel and waiting time between Capão Redondo, the first station on Line 5, to Sé, a station in the central business district, crossing all new Line 5 stations and connecting with Line 1, has halved, dropping from 99 minutes before the project to 50 minutes after the project.

• Prior to the COVID-19 pandemic, about 58 percent of all trips on Line 5 were by low-income passengers (from households that earn less than four monthly minimum salaries), with an average daily ridership among these users of 329,000 in 2019.

• User surveys in 2019 showed that 84 percent of all users perceived Line 5 performance as satisfactory.

• Five stations on Line 5 have adjacent bus terminals, allowing passengers to transfer directly from or to buses, supporting seamless transfers within the public transport network.

• Gross greenhouse gas (GHG) emission savings resulting from Line 5 over the economic lifetime of the assets are estimated to be 2,960,000 tCO2eq, including savings from the modal shift away from more GHG-intensive travel modes, such as automobiles and buses, to the metro. Economic benefits related to GHG emissions savings are expected to amount to US$75.6 million over 50 years.
BANK GROUP CONTRIBUTION

The World Bank, through the International Bank for Reconstruction and Development, provided a loan in the amount of US$650 million to the State of São Paulo to help finance the project. Of this US$650 million, US$400 million financed rolling stock, system installation, and technical assistance for Line 5, and US$250 million financed the remaining works of Phase 2 of the Line 4 extension, including civil works in Vila Sônia station.

PARTNERS

The solid relationship between the World Bank and the State of São Paulo, the São Paulo State Secretariat for Metropolitan Transport, and Metrô contributed to the project’s successful implementation, building on the more than 25 years of World Bank support for urban transport investments and reforms in the São Paulo metropolitan area. The total costs of Line 5 are estimated at about US$3.7 billion. Other development partners providing co-financing to the Line 5 extension included the Brazilian Development Bank (BNDES), with US$1.9 billion, and the Inter-American Development Bank (IDB), with US$350 million. The Japan Bank for International Cooperation (JBIC) provided co-financing of US$130 million for the second Phase of Line 4. Moreover, both lines are currently operated by the private sector, which has committed to investing about US$2 billion in Line 4 and US$3 billion in Line 5 over the span of the concession periods of 30 and 20 years, respectively.

The extension of Line 5 in São Paulo has improved mobility for thousands of passengers—in 2019, this meant, on average, 563,000 passengers every day, of which 56% were women and 58% were from low-income households.
The extension of Line 5 in São Paulo has improved mobility for thousands of passengers—in 2019, this meant, on average, 563,000 passengers every day, of which 56 percent were women and 58 percent were from low-income households (earning less than four monthly minimum salaries). The entire population of São Paulo (more than 22 million people) now benefits from better rail transport and from Line 5’s effect in lowering GHG emissions by providing a high-quality alternative to more polluting travel modes, such as automobiles and motorcycles.

As described by one Line 5 user, her travel time to work has been significantly reduced with the opening of the new stations, and she has shifted away from using automobile and bus travel, avoiding the heavy traffic congestion in the city.
MOVING FORWARD

Post–COVID-19, the high-quality service provided by the Line 5 extension will contribute to rebuilding the public’s confidence in mass transport while addressing customers’ health and safety concerns. Future expansion of the metro network is expected to bring additional passengers onto Line 5, including a second expansion of the metro line that will provide accessibility to low-income populations in the vicinity of two new stations, Comendador Sant’Anna and Jardim Ângela. This later extension is expected to be financed by the private concessionaire in charge of Line 5 operations.

Capão Station and surroundings on Line 5. Photo: São Paulo Metropolitan Transport Secretariat.
The state of Pernambuco in Brazil strengthened its water sector’s regulatory and institutional environment by creating a state Water Regulatory Agency and investing in water supply and sanitation infrastructure and service improvements. These efforts reduced water rationing for about 900,000 people in the Metropolitan Region of Recife and provided more than 70,000 people with a safe connection to the sewerage network.
Population: 212,559,409

Land: 8,515,770 sq. km

IBRD/IDA lending commitments approved in FY20+FY21: 1,879 million

Active projects: 31

New and supplemental projects approved in FY20+FY21: 9

Santa Cruz do Capibaribe Wastewater Treatment Plant built under the project. Photo: Acciona.
In 2010, low water availability in the semi-arid regions of the Brazilian state of Pernambuco, coupled with the high rate of urbanization and economic activity in the coastal regions, placed the state’s water resources under stress. Despite high levels of urban water supply coverage (91 percent), service was unreliable and intermittent, with only 30 of the 170 municipalities served by the Pernambuco State Water Supply and Sanitation Company (COMPESA) receiving water 24 hours per day. Rationing was commonplace, even in the Metropolitan Region of Recife (MRR). In terms of sanitation, only 20 municipalities had sewerage networks, with an average coverage of about 20 percent, contributing to the pollution of water resources. A regulatory agency capable of implementing state policies on water resources management (WRM) and incorporating climate change into policy making was also needed if the state were to aspire to more sustainable water supply and sanitation (WSS) services for its population.

Surubim Wastewater Treatment Plant built under the project. Photo: COMPESA.
APPROACH

The Brazil Pernambuco Sustainable Water Project was designed to overcome these challenges. To increase availability of water and reduce the population subject to rationing, the project aimed to strengthen the MRR’s water supply conveyance system, establish and isolate hydraulic areas and metering districts, and reduce nonrevenue water (NRW). In terms of sanitation, the project aimed to expand the coverage of wastewater collection and treatment to reduce the organic pollution discharged into the environment, ultimately protecting water resources and their quality. Finally, WRM would be improved by establishing the state water regulatory agency (APAC, for its name in Portuguese), establishing and strengthening river basin committees, and modernizing and expanding the hydrometeorological and water quality monitoring network.

RESULTS

Results associated with the project objective of improving sustainable water supply services were achieved by establishing APAC and making water supply efficiency improvements, attaining the following specific results:

- APAC, established in 2010, carried out an evaluation of WRM policies and instruments, including planning studies and allocation rules and water rights, and established a state-of-the-art hydrometeorological monitoring and forecasting system with online and real-time information and an effective flood early warning system. As part of APAC’s mandate, water quality is also now monitored on a quarterly basis in 52 stations located in 13 water basins, and the water quality results are shared with bulk water customers. Based on regular rainfall
and basin water level monitoring, APAC also issues drought maps and alerts to its customers. In 2015, APAC established 11 Reservoir Management Councils for three critical river basins, contributing to the reduction and mediation of water-use conflicts.

• As a result of increases in water production and supply efficiency improvements put in place between 2009 and 2020, about 900,000 people in the MRR are no longer subject to rationing and receive 24-hour-per-day water service.

• A NRW reduction performance-based contract (PBC) was designed and implemented between 2016 and 2020 in the MRR municipality of Olinda. The PBC reduced leaks by 50 percent and recuperated over 42.5 million cubic meters of water, which has been used in Olinda or transferred to other areas to alleviate rationing.

Results associated with the project objective of improving sanitation services included the following:

• Intradomiciliary connections, sewerage networks, and wastewater treatment plants were constructed in two municipalities: Surubim and Santa Cruz do Capibaribe. These now provide a safe wastewater connection to about 70,000 people and remove 1,164 tons of organic pollution (measured as biochemical oxygen demand or BOD) per year.

BANK GROUP CONTRIBUTION

The World Bank, through the International Bank for Reconstruction and Development (IBRD), provided a loan in the amount of US$190 million to finance this project. In addition, to further strengthen COMPESA’s efficiency in service delivery, an externally financed output (EFO) in the amount of GBP 310,000 (approx. US$425,000), financed by the United Kingdom Prosperity Fund (UKPF).

Administered by the World Bank, was developed to complement the project, providing technical assistance in NRW control and management from October 2018 to November 2019, in the form of trainings, interaction with innovative technology providers, and diagnostics.
PARTNERS

The government of the State of Pernambuco provided US$220 million in counterpart funds. The “Smart Urban Water” EFO provided COMPESA with a complementary technical partnership to strengthen its capacity in NRW management. Synergies were created between the project and the EFO, with the Olinda PBC helping to design a new performance-based contract for the MRR under the EFO, putting project lessons to use and bringing continuity and scale to project achievements. The project also created a space for the exchange of experience with other wastewater utilities in Brazil, with a particularly successful visit to utilities in the State of Rio de Janeiro to learn about the use of interceptor sewers with sanitary sewer overflow in times of heavy rains, an investigation that later inspired the system installed in Santa Cruz do Capibaribe.
As a result of increases in water production and supply efficiency improvements put in place between 2009 and 2020, about 900,000 people in the Metropolitan Region of Recife are no longer subject to rationing and receive 24-hour-per-day water service.

**BENEFICIARIES**

The project has had particular impact on about 815,000 of the 900,000 total project beneficiaries living in the MRR, as they went from receiving water only once every five days to benefiting from 24-hour service. An additional 1,185,000 people from the municipalities of Olinda and Jaboatão, and others from the low and high hill areas on the fringes of the Recife municipality, have benefited from additional water availability as a result of the project. For example, in the localities of Rio Doce and Fragoso, water service is now available four days a week, instead of one every five days.

**MOVING FORWARD**

As a follow-up to the EFO, the Supporting Smart Urban Water Management in the MRR Trust Fund, also financed by the UKPF and administered by the World Bank, is building on the achievements realized under the project and the EFO to focus on bringing innovative approaches and equipment to the region to further reduce water losses. In addition, the success of the Olinda PBC and the turnkey contract model implemented in Santa Cruz de Capibaribe to build the wastewater treatment plant will be replicated in a new project, financed by the New Development Bank (NDB), helping to consolidate the knowledge COMPESA gained from implementing these innovative contracts.
Fresh water tank, Pernambuco, Brasil. Photo: Mariana Kaipper Ceratti / World Bank.
Guiding Complex Decision-Making During the COVID-19 Crisis: Colombia Improves Data Collection Through a Real-Time Safe Economic Reactivation Dashboard

The government of Colombia developed and promoted a COVID-19 crisis dashboard that helps policy makers in 1,100 municipalities monitor in real time the interplay of virus spread, health sector readiness to address new clusters of infections, and the preparedness of 29 different economic sectors to operate safely at different stages of the pandemic.
Population

50,882,884

Land

1,141,749 sq. km

IBRD/IDA lending commitments approved in FY20+FY21: 2,600 million

Active projects: 16

New and supplemental projects approved in FY20+FY21: 6
CHALLENGE

At the onset of the COVID-19 pandemic, the government of Colombia looked for strategies both to manage the health impacts of the coronavirus and to minimize the impact of the protective lockdown on employment and productivity. Weeks of shelter-in-place orders had helped contain the spread of the virus, but the lockdown had also negatively impacted peoples’ lives and livelihoods. The government wanted to be able to determine when and how to safely reopen the economy. A major challenge was to integrate the more than two dozen relevant but fragmented datasets so that health and economic data could be brought together in a single dashboard built to meet local policy makers’ information needs.
APPROACH

Through the analytical work Better Knowledge and Analytics to Support Governments’ Response to COVID-19 in LAC, the World Bank responded to Colombia’s need for an integrated data solution to meet the crisis. The Bank brought together staff from its Health and Social Protection and Jobs Global Practices to design Colombia’s COVID-19 Safe Economic Reactivation Dashboard, a tool aimed at helping decision-makers in two areas:

1. Real-time monitoring of the pandemic’s impacts on key epidemiologic indicators relating to the spread and health burden of the virus and the capacity of the public health and health care sectors to respond; and

2. In-depth analysis of the preparedness of the economic sectors to achieve a safe economic reactivation.

The team designed the COVID-19 Safe Economic Reactivation Dashboard to provide analysis that combines the importance of each sector for both national GDP and local employment with its capacity to restart productive activities without generating more pressure on the health system. Almost all Dashboard indicators are disaggregated by gender and by ethnicity, raising awareness about the disproportionate impact of the pandemic on women and on different ethnic groups.

RESULTS

The Dashboard helps mayors and governors determine the safest economic sectors to reopen and to understand the impact of their decisions on jobs and the economy. As of August 2021, it had been used by more than 20,000 unique visitors, and training had been provided to more than 400 mayors, governors, and national policy makers.

The Dashboard represents a timely, cross-sectoral strategy for supporting governments during the COVID-19 pandemic. The project, responding to the immediate development challenge faced by the government of Colombia, helped convene public agencies toward the common objective of an integrated
As of August 2021, it had been used by more than 20,000 unique visitors, and training had been provided to more than 400 mayors, governors, and national policy makers.

economic reactivation dashboard. The Dashboard was endorsed by the Presidency of the Republic and has become a key resource for decision-making in a context of high uncertainty and imperfect information.

This activity brought to bear the expertise of both the Bank and leading global academics, first to produce a working prototype and then to automate its production, allowing information to be updated daily with information from more than a dozen datasets. After the desktop version was established, the Dashboard was then redeveloped for mobile use.

This work has shown the possibilities for data integration between the health and labor ministries and other government agencies, thus strengthening government capacity. The tool was shown on national television by the President of the Republic of Colombia in July 2020. The president called for dissemination events with mayors and governors and participated with the vice-president in events to raise awareness about the importance of using real-time data to manage crisis response.

BANK GROUP CONTRIBUTION

The Bank provided a total of US$100,000 in initial funding for this work and for its later expansion. This contribution was supplemented by additional funding of US$50,000 from the Korea-World Bank Partnership Facility (KWPF). The KWPF’s overall objective is to assist developing World Bank member countries in achieving inclusive and sustainable economic growth and to foster broader dialogue on economic development issues.
PARTNERS

The Korea World Bank Group Partnership Trust Fund provided financial support for this work during 2020 and 2021. In addition, the initiative benefited from the expertise of academic partners at the Dalla Lana School of Public Health at the University of Toronto and of Deloitte Canada’s artificial intelligence and data visualization practice.

BENEFICIARIES

The Dashboard benefits Colombia’s 1,100 mayors and their support teams daily in making decisions related to managing the health and economic impacts of the pandemic. The Dashboard has accommodated more than 20,000 users thus far, and its new, mobile-friendly version increasingly meets the needs of the general public, health care providers, and insurance companies by providing easy access to localized data on key public health and health care indicators related to the COVID-19 pandemic.

MOVING FORWARD

As the COVID-19 pandemic continues, and in anticipation of a possible fourth wave in late 2021, the Dashboard remains of great use to policy makers. The government and the World Bank have developed a communications and social media strategy to disseminate knowledge of the instrument among policy makers and the general public. The Dashboard is automatically updated daily, encouraging its use, and it is now available on smartphones. The World Bank continues to engage with the government of Colombia and with Colombia’s mayors and governors to improve the Dashboard’s functionality.

Other countries have embraced this approach. The Ministry of Finance of Peru asked the World Bank to develop a similar dashboard adapted to the Peruvian context, and the Peru Dashboard for Safe Economic Reactivation was released in June 2021.
Supporting Colombian Host Communities and Venezuelan Migrants During the COVID-19 Pandemic

As of spring 2021, Colombia has accommodated an estimated 5.5 million people fleeing Venezuela, the majority of whom have migrated since 2015. Colombia has responded holistically to this unprecedented influx of migrants and refugees, further stepping up its work to address a migration crisis exacerbated by the COVID-19 pandemic and making special efforts to mitigate its effects on local host communities.
Venezuela and Colombia border at Paraguachon control point. Photo: Greta Granados/World Bank.
CHALLENGE

As of March 2021, an estimated 1.7 million people from Venezuela were based in Colombia—approximately 32 percent of all Venezuelan migrants in Latin America. The impact of the crisis is geographically concentrated: approximately 25 municipalities in Colombia (of a total of 1,122) host 70 percent of all Venezuelan migrants. For Colombia, however, the long-term economic benefits of this migration have the potential to outweigh the short-term costs. Recognizing that properly managed migration is a development opportunity, since 2015 Colombia has remained committed to exemplary open policies for the social and economic integration of Venezuelan migrants. These efforts include: (i) issuing work, transit, and stay permits; (ii) extending access to health, education, and social programs and housing subsidies; (iii) investing to benefit both host and migrant communities; and (iv) protecting vulnerable populations through programs to reunify families, protect children, and prevent human trafficking.

APPROACH

Since the beginning of the Venezuelan exodus in 2015, the World Bank has mobilized its global expertise in responding to situations of human mobility and supporting host countries working to integrate migrant populations. The Bank has supported the Colombian government with analytical capacity, financial and technical assistance, and convening power, enhancing the government response to the unprecedented situation through numerous projects, including Responding to the Venezuelan Migration Crisis in Colombia and SPF Colombia: COVID-19 Response for Migrants from Venezuela and Host Communities. The Bank’s support aligns with several broader strategies, particularly the World Bank Group Fragility, Conflict, and Violence Strategy and the COVID-19 approach paper. The Colombian government’s response to the large-scale exodus from Venezuela has focused on humanitarian outreach and on ensuring the long-term integration of migrants and refugees. The impact of the crisis is multidimensional, as the arrival of massive numbers of migrants has placed pressure on many of Colombia’s institutions and systems. Nevertheless, evidence suggests that the shock of such migration—if well managed—can bring development opportunities for LAC countries.
RESULTS

The World Bank has responded to the Venezuelan migration crisis by supporting Colombia through a combination of financing, analysis, and partnership.

The World Bank has been one of the main sources of funding for Colombia, delivering support through four approved projects.

- Colombia became a beneficiary of the Global Concessional Financing Facility (GCFF), becoming the first country outside the Middle East to access this fund, which provides countries with concessional financing for projects to support migrant and host communities.

- Colombia’s first project, approved in 2019, the Second Fiscal Sustainability, Competitiveness, and Migration Development Policy Financing (DPF), includes support for government policies to regularize and integrate Venezuelan migrants, including enabling 115,012 Venezuelans to access services from the National Employment Agency. Some 281,557 migrants, 139,586 of whom were women, obtained Temporary Stay Permits (Permiso Especial de Permanencia, or PEP).

- The second project approved, Improving Quality of Health Care Services and Efficiency in Colombia, aims to improve the health system. With the support of the project, by June 2021, a total of 196,000 Venezuelans had been enrolled in the General System of Social Security in Health.

- The third project, the Colombia: Resilient and Inclusive Housing Project, aims to increase access to decent housing for migrants and host communities.
Fourth, the State and Peace-Building Fund (SPF) Colombia: COVID-19 Response for Migrants from Venezuela and Host Communities, will deepen World Bank collaboration with the United Nations system and close the humanitarian-development gap, benefiting some 75,500 migrants.

In October 2018, the World Bank published *Migration from Venezuela to Colombia: Impacts and Response Strategy in the Medium and Long Term*. The report marked a fundamental step forward in understanding the impact of migration to date, creating a road map of actions and public policies to face the challenges and maximize the benefits of this phenomenon. The report informed key policy-making processes in the country, including:

- The Venezuela Migration Attention Strategy, formulated under CONPES 3950, which identifies 69 specific actions organized under two main pillars: (i) caring for and integrating migrants, and (ii) strengthening institutional capacity for a coordinated response.
• The National Development Plan 2018–2022, Pact for Colombia, Pact for Equity, which establishes as a government priority the social and economic integration in Colombia of the migrant population from Venezuela.

• Thanks to its impact, the analysis became an international model for similar analyses in Peru (2019), Ecuador (2020), and Chile (2021).

The Bank is also deepening its support for improved data collection and analysis under the initiative Venezuelan Refugee-Like Population: Data Collection and Analysis to Support Policy Making.

**BANK GROUP CONTRIBUTION**

The World Bank has allocated US$1.6 billion to support Colombia’s response to the Venezuelan migration crisis. The World Bank program fully aligns with the Country Partnership Framework (2020–2025) and is based on findings from the report Migration from Venezuela to Colombia: Impacts and Response Strategy in the Medium and Long Term, the Venezuela Migration Attention Strategy formulated under CONPES 3950, and the National Development Plan 2018–2022, Pact for Colombia, Pact for Equity. Through its technical and financial activities, the World Bank is tackling some of the most critical recommendations for managing the migration shock and turning it into development opportunities for all. The Bank’s response has been cross-sectoral, addressing needs at all levels of government and adapting a short-term humanitarian response into a medium- and long-term developmental response.

With the support of the project, by June 2021, a total of 196,000 Venezolanos had been enrolled in the General System of Social Security in Health.
PARTNERS

The World Bank has intensified its traditionally close collaboration with development partners in Colombia. The program complements the efforts of the Inter-American Development Bank (IDB), Development Bank of Latin America (CAF), and several bilateral development partners and UN agencies. Specifically, the Analysis of Impacts of Venezuelan Migration in Colombia was produced in close partnership with United Nations High Commissioner for Refugees (UNHCR) and the International Organization for Migrations (IOM), while Responding to the Venezuelan Migration Crisis in Colombia has included activities on antidiscrimination and xenophobia coordinated with several UN agencies, humanitarian partners, and civil society groups. Finally, the project SPF Colombia: COVID-19 Response for Migrants from Venezuela and Host Communities is being implemented by the World Food Program, and the projects Improving Quality of Health Care Services and Efficiency in Colombia and the proposed Colombia: Social and Economic Integration of Migrants DPF incorporate parallel financing with the IDB.
BENEFICIARIES

The main beneficiaries of the Bank’s support for projects to expand financial access include Venezuelan migrants and refugees and people living in marginalized and underserved host communities. This assistance includes:

- PEP temporary stay permits have been provided to 281,557 of the 442,462 Venezuelan migrants identified through the Administrative Registry of Venezuelan Migrants in Colombia (RAMV), 139,586 of whom were women.

- A total of 115,012 Venezuelans are now able to access services from the National Employment Agency.

- A total of 196,000 Venezuelans, as of June 2021, have been enrolled in the health system.

MOVING FORWARD

The program supported by the Bank has helped create a path toward effective recovery from a forced displacement shock, turning challenges into longer-term development opportunities. The Colombia: Social and Economic Integration of Migrants DPF is scheduled to be presented to the Board in November 2021, becoming the first DPL focused 100 percent on forced displacement and migration ever approved by the World Bank. This project aims to support Venezuelan migrants’ social and economic integration into host areas by supporting policies such as Temporary Protection Status (TPS), an instrument providing regular status to Venezuelans for ten years, and downstream integration and service access, including to COVID-19 vaccines, that complement technical assistance
resources. In line with the objectives of the Colombia Country Partnership Framework, the World Bank expects to continue supporting the integration of migrants and refugees as a marginalized population through policy dialogue and lending, underpinned by strong analytics and advisory work. Faster integration of Venezuelans into Colombia’s social and economic fabric represents a great opportunity to respond to the COVID-19 crisis and enable a faster, sustained recovery.

Two additional projects are expected to provide significant impact. The Colombia: Resilient and Inclusive Housing Project will provide access to improved urban living conditions for approximately 33,556 Venezuelan migrant households, and by September 2022, the Colombia: Social and Economic Integration of Migrants DPF will provide access for 1.1 million Venezuelans to the TPS and to COVID-19 vaccines.
Migrant boy from Venezuela at a public school in Colombia. Photo: Greta Granados/ World Bank.
Integrating Transport and Water Investments for Transformative Change in Ecuador: The Manta Experience

Ecuador’s newly integrated water supply and sanitation and transport investments have generated tangible, sustainability-focused public service improvements. Manta’s water supply and sanitation utility reduced nonrevenue water by 20 percent and extended piped water to more than 6,000 households. The municipality adopted a road management system to proactively guide transport investments and implemented road repairs that reduced travel time and promoted walkability.
**Population**

17,643,060

**Land**

256,370 (sq. km)

**IBRD/IDA lending commitments approved in FY20+FY21:**
1,470 million

**Active projects:** 11

**New and supplemental projects approved in FY20+FY21:** 7

Pavers installed on the sidewalk of Calle 13, Manta, Ecuador. Photo UGP Manta
Only 50% of Manta’s roads were considered to be in good or fair condition. Significant areas required rehabilitation, including unpaved areas in lower-income neighborhoods. Accessibility issues, such as sidewalks without ramps, hampered mobility for residents with disabilities.

**CHALLENGE**

In 2013, the city of Manta struggled to provide high-quality (WSS) services and to maintain its roads network in decent condition. Water supply and sanitation services coverage levels stood at 79 and 64 percent, respectively. Existing pipes were about 50 years old and ill-performing, and the existing wastewater treatment plants faced operational issues. At an institutional level, Manta’s WSS utility (known as EPAM from its name in Spanish) faced numerous challenges, including an out-of-date cadaster, double the number of employees per connection recommended by international best practice, no clear policies governing service suspension, and a lack of reliable micro- and macro-meters.

In regard to transport, only 50 percent of Manta’s roads were considered to be in good or fair condition. Significant areas required rehabilitation, including unpaved areas in lower-income neighborhoods. Accessibility issues, such as sidewalks without ramps, hampered mobility for residents with disabilities. In addition, Manta lacked a fact-based system to proactively guide and coordinate transport investments.

**APPROACH**

The Ecuador Manta Public Services Improvement Project represented the Bank’s first direct engagement with the municipality of Manta through a subnational investment project financing loan. Furthermore, this was one of the first projects with which the World Bank returned to work with Ecuador after several years. The project included areas where Manta had critical need of investment, but implementation capacity both at a project management and the institutional level presented shortcomings.
To mitigate this challenge and build investment sustainability, the project focused on providing close supervisory support and on accompanying transport and WSS infrastructure investments with institutional strengthening activities. Strategies to strengthen institutional capacity included helping to structure a partnership between a private company and EPAM to improve operational and commercial efficiency as well as developing an easy-to-use road management data system. On the infrastructure front, the project coordinated WSS and transport construction activities to minimize inconvenience to residents and maximize efficiency. The government of Manta leveraged the project’s multisectoral coordination approach to support Manta’s emergency response in 2016 to a 7.8 Richter magnitude earthquake.

RESULTS

The project reached nearly all of its anticipated results despite encountering numerous external obstacles, including political turnover, a 7.8 Richter magnitude earthquake, a national fiscal crisis, and the COVID-19 pandemic. Over the course of implementation (2013 to 2021), the project achieved the following WSS results:

- Nonrevenue water levels dropped from 50 to 30 percent.
• Water continuity increased from 14 hours to 14.7 hours of service per day, with further improvements expected once pending works are complete.

• Access to piped water and new household sewer connections reached 6,707 additional households.

• Rehabilitation of sewerage connections benefited 15,740 households.

• EPAM’s financial situation improved as shown by the decrease in working ratio from 88 to 79.63 percent.

The project achieved these results primarily through:

• Rehabilitation and replacement of 138 kilometers (km) of water pipes and 232 km of sewerage pipes.

• Installation of macro-meters across the network.

• A strategic alliance with a private operator resulted in updates to EPAM’s client database and increased billing collection from 68 to 91 percent, among other gains.

Before and after reconstruction of San Juan Avenue, Manta, Ecuador. Photo: World Bank.
On the transportation front, the project achieved the following results:

- Walkability improved through installation of 18 sidewalks and 17 streetlights and planting of 5,400 trees.
- Travel time along Par Vial, the main entrance to the city, went from 15 to 13 minutes.
- Paved roads reached 23,024 additional residents’ homes.
- A new road data management system now uses traffic data to evaluate remotely the condition of the entire city’s streets.
- An urban mobility plan was developed.

The project achieved these results by using the following resources:

- Financing enabled upgrades to 16 km of poor-quality streets and paving for 20 km of previously unpaved streets.
- Technical assistance and studies supported the development of transport tools and guided infrastructure investments to maximize urban mobility and other aspects of urban transport.

**BANK GROUP CONTRIBUTION**

The World Bank, through the International Bank for Reconstruction and Development (IBRD), provided a loan in the amount of US$100 million to finance the EC Manta Public Services Improvement Project.
PARTNERS

The municipality of Manta provided US$15.6 million in counterpart funds to finance the remaining project costs. An implementation unit, created by the municipality of Manta specifically for this project, worked in partnership with EPAM as well as with Manta’s Traffic, Public Works, and Community Development directorates.

BENEFICIARIES

Nearly 85,000 people living in the districts of Los Esteros, Tarqui, Manta, and Eloy Alfaro benefited from the investments in WSS and transport supported by the project, including improved roadways and facilities for pedestrians and cyclists.

Ana Cruz and her husband, Antonio García, spoke about the particular benefits the new wheelchair-accessible sidewalks have brought to their day-to-day experience. Ana, who uses a wheelchair, commented that the new sidewalks are “comfortable” and “accessible for people with mobility problems,” and her husband, who helps wheel her, emphasized how the ramps integrated into the project-financed sidewalks have raised awareness about mobility issues and, given the lack of accessible sidewalks pre-project, have helped people who otherwise might have had to wheel in the streets.

Beneficiaries of the project, Manta, Ecuador. Photo, video capture: UGP Manta.
MOVING FORWARD

Given the success of the project, the government of Manta has begun conversations with the Bank on developing a follow-up operation. A potential second phase is expected to maintain similar objectives and would help replicate and reinforce the project’s results while extending focus on environmental issues.

The municipality is using the road management system to make informed decisions on maintenance needs and to prioritize investments, promoting the sustainability of the road networks. On the WSS front, commercial and operational improvements strengthened EPAM’s sustainability, but the utility still operates at a deficit, limiting its ability to replicate results efficiently.
Improving Maternal and Child Healthcare in Times of Cholera: Haiti’s Battle on Two Fronts

In an unlikely success story in the aftermath of the 2010 earthquake, Haiti managed to improve access in the project intervention areas to quality maternal and children health care while simultaneously bringing under control a cholera epidemic that had resulted in almost 8,000 deaths, making it the largest epidemic ever recorded in a single country.
<table>
<thead>
<tr>
<th>Population</th>
<th>Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,402,533</td>
<td>27,750 (sq. km)</td>
</tr>
</tbody>
</table>

IBRD/IDA lending commitments approved in FY20+FY21: 360 million

Active projects: 21

New and supplemental projects approved in FY20+FY21: 11

CHALLENGE

Ten months after a devastating earthquake hit in 2010, a severe cholera outbreak placed additional pressure on Haiti’s already fragile health system, further compromising the welfare and health of its population. As of January 2013, nearly 650,000 cases of cholera had been reported, with almost 8,000 attributable deaths, making it the largest epidemic ever recorded in a single country. In addition to the emergency situation, Haiti faced serious structural challenges in ensuring access to basic health services. Maternal mortality was the highest in the region, at 630 per 100,000 live births in 2012 (six times the regional average). Likewise, under-five mortality, at 87 per 1,000 live births in 2012, was three times the regional average. Children from the poorest households faced a mortality rate more than double that of children from the richest households. Key challenges included low access to and quality of health services and serious difficulties coordinating the myriad of service providers operating in the country.

APPROACH

The Improving Maternal and Child Health through Integrated Social Services Project incorporated innovative results-based financing mechanisms that had been successfully implemented under other Bank-financed operations. Under this approach, participating health-care providers received payments for delivering selected maternal and child health-care services following predefined clinical and reporting protocols. Both the quantity and the quality of the services were externally verified, and payments were adjusted accordingly. In this way, the project introduced an innovative financing mechanism to generate “more,” “better,” and “more homogeneous” child and maternal health care services.

The project also supported the National Plan for the Elimination of Cholera, scaling up support after Hurricane Matthew hit the country in 2016. The project supported the innovative approach to cholera surveillance and response promoted by UNICEF, aiming to systematically detect suspected cases and respond in less than 48 hours with a full package of interventions, including patient treatment, home decontamination, access to clean water, and activities on community awareness on cholera prevention.
RESULTS

Implemented between 2013 and 2020, the project made major contributions on three different fronts.

Upgraded basic health infrastructure included the following:

• More than 1.5 million people benefited from the restoration of 46 health care facilities in areas affected by Hurricane Matthew, restoring access to vaccination to more than 300,000 children.

• Between 2015 and 2019, water and sanitation were improved in more than 140 health facilities and communities to help prevent cholera.

“More” and “better” health care services achieved for pregnant women and for children in the four departments under the project included the following:

• The percentage of health service providers achieving the minimum quality score (60 percent) increased from 0 percent to 93 percent between 2012 and 2019.
The project supported the innovative approach to cholera surveillance and response, aiming to systematically detect suspected cases and respond in less than 48 hours with a full package of interventions.

- The number of children aged under 12 months who were completely vaccinated at health facilities increased by 51 percent between 2012 and 2019.
- The percentage of institutional deliveries in the participating departments more than doubled between 2012 and 2019, increasing from 21.26 percent to 43.92 percent.
- As of June 2018, the percentage of children aged between 6 and 59 months receiving nutritional screening and follow-up increased 55 percent over the 2016 baseline.

**Achievements of the robust cholera surveillance system include the following:**

- In 2019, 100 percent of cholera alerts and outbreaks were investigated within 48 hours of onset, compared to 7 percent in 2015.
- Water and sanitation were improved in 141 health facilities and communities between 2015 and 2019.
- The percentage of health facilities with adequate stocks of cholera supplies increased from 0 to 100 percent in departments affected by Hurricane Matthew.
- As a result of these steps, the cholera fatality rate decreased from 0.89 percent to 0 percent between 2015 and 2019. Most notably, no cases have been confirmed since January 2019, indicating that the cholera epidemic has been controlled.
BANK GROUP CONTRIBUTION

The World Bank provided US$115 million in grants, including US$95 million from the International Development Association and US$20 million from the Health Results and Innovation Trust Fund. The Bank also provided labor-intensive technical assistance in substantive topics, such as the implementation of results-based mechanisms. The Bank’s contribution was also critical in controlling the cholera epidemic and the spike in cases after Hurricane Matthew. The Bank responded quickly, expanding the operation’s geographical coverage and closing the gap in financing resulting from the sharp decrease in cholera funding from other donors. The Bank team also exhibited strong entrepreneurialism, actively coordinating and brokering with other partners and donors and effectively leveraging the Bank’s financing to promote further integration of donor activities.
PARTNERS

The project’s successful implementation is due in large part to the joint and coordinated action of the Haitian government and its development partners. In the case of maternal and child health services, the Bank Team worked closely with Canada and with the U.S. Agency for International Development (USAID) under the strong stewardship of Haiti’s Ministry of Health. Likewise, efforts to control the cholera outbreak were guided by Haiti’s National Plan for the Elimination of Cholera. The Bank Team worked in close coordination with government counterparts and other partners, including the Pan-American Health Organization (PAHO), the United Nations Children’s Fund (UNICEF), and the U.S. Centers for Disease Control and Prevention (CDC).
BENEFICIARIES

When Dr. Edwidge Michel, research coordinator in the Department of Research Epidemiology and Laboratory of the Ministry of Public Health, joined the Ministry of Public Health and Population in 2012, hundreds of people with cholera symptoms were arriving at the various treatment centers around the country. Although not proclaiming victory, Dr. Michel is now delighted that efforts to contain the disease have thus far been successful. He notes, “Since February 2019, Haiti has not recorded any confirmed cases of cholera.” He goes on to explain, “We continue to conduct passive surveillance, which consists of collecting the first five cases of acute diarrhea in people over five years old who do not meet the cholera case definition to conduct testing. This also adds to the strengthening of regional and peripheral laboratories.” He further specified that, thus far, all results have come back negative.

MOVING FORWARD

Substantial progress has been made toward institutionalizing results-based financing at the national level, with donors acting in consonance under the leadership of Haiti’s Ministry of Health. The Bank’s ongoing PROSYS Project supports use of results-based financing and is expanding it to additional primary health services. The Bank also provides support for maintaining Haiti’s response capacity for cholera control and the country’s transition toward an expanded system that includes other diseases. Support under PROSYS is particularly important, as other donor financing for cholera and general infectious diseases is not expected to significantly increase in the short term.

As a result of the project, the cholera fatality rate decreased from 0.89% to 0% between 2015 and 2019. Most notably, no cases have been confirmed since January 2019, indicating that the cholera epidemic has been controlled.
HAITI

Between 2012 and 2020, in response to the 2010 Earthquake and Hurricane Matthew, Haiti strengthened its national and local disaster risk management capacity and made investments to improve the resilience of its road network, which benefited 150,000 residents.
Population: 11,402,533

Land: 27,750 (sq. km)

IBRD/IDA lending commitments approved in FY20+FY21: 360 million

Active projects: 21

New and supplemental projects approved in FY20+FY21: 11

Winds of Hurricane Matthew. Photo: Protection Civile Haiti.
The earthquake killed an estimated 220,000 people and displaced 1.5 million people; damages, including but not limited to housing, agriculture, water and sanitation, education, transport, health, and energy, were valued at US$7.8 billion.

**CHALLENGE**

In November 2011, Haiti was still recovering from the earthquake of January 12, 2010, the worst humanitarian disaster in recorded history in Latin America and the Caribbean. The earthquake killed an estimated 220,000 people and displaced 1.5 million people; damages, including but not limited to housing, agriculture, water and sanitation, education, transport, health, and energy, were valued at US$7.8 billion. Furthermore, earthquake-related damage to the transport sector hindered prompt access and response to regions prone to hurricanes and flooding. The disaster revealed important shortcomings in Haiti’s overall national disaster risk management system. After the January 2010 earthquake, reducing vulnerability, improving emergency preparedness and response capacity, and understanding risks became key themes for Haiti’s government and the international community.

**APPROACH**

The Disaster Risk Management and Reconstruction project focused on (i) supporting Haiti to improve its disaster response capacity, and (ii) enhancing the resilience of critical transport infrastructure. The project aimed to bring together the disaster risk management (DRM) and transport sectors to build local capacity and promote shared knowledge and coordination. On the DRM side, the project sought to improve risk assessment capacity by generating key risk data using earth observation, remote sensing technology, and hydrological risk models. Strengthening citizen engagement was also a critical aspect to enhance emergency preparedness and response through early warnings, emergency evacuation, and emergency shelter management. On the transport side, the project
utilized hydrological models and multi-hazard maps to bring to bear innovative, reliable, and cost-efficient engineering solutions, both for post-disaster reconstruction and to build a more resilient road network. Men and women were trained as skilled laborers to carry out labor-intensive work, creating job opportunities in mainly poor areas. The project design was innovative at the time by incorporating a US$1 million contingent emergency response component that could be triggered in case of national emergency, which has since become a common feature in Bank-financed investment projects.
RESULTS

During project implementation (2012–2020), the Disaster Risk Management and Reconstruction Project achieved the following key outcomes:

**Improving disaster response capacity**

- Two key ministries — Health and Education — strengthened their disaster risk management capacity by developing sector-specific disaster risk management plans.
- Training in disaster risk management was delivered to 127 ministry officials and 1,520 beneficiaries.
- Risk assessment capacity was improved by generating key risk data using earth observation, remote sensing technology, and hydrological risk modeling.
- The Municipal Civil Protection Committees (CCPCs) were expanded from 73 to 140 to cover all municipalities in the country with a level 2 certification, and 2,800 CCPC volunteers were trained to provide emergency services to the population. (CCPC capacity is evaluated by Haiti’s Directorate for Civil Protection, which assigns each CCPC a score ranging from 1 to 4, depending on organizational and functional factors combined in a performance index. CCPCs assigned a ‘1’ are deemed ‘Excellent’, those assigned ‘2’, ‘3’ and ‘4’ are assessed as ‘Good’, ‘Average’ and ‘Weak’ respectively.)
- A roadmap to provide a legal basis for the DRM system was developed, leading to adoption in 2020 of the national DRM system and creation of the General Civil Protection Directorate (DGPC). These changes better position civil protection structures at the national level and dynamize and strengthen the system’s structures at both the central and the territorial level.
- DGPC’s institutional mandate to coordinate the DRM system strengthened Haiti’s disaster risk management capacity, as evidenced by DGPC’s strong coordination of the emergency response following the 2021 earthquake.
- Seven emergency shelters were rehabilitated in rural areas in the South Department.
Enhancing the resiliency of critical transport infrastructure

- Improved and resilient investment on the road network benefited 150,000 people.

- Road structures requiring urgent interventions were rehabilitated before they fell to a level beyond repair. This included rehabilitation of 120 kilometers (km) of roads, construction or rehabilitation of 6 bridges, completion of 112 spot interventions to protect local access, and repair or consolidation of 27 bridges and road sections damaged by Hurricane Matthew.

- The project built the capacity of the Ministry of Public Works, Transport, and Communication (MTPTC) at the national level as well as that of beneficiaries at the commune levels, while also creating job opportunities. MTPTC’s increased capacity was exhibited in the aftermath of the 2021 earthquake; the Ministry contributed to a strong emergency response, clearing roads and gravel and conducting assessments of damaged buildings.
BANK GROUP CONTRIBUTION

The World Bank, through the International Development Association (IDA), provided a grant in the amount of US$60 million to finance this project. Emergency additional financing of US$20 million was subsequently provided through the IDA Crisis Response Window to respond to the impact of Hurricane Matthew.

PARTNERS

Other DRM programs and projects carried out by the Haitian government and development partners maintained close collaboration with the Bank team to leverage the results of Bank-financed DRM operations and advance capacity building. These successful partnerships included a US$24.5 million grant from the Climate Investment Funds (CIF) Bank Pilot Program for Climate Resilience (PPCR) to finance the Haiti Strategic Program for Climate Resilience (SPCR), coordinated between 2011 and 2015 by the Comité Interministériel d’Aménagement du Territoire (CIAT), and US$500,000 in financing for the Technical Assistance Program from the European Union in 2018–2020.

BENEFICIARIES

Over 2,800 members of CCPCs, covering the whole country of 11.4 million people, received training that strengthened their capacity to evacuate at-risk populations, and this training has already been instrumental in saving lives, as evidenced by the response to the 2021 earthquake. The CCPCs’ role is crucial in the National Risk and Disaster Management System (Système National de Gestion des Risques et des Désastres, SNGRD), as they are the closest to the population and can go door-to-door to explain early warning systems, communicate active alerts, and organize their community for evacuation when a disaster is anticipated. The CCPCs are volunteer organizations, and they have successfully engaged in Haiti’s most adverse natural events, including Hurricane Matthew in 2016. Acting in rural areas with limited access to traditional communication channels (phones, radios, or newspapers), these volunteers can reach even the most isolated people.
“We’ve seen in the last few years that these [disasters] are more frequent and more powerful because of climate change, people need to know exactly what they’re up against, so they can adjust and adapt their lives,” says Jerry Chandler, a surgeon and disaster medical specialist who leads Haiti’s disaster risk management agency, the General Directorate of Civil Protection (DGPC).

In addition, Haitian society as a whole benefits from the timely use of new tools to better assess disaster risks, with the support of the more than 1,000 individuals who received disaster risk management training.

“Thanks to the support of the World Bank and the financing of spatial data production, open data platforms, and technical training, DRM activities in Haiti received major benefits, spatial analysis, Digital Elevation Models, and hazard layers have been key in assisting decision making, public investment, and planning for both preparedness and response (emergency shelters location, damage and loss assessment, humanitarian support, etc.). The use of new technologies for data collection via mobile application and GIS remote sensing were relevant to connect field studies and laboratory evaluation helping local communities and DRM emergency committees.”

says Boby Emmanuel Piard, Director General of National Geo-Spatial Information Center (CNIGS).
MTPTC’s increased capacity was exhibited in the aftermath of the 2021 earthquake; the Ministry contributed to a strong emergency response, clearing roads and gravel and conducting assessments of damaged buildings.

MOVING FORWARD

Key activities and systems developed under the project, including the enacted National DRM System, the earth observation knowledge base, risk assessments, communications and early warning systems, and improved road sections, are being further strengthened by ongoing IDA-financed projects in the urban, DRM, and transport sectors and are expected to contribute to subsequent initiatives. The data and knowledge base developed with the project’s support is now used by the government, development partners, academia, NGOs, and beneficiaries to formulate strategies, shape policies, and design programs and projects to better manage future disaster risks. A recent example is the response to the August 2021 earthquake, during which the Government was able to: (i) effectively mobilize CCPCs at the municipal level; (ii) conduct a rapid and sound evaluation of damages and losses rooted in sound disaster risk and impact data; and (iii) exhibit stronger coordination among institutional actors in the DRM system.

Civil protection brigadiers working to make disaster preparedness announcements to the community, Haiti. Video, photo capture: Protection Civile Haiti.
Local access bridge in Port-Salut, Haiti. Photo: World Bank.
Tackling Urban Vulnerability and Public Safety Challenges in Jamaica’s Inner-City Communities

Since 2014, Jamaica has supported vulnerable and volatile communities, working to improve municipal infrastructure and services and to enhance public safety in those communities. By 2021, 89,000 people had benefited from access to higher quality services, improved basic infrastructure, and integrated crime and violence programs, with nearly 76 percent of the beneficiaries reporting feeling safer while walking in their communities.
Population

2,961,161

Land

(sq. km)
10,990

IBRD/IDA lending commitments approved in FY20+FY21: 270 million

Active projects: 8

New and supplemental projects approved in FY20+FY21: 5

Wilton Garden community children, Jamaica. Photo: PJSIF
Inadequate land use and urban planning had resulted in imbalances in regional development, distribution and access to services, and employment opportunities.

**CHALLENGE**

During 2014, 52 percent of Jamaica’s population resided in urban areas, and approximately 17 percent lived below the poverty line. Inadequate land use and urban planning had resulted in imbalances in regional development, distribution and access to services, and employment opportunities. These problems were evidenced in some areas by rundown town centers, urban sprawl, environmental degradation, and unsafe and dilapidated housing. Peri-urban areas faced similar conditions, indicating the need for community security and urban renewal projects focused on communities in a range of geographic locations and stages of urbanization. Productivity losses due to injuries from interpersonal violence, for example, accounted for 4 percent of Jamaica’s GDP. While intentional homicide rates had declined from a peak of 60.2 per 100,000 inhabitants in 2009 to 46.5 per 100,000 in 2020, Jamaica topped the Latin America and the Caribbean region in homicide rates in 2020.

**APPROACH**

The Integrated Community Development Project (ICDP) built on national strategies and programs to foster sustainable urban development, improve communities’ resilience in the face of violence and crime, increase effective delivery of social intervention programs, and promote the integration of democratic governance within the communities most at risk for crime and violence. The Bank aligned with these principles and worked with the government to design the project to tackle urban and social development holistically by creating inclusive and safe physical and social environments. Project investments were designed to integrate with and amplify other interventions. Physical infrastructure included investments in roads,
water access, sanitation, improved drainage, solid waste management, green spaces, and safe passages for children, among others. Together these efforts aimed to contribute to better served, cleaner, healthier, and more aesthetically pleasing communities. Social interventions focused on strengthening social capital within the communities (i.e., school programs, alternative livelihood training and job placements for youth and distribution of birth certificates/other civil registration documents) to allow for increased ownership and safety within communities. Interventions were designed to target four levels of society—individual, family, school, and community—to prevent violence by reinforcing the effects of other interventions. Interventions were designed to improve civic behavior, such as results-based financing to improve solid waste management and institutional strengthening to support project outcome sustainability.

Civil and birth certificate distribution program, Jamaica. Photo: PJSIF.
RESULTS

Between 2014 and 2021, the project contributed to the following key outcomes (reported April 2021):

- 89,000 people benefited from access to higher quality services and improved basic infrastructure.
- 47 km of rehabilitated roads and 17 rehabilitated schools in volatile and vulnerable communities.
- The total number of people with access to electricity through legal household connections increased from 9,131 in April 2014 to 12,335 in April 2021.
- A total of 13,004 people gained access to improved water resources.
- Civil registration documents, key for accessing public services, were supplied to 6,197 people.
- Participants gaining from improved services included 13,759 people in educational programs and 7,514 people in employment programs or activities.

BANK GROUP CONTRIBUTION

The World Bank, through the International Bank for Reconstruction and Development (IBRD), provided a loan in the amount of US$42 million in 2014 to finance this project. ICDP built on the work of the Inner-City Basic Services for the Poor Project, also financed by the Bank with an IBRD loan of US$29.3 million, which targeted 12 other communities in Jamaica.
PARTNERS

The project implementing unit, the Jamaica Social Investment Fund (JSIF), worked in partnership with several local entities and initiatives to implement the project, leverage other programs, and ensure the sustainability of results beyond the project term. Community-based organizations representing each community were critical in supporting implementation. Project-supported activities also benefited from complementary investments, including the Government of Jamaica’s Zones of Special Operation program to reduce violence in the most volatile communities and a large-scale market composting initiative involving multiple donors. The project had several institutional partners supporting maintenance and/or longer-term access to services, including the National Water Commission; National Solid Waste Management Authority; Jamaica Constabulary Force; Ministry of National Security; Human Employment and Resource Training Trust/National Service Training Agency; Jamaica Crime Observatory; Ministry of Education, Youth, and Information; and numerous municipalities.

BENEFICIARIES

Approximately 89,000 people benefited from the expanded basic infrastructure, improved access to services, and integrated crime and violence programs financed by the project. These beneficiaries included (i) at risk youths and young adults (males and females); (ii) in-school children; (iii) parents; (iv) unemployed or irregularly employed community members; (v) families requiring counseling and civil support to access basic social services; and (vi) schoolteachers.

Barrett Town was the first community to receive the full set of project interventions. The head of the community-based organization told the World Bank team that, previously, an average of 16 people were murdered each year in their community, whereas in the two years since the interventions, one had been murdered. Other community members mentioned that the paved roads made it possible for the first time for them to take a taxi directly to their homes, and because police could patrol within the community, they felt safer. For the first time, their children could play on the roads because they felt safe enough.
MOVING FORWARD

The Government of Jamaica, following the integrated development model successfully piloted by the ICDP, now uses its own resources to support upgrades to urban environments and violence prevention efforts. In addition, it has financed a follow-on project modeled on the ICDP—termed ICDP 2—to cover additional inner-city urban communities. The government has also launched the Citizen Security Plan and the Citizen Security Secretariat to strengthen institutional coordination and oversight with the goal of continuing its violence prevention measures. Lessons learned from the ICDP have fed into the Citizen Security Plan, and with support from the European Union, the government intends to continue using socially driven, evidence-based, and integrated interventions in programs to address Jamaica’s public safety issues.
Students at reconstructed public school, Jamaica. Photo: JSIF.
Mexico’s indigenous peoples and local communities, frequently living under conditions of poverty and with limited access to water and sanitation, have faced particular challenges during the COVID-19 pandemic. To meet these challenges and to build resilience among these communities, successful efforts were made to expand sustainable natural resource management projects, led by the indigenous peoples and local communities themselves, and to provide capacity-building workshops for developing income-generating projects based on available natural resources.
IBRD/IDA lending commitments approved in FY20+FY21: 2,955 million

Active projects: 11

New and supplemental projects approved in FY20+FY21: 6

Population

128,932,753

Land

1,964,375 (sq. km)

Forest in Oaxaca, Mexico. Photo: Jessica Belmont / World Bank.
CHALLENGE

COVID-19 has disproportionately impacted Mexico’s rural communities. Compared to urban areas, rural areas in Mexico have a larger proportion of people living in poverty, with lower levels of education, less access to water and sanitation, and higher COVID-19 case and mortality rates.

In addition, indigenous peoples have suffered disproportionately from the economic impacts of the COVID-19 pandemic. Domestic workers and cooks, most of whom are women from indigenous peoples and local communities (IPLC), make up 60 percent of Mexico’s job losses due to COVID-19. The nation’s response required meeting both sides of this global crisis and doing so in areas with populations already at risk from economic, health, education, climate, and other challenges.

APPROACH

In October 2017, the Rainforest Alliance piloted the Mexico Dedicated Grant Mechanism (DGM) for Indigenous Peoples and Local Communities, in alignment with Forest Investment Program (FIP) guidelines, focusing on five Mexican regions with high-value ecosystems, active local communities, and at high risk of deforestation. Women in rural areas represent 50.5 percent of the population, yet only 26 percent are landowners and 21.3 percent are decision-makers in their communities. Thus, gender was an integral part of the design process: workshops were gender-sensitive, and women were proactively sought for community engagement efforts and as potential project leaders.

The DGM approved 51 sustainable natural resource management (NRM) projects led by IPLCs and provided capacity-building workshops in which participants developed income-generating subprojects. The onset of COVID-19 in 2020 challenged the project to develop alternative implementation schemes to support IPLC activities. This was especially important for women, who rely most on natural resources for income to support their families and communities. Empowering IPLC women to engage in productive activities has built resilience that has proven essential during the pandemic as well as having long-term impacts on livelihoods.
The COVID-19 pandemic forced this project to become fully virtual. With increased pressure to support forest-dependent communities during a global economic crisis, the team adapted and innovated, developing customized training opportunities for counterparts, project staff, and beneficiaries. This effort specifically sought to increase the number of female participants, providing them with voice, agency, and productive capacities that will have long-term impact on their lives and those of their families and their communities.

RESULTS

The DGM for IPLC has provided important funding to complement public sector investment toward the sustainable recovery of rural and indigenous income levels:

- Benefits at scale: From December 2017 to December 2020, 520 people received direct monetary benefits from the project, with an additional 3,500 people receiving direct non-monetary benefits.
(e.g., employment, capacity building, organizational strengthening, etc.). When nonmonetary benefits are taken into account, project beneficiaries increase six-fold, and project impact is expected to expand in upcoming years as female-led subprojects continue to be developed.

- Strengthened rural women’s participation in NRM: Women-centered project design led to a four-fold increase in women participating in the process and 22 more female-led projects.
- Developed capacity of indigenous and rural community leaders: The project was focused on creating female role models who could serve as technical allies for the new subprojects. On average, 17 percent of technical leaders in indigenous and rural communities are women, yet 79 percent of the project’s extensionists supported and hired through this project are female and continue to provide technical guidance and leadership for subprojects during the pandemic.
- Empowered rural and indigenous Peoples: Between February and November 2020, despite the pandemic, 51 mostly female-led technical proposals were developed. This process included virtual meetings with each working group to validate technical proposals; participatory impact diagnoses for productive activities; and meetings with their communities to ensure enabling frameworks were in place.

BANK GROUP CONTRIBUTION

Through the Forest Investment Program, one of three main WB-administered programs within the Strategic Climate Funds (SCF), the Bank provided a grant in the amount of US$6 to support Mexico’s Dedicated Grant Mechanism (DGM) for Indigenous Peoples and Local Communities. A multi-donor fund established in 2009, FIP’s contribution to this program aligns with both its mission to assist indigenous peoples’ groups to enhance their capacity to design and lead projects and its focus on contributing to local, national, and international dialogue and actions toward reducing greenhouse gas emissions by countering deforestation and forest degradation (REDD+). In addition, the World Bank’s technical advice and implementation support during the pandemic led participants to the adoption of innovative implementation and supervision tools and to mainstreaming cutting-edge gender actions.
PARTNERS

The partnership among the key implementing agency, the Rainforest Alliance, the Government of Mexico, and indigenous and rural communities was strengthened through the DGM and the World Bank via the Forest Investment Program.

BENEFICIARIES

Laura Pérez Pérez is from the Ixtlán Community in Juárez de Oaxaca. Laura is part of a group of nine indigenous women who proposed a subproject under the DGM funding window launched during the pandemic to produce biodegradable soaps, shampoos, and lotions from plants and flowers found in their natural environment.

On average, 17% of technical leaders in indigenous and rural communities are women, yet 79% of the project’s extensionists supported and hired through this project are female and continue to provide technical guidance and leadership for subprojects during the pandemic.
“We were lucky to be selected, even more so because we participated in workshops to learn how to develop a viable technical proposal so our idea can become a reality. In these workshops we learned about the social, economic, and environmental angles and the importance women have in supporting our community’s sustainability. This strengthens us as women: not only does this contribute to our home’s economy but we can also add value to our community by protecting the environment and believing in ourselves. We have much to learn, but with the support from these institutions we hope to make our dreams come true.”

Laura Perez, Ixtlan de Juarez, Oaxaca, Mexico. Photo, video capture: MDE.

MOVING FORWARD

Delays due to the pandemic have affected IPLC implementation capacity. By April 2021, 79 percent of beneficiaries surveyed said they had been affected by COVID-19: 24 percent reported reduced sales, 22 percent reported reduced employment, 13 percent noted the company’s contributions to the community had decreased, and 15 percent of workers were infected by COVID-19 or died from it. Nevertheless, almost all beneficiaries indicated a positive outlook about their capacity to recover from the crisis. Counterpart endorsement led to the immediate adoption of remote supervision and surveying tools; local ally support allowed beneficiaries to provide honest feedback through online platforms; and capacity building enabled all parties to internalize the use of these technologies and eliminated the need for on-site visits. Project implementation continues, and World Bank support is key to enhancing IPLC capacity to recover from the pandemic and establish long-term income-generating activities.
Capulalpam toy and art wood shop, Oaxaca, Mexico. Photo: Jessica Belmont / World Bank.
Nicaragua has become a steady member of the Central America and Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company, the region’s primary disaster risk pooling mechanism, established in 2007. Since Nicaragua began its membership with the purchase of tropical cyclone and earthquake policies in 2015, the government has increased its financial commitment to the facility by purchasing higher levels of coverage, and has also enhanced its knowledge of the risk models, products, and policy benefits and limitations. As a result, disaster risk financing remains one of the government’s top priorities, as evidenced by the last two years’ decreases in the percentage of the premium financed by the credit and the consistent budgeting by the Ministry of Finance of the balance.
Population

6,624,554

Land

130,370 (sq. km)

IBRD/IDA lending commitments approved in FY20+FY21: 100 million

Active projects: 8

New and supplemental projects approved in FY20+FY21: 2

Satellite imaging of Hurricane Richard over Central America, 2010. Photo: NOAA.
CHALLENGE

Nicaragua is classified as being at the highest risk level for climate-related and other natural disasters; it is in the high-risk group for earthquakes, floods, and epidemics and in the medium-risk group for drought and hurricanes. Without adequate fiscal management strategies, major catastrophic events jeopardized government efforts to end extreme poverty and boost shared prosperity while threatening to reverse hard-won development gains. In terms of disaster-related economic impacts, between 1994 and 2013, hydrometeorological disasters in Nicaragua were associated with annual losses of US$301.75 million, equivalent to an annual loss of 1.71 percent of its gross domestic product (GDP). The limited ability to absorb fiscal shocks associated with natural hazard impacts relates to restricted capacity for external borrowing as well as limited use of financial tools to manage fiscal volatilities. The country needed a comprehensive budget protection strategy against natural hazards to safeguard fiscal accounts and balances while allowing for rapid resource mobilization in the wake of a disaster.

APPROACH

Catastrophe risk pooling at the regional level is a cost-efficient means of safeguarding against extreme events, and the Nicaragua Catastrophe Risk Insurance Project has supported Nicaragua’s participation. By enabling aggregation of risk into larger, more diversified portfolios, premiums are more affordable and international reinsurance and capital markets become more accessible than would otherwise be possible for a country in Nicaragua’s situation. The region’s most prominent mechanism, the Central America and Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC), mobilizes funds that contribute to reducing the overall gap between member countries’ contingent liability and their susceptibility to financial shock from natural catastrophes. Under the parametric risk insurance approach, within 14 days of a disaster event Nicaragua receives payouts triggered by certain predefined loss thresholds. In addition, technical assistance components strengthen the government’s capacity to take informed decisions, in tandem with the facility’s own technical assistance (TA) program aimed at deepening member countries’ understanding of natural hazards and risks and which financial instruments to adopt against the adverse fiscal impacts of a catastrophic event. Through the Disaster Risk Financing (DRF) TA, the World
Bank has supported Nicaragua in conducting public financial management assessments, implementing a budget classifier, and improving reporting requirements to promote the efficiency and transparency of post-disaster public spending. While the COVID-19 pandemic further undermined Nicaragua’s fiscal position in maintaining membership in the facility, CCRIF SPC and its financing partners, including the World Bank–administered Multi-Donor Trust Fund, responded quickly to Nicaragua’s need by offering 50 percent discounts on premium payments.

RESULTS

The Nicaragua Catastrophe Risk Insurance Project, in tandem with Central America and Caribbean Catastrophe Risk Insurance Program Multi-Donor Trust Fund (CCRIF MDTF), has achieved the following results:

• Nicaragua has renewed its CCRIF membership every year since 2015, increasing its tropical cyclone coverage by 30 percent and its earthquake policy by 49 percent by project closure in 2021. Nicaragua also started purchasing an excess rainfall policy in 2017. CCRIF premiums for Nicaragua are lower than the simulated price for comparable coverage purchased individually in the market. Since 2015, Nicaragua has received five payouts within 14 days of triggering events, totaling US$32.25 million, against its earthquake, tropical cyclone, and excess rainfall policies.

• The Ministry of Finance has worked with line ministries to build in-house capacity to conduct damage and loss assessments since 2016. As a result, when the category 4 Hurricanes Eta and Iota hit Central America in November 2020, the country assessed damages and losses within three weeks, informing its timely mobilization of funds and

In terms of disaster-related economic impacts, between 1994 and 2013, hydro-meteorological disasters in Nicaragua were associated with annual losses of US$301.75 million, equivalent to an annual loss of 1.71% of its gross domestic product (GDP).
early action toward a recovery plan. The Ministry uses methodologies developed for the international community to conduct joint post-disaster damage and loss assessments, such as the Post-Disaster Needs Assessments and the Damage and Loss Assessment.

• In 2020, the Ministry of Finance took measures to prepare for the forecasted above-average hurricane season, based on technical recommendations from the Nicaraguan Institute for Territorial Studies (INETER), by increasing its tropical cyclone insurance coverage from the CCRIF SPC. As a result, after Hurricanes Eta and Iota, the country received US$30.6 million in payouts under the excess rainfall and tropical cyclone policies. This payout provided short-term liquidity in the aftermath of the disasters, enabling the government to respond to the emergency conditions until it secured other funding.

• Nicaragua started evacuation procedures three days ahead of the 2020 storms and reported six times fewer fatalities than after Hurricane Felix in 2007. The country’s response reflected its greater awareness of the exposure and vulnerability of certain urban areas to natural adverse events and its ability to effectively use early warning systems and evacuation procedures to save lives. As part of a comprehensive approach to disaster risk reduction, Nicaragua has taken essential steps to incorporate disaster risk management (DRM) and climate change adaptation into its urban and sectoral development policies.

• As a result of the DFR-TA, Nicaragua has been working to conduct public financial management assessments, implement a budget classifier, and improve reporting requirements. Nicaragua has broadened the scope of its financial toolkit and has begun implementing a DRM and climate change budget classifier in 14 entities and critical sectors. This has helped the country trace and monitor resources allocated to DRM, providing valuable information for future budget allocations and efficient use of public funding.

• During the final year of the project’s implementation (2020/21), the government covered 30 percent of the premium payment, and the IDA credit covered the remaining 70 percent (after applying the 50 percent discount). As part of the project’s sustainability measures, the percentage of the premium financed by the IDA credit has decreased over the last two years, with the Ministry of Finance consistently budgeting for the balance.
The World Bank, through the International Development Association (IDA), provided a credit in the amount of US$12 million to finance the cost of participation fees (entrance fees) and premium payments related to CCRIF membership for seven years. The World Bank–administered Multi-Donor Trust Fund (established by contributions from the United States, Canada, the European Union (EU), and Germany, through BMZ and KfW) totaling US$68 million supported CCRIF SPC (CCRIF Segregated Portfolio Company) in providing disaster risk insurance and related TA programs to the Central America and Caribbean subregions. Specifically, the MDTF supported insurance payouts (US$22 million), reinsurance payments (US$13 million), participation fees (US$5 million), and TA, including model and product development (US$12 million).
As a result, after Hurricanes Eta and Iota, the country received US$30.6 million in payouts under the excess rainfall and tropical cyclone policies. This payout provided short-term liquidity in the aftermath of the disasters, enabling the government to respond to the emergency conditions until it secured other funding.

PARTNERS

A strong partnership with CCRIF SPC allowed Nicaragua to receive payouts seamlessly within 14 days of a triggering event. The CCRIF SPC has worked with the World Bank to execute its risk transfer/reinsurance programs, using IBRD intermediation services to approach capital markets to further diversify its credit exposure as well as to access nontraditional sources of risk capital. World Bank support contributed to extending the tenure and quality of CCRIF’s products, enabling the facility to provide more competitive pricing for client countries. The World Bank Treasury has also played a significant role in supporting the CCRIF as it negotiates on the private market. Regional and country ownership is evidenced by the high-level dialogue led by the COSEFIN group of ministers (El Consejo de Ministros de Hacienda o Finanzas de Centroamérica, Panamá y la República Dominicana) and the COSEFIN secretariat. Finally, the group of donors represented in the CCRIF Multi-Donor Trust Fund played a critical role in responding to the urgent fiscal needs created by the COVID-19 pandemic.
BENEFICIARIES

Isaac Anthony, CEO of CCRIF SPC, commented on member countries’ renewals for the 2021/22 policy year, wholeheartedly thanking the development partners who stepped forward early in the pandemic to support member governments and offset their policy premiums for 2020/21 and 2021/22. Grants provided by development partners, including the European Union and the government of Canada, were most welcomed by members, given the fiscal challenges they continue to face. Flexibility in the use of the funds was also well received by members, as it enabled them to use a portion of the funds during the last policy year as well as a portion for the current policy year.

MOVING FORWARD

The World Bank is currently implementing the second CCRIF project funded by the Multi-Donor Trust Fund as well as by a Single-Donor Trust Fund established with the EU through the Global Facility for Disaster Reduction and Recovery (GFDRR), with the goals of scaling up the results achieved in the first CCRIF project and of further expanding CCRIF membership in Central America and the Caribbean regions. Evidence of the sustainability of the Nicaragua project is clear: the Nicaraguan government has increased its commitment to CCRIF SPC as shown by its intention to fully finance the policy for year 2021/22 with its own budget funding. In the 2021/22 policy year, membership among the COSEFIN countries has increased 60 percent, with El Salvador and Honduras as new members, further underscoring the facility’s long-term sustainability as a disaster risk insurance mechanism.
PARAGUAY

Transforming the Agricultural Practices, Resource Access, and Land Title Stability among Agricultural Organizations and Indigenous Communities in Rural Areas of Paraguay

Between 2009 and 2020, Paraguay promoted the adoption of sustainable agricultural practices among target beneficiaries (249,662 direct beneficiaries, 53 percent of whom were women). The project supported 105 communities in regularizing their land titles, and improved basic services (foremost, access to water and energy) while improving cassava and maize crop productivity by at least 25 percent.
**Population**

- 7,132,530

**Land**

- 406,752 (sq. km)

**IBRD/IDA lending commitments approved in FY20+FY21:**

- 320 million

**Active projects:** 5

**New and supplemental projects approved in FY20+FY21:** 3

*Flowers in the Atlantic forest, Alto Parana, Paraguay. Photo: World Bank*
CHALLENGE

Despite a continuous decline of poverty rates since the beginning of the twenty-first century, Paraguay experienced a reversal trend in 2020 due to the COVID-19 pandemic, with moderate poverty reaching 26.9 percent and an additional 265,500 people to fall below the poverty line. Poverty tends to be concentrated in rural areas: almost one-third of the rural population (33.86 percent) live in poverty, compared to 22.7 percent in urban areas. Extreme poverty reached 7.39 percent, affecting mostly people living off agriculture and exposed to climate shocks.

Given Paraguay’s economic dependence on agriculture and livestock, the use and management of land has a notable impact on production, livelihoods, and natural resources. The land situation in Paraguay today is characterized by significant inequality in tenancy and extensive titling irregularities. Smallholder farmers are constrained by limited access to land and technologies, and to adequate human and social capital resources. This situation not only makes it extremely difficult for small-scale farmers to diversify their production, but it also incentivizes unsustainable agricultural practices leading to environmental degradation that further negatively affects crop productivity and rural families’ well-being.

APPROACH

The Sustainable Agriculture and Rural Development Project (PRODERS) aimed to sustainably improve the quality of life of targeted small-scale farmers and indigenous communities by supporting actions that strengthened their community organizations, self-governance, and access to markets and value chains.
RESULTS

Between 2009 and 2020, PRODERS directly benefited 249,662 small-scale farmers and indigenous communities in 39 municipalities in the two poorest departments of the country’s Eastern Region: Caaguazú and San Pedro. The project contributed to the following key outcomes:

• 28,172 targeted farms increased their agricultural income by at least 30 percent.

• 28,180 families were lifted out of poverty.

• 3,200 farms (of 10,000 farms in total) increased their productivity (per hectare by at least 25 percent through productive practices promoted by the project (exceeding the target value of 2,500 farms by 128 percent).

• 84.8 percent of community development groups (peasant producers) and 62 percent of indigenous groups made business proposals oriented to market access and inclusive value chains.

• 180 subprojects in indigenous communities (one subproject per community) were financed.
BANK GROUP CONTRIBUTION

The World Bank, through the International Bank for Reconstruction and Development (IBRD), provided an initial loan in the amount of US$37.5 million to finance the project. An additional IBRD loan in the amount of US$100 million was approved in November 2013 to increase the project’s geographic scope and the number of target beneficiaries from 56,000 to 256,000.

PARTNERS

The Inter-American Development Bank provided US$15 million to improve animal health services and to expand veterinary service coverage, complementing the World Bank’s financial support for PRODERS. The PRODERS project design also benefited from synergies resulting from the integrated portfolio promoted by the World Bank and the government of Paraguay and from lessons learned by the World Bank and other international agencies, such as the International Fund for Agriculture Development and the German Society for International Cooperation.

BENEFICIARIES

Small-scale farmers now benefit from (i) greater capacity and active participation in planning and in implementing sustainable agriculture and rural development activities at the farm, community, and micro-catchment levels; (ii) increased local management capacity to support these activities; and (iii) improved incomes, living conditions, food security, and environmental resource management. Larger-scale farmers in the selected micro-catchments, rural teachers and students, technical staff and...
managers from municipal governments, and producer and civil society organizations also benefited from project-financed trainings and environmental education services.

“It is a dream for us, and one that we never thought could be achieved. For example, today we are like microentrepreneurs.”
Antonio Vargas, indigenous community leader.

“Before they were very difficult times, there was nothing... My children used to tell me: ‘mom, what are we going to eat?’ And I told them there was no sale.”
Ña Modesta Sosa, Guaná community member.

“Now I am very happy, I work at the municipality fair. Through this, I sell all my production at better prices without losing products like in the past.”
Floria Beatriz González Gauto, Producer of San Juan Caaguazú
MOVING FORWARD

PRODERS conducted several value-chain analyses to inform the preparation of a US$100 million Bank-financed operation known as Market Access for Agricultural Products Project (PIMA). PIMA, approved by the World Bank in March 2020, aims at creating a long-term economic opportunities for small- and medium-sized agricultural producers and indigenous people by (i) supporting the development of farmers’ organizations; (ii) strengthening public sector institutions to improve delivery of key agricultural services; and (iii) supporting investment subprojects.
Saffron and corn at a rural market, Paraguay. Photo: World Bank.
Advancing Policy Reforms in Peru to Reduce Risk from Natural Hazards

Peru has instituted policy reforms to improve its disaster risk management readiness and practices. The reforms established stronger financial protections, increased public investment in disaster prevention, and targeted interventions for resilient health and water infrastructure, reducing the population’s vulnerability. These reforms particularly benefit women, who tend to be disproportionately affected by shocks from natural disasters.
Population

32,971,846

Land

1,285,220

IBRD/IDA lending commitments approved in FY20+FY21: 1,397 million

Active projects: 17

New and supplemental projects approved in FY20+FY21: 7

Destruction after the 2001 earthquake, Peru. Photo, video capture: Peru Ministry of Education.
Nearly half of the country’s 32.5 million people have been affected by floods, droughts, forest fires, earthquakes, landslides, or volcanic eruptions, and more than 511,000 people lost their homes to natural disasters between 1990 and 2020.

**CHALLENGE**

Geologic and climate-related risks posed major challenges for sustainable and resilient development in Peru and for its efforts to reduce poverty. Peru lies in the “Pacific Ring of Fire,” a highly seismic region where about 80 percent of the world’s earthquakes occur. Furthermore, its location on the tropical west coast of South America exposes the country to El Niño oscillations, which are characterized by prolonged, torrential rains. Due to the lack of land-use planning, inconsistent application of technical standards, and insufficient mainstreaming of hazard and risk knowledge to shape decision-making processes, disaster risk had been increasing. Forty-six percent of the nation’s territory is used or occupied by over one-third of the population, most living in conditions of high to very high vulnerability. Nearly half of the country’s 32.5 million people have been affected by floods, droughts, forest fires, earthquakes, landslides, or volcanic eruptions, and more than 511,000 people lost their homes to natural disasters between 1990 and 2020.

**APPROACH**

Peru was among the first countries to use the Bank’s Development Policy Loan with a Catastrophe Deferred Drawdown Option (Cat DDO) and has made substantial progress in advancing the disaster risk management (DRM) agenda. The Peru Cat DDO operation aimed to support the government’s efforts to strengthen the country’s institutional and legal framework for promoting risk reduction and reducing its fiscal and physical vulnerability to disasters in key sectors. These efforts include (i) establishing a results-based budgetary program for DRM, (ii) approving the DRM law and the DRM plan to implement the mandates under...
the law, (iii) developing a financial protection strategy against disasters with a range of instruments to improve capacity to mobilize resources in the event of a disaster, and (iv) working closely with sectors managing critical and essential infrastructure. Peru has achieved important milestones and has been widely recognized in the Latin America and Caribbean region for its progress.

RESULTS

Between the operation’s approval in 2010 and its closure in 2020, the government of Peru introduced policy reforms focused on strengthening the nation’s capacity to mobilize resources in the event of a disaster and to promote risk reduction. The Cat-DDO supported the following outcomes:

Pillar 1: Risk Reduction Policies in Public Investment

- Specific allocations for PREVAED-PP068, the budgetary program for disaster risk reduction and emergency response, grew from US$19 million in 2011 to US$400 million in 2019.

Pillar 2: Vulnerability Reduction Actions in the Government of Peru’s Priority Sectors

- The Pan-American Health Organization’s Hospital Safety Index was used to evaluate 91 percent of Peru’s hospitals and institutes.

- Retrofitting investment preparations were made for five hospitals in Lima and a budget of US$24 million was allocated for work to be completed by 2022.

- The National Safer Hospitals Policy was updated and approved in 2017, mandating that all health facilities integrate risk reduction procedures.

- The Water and Sanitation National Plan 2017–2021 was approved. It includes policy guidelines and indicators related to mitigating climate change and disaster risks. Forty-one water and sanitation service companies established contingent funds for disaster risk management.
Pillar 3: Financial Protection Mechanisms against Disasters Resulting from Natural Events

- Under the Financial Protection Strategy against Disasters, the Ministry of Finance mobilized US$1.2 billion in contingent credit lines to respond to disaster impacts, and it participated in the Pacific Alliance catastrophe bond, issued by the World Bank Group in 2018, for US$200 million for earthquake risks. Following the magnitude 8.0 earthquake in 2019, this fund paid out US$60 million.

- A new public investment system (Invierte.pe) includes guidelines to integrate DRM considerations into the project formulation cycle.
BANK GROUP CONTRIBUTION

The World Bank, through the International Bank for Reconstruction and Development (IBRD), provided a loan in December 2010 in the amount of US$100 million to finance this Cat DDO. The Bank also approved US$400 million in IBRD financing in 2015 for a second Cat DDO (closed in 2018) that supported additional sectors to mainstream DRM. One key sector was education, and in 2017, risk reduction was integrated into school infrastructure planning and investments by adopting the first national school infrastructure plan, including an earthquake vulnerability reduction program.

The project also benefited from two grants from the World Bank–administered Spanish Fund for Latin America and the Caribbean (SFLAC): the first grant, US$310,000, helped to build capacity and to support mainstreaming of risk information into the planning processes, in particular through the national public investment system and the General Directorate for Public Budget within the Ministry of Economy and Finance. The second SFLAC grant, in the amount of US$300,000, supported the Geophysical Institute of Peru in generating probabilistic seismic hazard information and the health and education sectors to conduct seismic risk assessments of their infrastructure portfolio in the Lima metropolitan area.

PARTNERS

Key partners in supporting the government’s efforts to increase capacity to mobilize resources and promote risk reduction included the Global Facility for Disaster Reduction and Recovery (GFDRR) and the Switzerland State Secretariat for Economic Affairs (SECO), both of which mobilized...
grant resources throughout the life of the DRM engagement to provide technical assistance in key areas and sectors. Through GFDRR, the Probabilistic Risk Assessment Program (CAPRA) used a portion of funding supplied by Australia (overall program funding of US$1.7 million) to provide capacity building and advisory services focused on strengthening Peru’s technical and institutional capacity to quantify and use risk information, building on SFLAC’s work. A US$1.4 million grant was also financed by Japan to support the Ministry of Education in mainstreaming DRM in the education sector, specifically to support the ministry in formulating the first national school infrastructure plan. Through SECO, US$988,000 was mobilized to support a range of activities focused on strengthening the government’s post-disaster financial response capacity, including preparing a national disaster risk financing strategy, launched in 2016.
BENEFICIARIES

In 2010, given the country’s high seismic risk, the National Safe Hospitals Policy was approved, which included key vulnerability reduction actions for hospitals and health facilities. As part of this initiative, over 90 percent of Ministry of Health hospitals were evaluated using the Hospital Safety Index, providing a snapshot of the probability that a hospital or health facility will be able to maintain operations during and after an emergency. Fifteen structural vulnerability studies of hospitals were also completed and, based on this work, five hospitals (Dos de Mayo, Hipólito Unanue, Cayetano Heredia, Arzobispo Loayza, and Maria Auxiliadora) in Lima will be retrofitted. Two of these hospitals (Arzobispo Loayza and Dos de Mayo), identified as part of Peru’s cultural heritage, required further coordination with the Ministry of Culture to preserve their historic buildings. The government is committed to improving the structural safety and conditions in all five hospitals, and it has allocated about US$24 million for the effort, expected to be completed by 2022. These interventions are key to having safer, more resilient hospital infrastructure and ensuring continuity of services even in the event of a disaster.

MOVING FORWARD

An opportunity has emerged to continue the Bank’s DRM engagement in Peru. Taking into account lessons from the 2017 El Niño Costero and the COVID-19 pandemic, recent analytical work financed by the Bank has gathered evidence and provided policy recommendations to the government of Peru for increasing the resilience of local governments’ key sectors to seismic and hydrometeorological disaster impacts (particularly floods and droughts). A new Cat DDO could provide support to further consolidate reforms introduced under Cat DDOs I and II and support key areas identified by the analytical work, such as including other priority sectors and the subnational level to increase their resilience to natural disasters and pandemics.
Recognizing Indigenous Peoples’ Leadership in Climate Action: Land Security and Sustainable Forest Management in the Peruvian Amazon

Indigenous peoples of the Peruvian Amazon led and implemented efforts to achieve full legal recognition of 253 native communities and demarcation and land titling of 58 native communities (approximately 230,000 hectares). In addition, 44 community-based productive subprojects were accomplished—including 16 women-led initiatives—contributing to sustainable forest management and improved food security and generating income in 119 native communities in the region.
Population

Female artisan project beneficiaries. Photo: Daniel Martinez Quintillana.

Land

IBRD/IDA lending commitments approved in FY20+FY21:
1,397 million

Active projects: 17

New and supplemental projects approved in FY20+FY21: 7
On average, over 134,000 hectares of forest cover were lost annually in Peru between 2005 and 2015, especially in the Amazon. 45% of this deforestation took place on lands with no legal status.

**CHALLENGE**

High deforestation rates, unsound forestry practices, and illegal logging have threatened Peru’s impressive biodiversity as well as the livelihoods of local communities. On average, over 134,000 hectares of forest cover were lost annually in Peru between 2005 and 2015, especially in the Amazon. Forty-five percent of this deforestation took place on lands with no legal status. Over half of national greenhouse gas (GHG) emissions come from land-use change (predominantly deforestation).

Forests provide a wealth of goods and services: carbon storage, biodiversity, water filtration, storm mitigation, timber and nontimber products, food, and more. Indigenous peoples and local communities (IPLCs) retain a close relationship with forests, not only for their livelihoods but also for their cultural and spiritual well-being. Although social indicators are low for most inhabitants of the Amazon region, indigenous peoples fare worst from high levels of chronic malnutrition and infant mortality and from limited access to education and primary health care.

**APPROACH**

The Saweto Dedicated Grant Mechanism (DGM) for Indigenous Peoples and Local Communities Project aimed to invest in enabling conditions for environmental sustainability, climate change mitigation, and poverty reduction among IPLCs by promoting (i) legal protection and recognition of native communities; (ii) land tenure security; and (iii) financial support and capacity building for promoting income generation and food security in native communities through sustainable forest management. By
strengthening their land rights, IPLCs can better protect their lands and forests from illegal encroachment and develop productive activities related to forestry, tourism, aquaculture, or other income-generating enterprises. In response to COVID-19, the project also reallocated grant proceeds to support IPLCs in responding to the pandemic with communication materials on COVID-19 prevention and sanitary protocol development and training.

RESULTS

Between 2015 and 2021, the project contributed to the following key results:

- Recognition of 253 native communities, allowing those communities to begin the land titling process.
- Demarcation and titling of 58 native communities, covering approximately 230,000 hectares.
- Financing for 44 community-based productive subprojects—including 16 women-led initiatives—contributing to sustainable forest management and improved food security and income generation in 119 native communities in the Peruvian Amazon. These subgrants also contributed to (i) formalizing cooperatives and associations, especially for women; (ii) acquiring permits and certificates for production; and (iii) increasing productivity and promoting sustainable practices in community businesses by investing in improved facilities and equipment, training, and market access.
- Provision of personal protection gear and sanitization and first aid kits for 400 communities; 164 communities in highly isolated areas also received radio communication equipment to help cope with mobility restrictions imposed by the COVID-19 pandemic.
- Adoption by the government of Peru of new regulations to streamline multiple aspects of the native community recognition and land titling processes. The new regulations emerged following close coordination between the National Steering Committee (NSC) and public agencies at the national and regional levels. Adopted at the national level, these regulations set standard procedures and clear assessment criteria for all regions, expediting the recognition and titling processes.
The Forest Investment Program (FIP), a targeted program of the Strategic Climate Fund administered by the World Bank, provided a grant in the amount of US$5.5 million to finance this project. Active in 23 countries, FIP supports developing countries’ efforts to reduce deforestation and forest degradation and promotes sustainable forest management that leads to emission reductions and the protection of carbon reservoirs. FIP also financed the DGM Global Project, implemented by Conservation International and aimed at facilitating knowledge exchange and capacity building for IPLCs at the regional and global levels and strengthening the networks and alliances of IPLC organizations. The Global DGM facilitates the dialogue among national-level DGMs in 12 FIP countries, including Peru’s DGM.
PARTNERS

The project’s National Steering Committee—responsible for reviewing and approving all subproject proposals and acting as project intermediaries for the beneficiary communities—benefited from the participation of ten representatives from the Interethnic Association for the Development of the Rainforest (AIDESEP for its Spanish acronym) and the National Council for Protected Areas (CONAP from its name in Spanish). Both the NSC and the project’s National Executing Agency (World Wildlife Fund—Peru) closely coordinated with the Ministry of Environment, the Ministry of Culture, the Ministry of Agriculture and Irrigation, and the regional governments to implement project activities, particularly those related to the legal recognition of native communities and native land titling.

DGM Peru has also continued to generate synergies with the Directorate General of Sanitation of Agricultural Property and Rural Cadastre (DIGESPACR), the governing body of land titling and recognition processes at the national level. The project has also continued to coordinate closely with the Regional Agricultural Directorate in each region to understand its personnel needs to facilitate progress at the cabinet level in recognizing and titling lands.

BENEFICIARIES

The main beneficiaries of the project include the 1,500 IPLCs living in the Peruvian Amazon, as well as the women benefiting from grant financing for subprojects specifically managed by them.
The women-led indigenous association Chocowarmi, in the Copa Sacha native community, has produced cacao-based products since 2013. “We, as women, want to improve the quality of our lives, in our families, our household and business,” said member Lulli Chavez. With the DGM, the association remodeled its processing facility to improve quality and productivity and financed training and internships for its members. In 2018, its chocolate with shica-shica, extracted from a palm tree, won a national competition. “We do the entire process—harvesting, post-harvesting, drying, fermentation. We now aim to access the international market to sell our products,” said Karina Tuanama.

Reene Pujupat Taan, an Awajún indigenous woman, is a member of a women-led fish-farming initiative. These indigenous women decided to undertake this activity to cope with the high levels of pollution from the Chiriyacu River. With the DGM support, the group of women expanded and improved existing fishponds, acquired equipment, and participated in technical training. The project supported the formal creation of the Awajún Nazareth Women’s Aquaculture Association. The income generated by the association was essential during the COVID-19 pandemic for the food security of the entire community and the purchase of medicines.
MOVING FORWARD

The Peru DGM demonstrated that IPLCs can successfully take a lead role in designing and implementing development projects, and it is expected that the DGM Peru project will serve as a successful experience and help raise additional funds with international partners. The lessons from the project will inform the government of Peru in its future engagement with IPLCs and with climate action, especially its efforts to improve native land titling. Additionally, community-driven productive subprojects were designed to provide the initial capital and technical assistance native communities required to start or upgrade their businesses while considering both environmental and economic sustainability. In most cases, income generated by subprojects has been reinvested in the community businesses.

Enhancing Trade, Competition, and the Acquisition of Human Capital to Boost Productivity in Peru

The government of Peru has delivered a program of development policies aimed at increasing productivity by strengthening the acquisition of human capital, streamlining business regulations, and facilitating trade. Results were achieved by addressing a range of areas, from tax and customs policy reforms to improved business entry and exit procedures to enhanced education policy frameworks.
Population

32,971,846

Land

(sq. km)
1,285,220

IBRD/IDA lending commitments approved in FY20+FY21: 1,397 million

Active projects: 17

New and supplemental projects approved in FY20+FY21: 7

Peruvian women transporting boxes of avocados for export. Photo: Dieter Castañeda / World Bank.
CHALLENGE

Peru grew at an average of 5.7 percent per year from 2001 to 2013, compared to regional and global growth of around 3 percent. This growth helped Peru reduce poverty from 55 to 24 percent of the population in the same period, faster than in other countries with similar income levels. Growth was the main driver of this reduction in poverty and inequality, accomplished primarily through improved labor incomes rather than redistribution policies. However, by 2014 growth had slowed to 2.4 percent, as most emerging economies—including Peru—faced lower export demand from China and elsewhere, worsening terms of trade, and higher borrowing costs. Under this unfavorable external environment, by 2016 growth in Peru had to rely much more on productivity gains. Productivity had contributed to about a third of the country’s growth in the preceding years, but a large gap with high-income countries still remained.

APPROACH

With the Boosting Human Capital and Productivity Development Policy Financing with a Deferred Drawdown Option Project, the World Bank sought to support Peru in targeting key productivity constraints by enabling improvements in the quality of human capital, fostering competition pressures, and facilitating trade. A stand-alone development policy financing with a deferred drawdown option (DPF-DDO), Boosting Human Capital and Productivity, was prepared to back Peru’s reform agenda, support the authorities’ medium-term financial plan, serve as a buffer to negative shocks, and foster policy dialogue with the new government. The hedging feature of the DDO, particularly in times of international capital market volatility, was highly valued by the authorities. With a presidential election in mid-2016, this instrument also signaled an ongoing commitment to policy reforms. This project focused on enhancing education policy; facilitating the entry, operation, and exit of firms; and reducing transaction costs of trade. Further, it supported policy and implementation continuity beyond the financing option for the incoming administration.
RESULTS

The DPF-DDO supported adoption of legislation to enhance the effects of trade, competition, and education on productivity. Adoption of these policies led to the following key results:

- Reducing transaction costs in trade: The project supported reforms to simplify the customs regime and to complement other actions to increase the efficiency of customs proceedings. As a result, total time to release goods imports (TTLM) declined 49 percent between 2014 and 2019. In addition, export competitiveness and access to markets were supported through two new organizations: the National System for Quality and the National Quality Institute (INACAL). Standards provided by INACAL have been relevant to the export success of several agro-industrial products, like asparagus and avocado.

- Facilitating the entry, operation, and exit of firms: The entry of firms was simplified with the operation of a digital intermediation system, known as Sistema de Intermediación Digital (SID), which has allowed firms to register online since 2014; the reform was deepened with the creation of a new type of firm (the simplified closed stock company or sociedad por acciones cerrada simplificada, SACS), for which basic firm constitution and the most important patrimonial acts can be completely done online. In addition, the competition authority (INDECOPI) was granted the mandate to promote entry into product and service markets, and more than seventeen thousand bureaucratic barriers were removed between 2014 and 2019. Backed by the program, business exit has been facilitated through the use of electronic auctions for asset foreclosures, a resource that has become increasingly prevalent in recent years as judiciary processes intensify its use.

Boosting Human Capital and Productivity project was prepared to back Peru’s reform agenda, support the authorities’ medium-term financial plan, serve as a buffer to negative shocks, and foster policy dialogue with the new government.
• Enhancing the education policy framework to improve skill quality: To increase teaching quality, the project supported performance evaluations for principals and teachers. It also backed the full-school-day scheme, which added two hours of instruction to select public schools, increasing the PISA scores for math in 23 percent of a standard deviation. Furthermore, the National Superintendency of High Education (SUNEDU), the country’s regulator of tertiary education quality, helped establish and review applications for institutional licensing for every university in Peru.

BANK GROUP CONTRIBUTION

The World Bank, through the International Bank for Reconstruction and Development (IBRD), supported policies implemented by the government of Peru by providing a credit line of US$1.25 billion. This credit line both encouraged continuity of already adopted policies and provided resources for the government to use to meet new financial needs arising from the El Niño weather phenomenon in 2017 and the COVID-19 pandemic.
PARTNERS

The reform program was implemented cooperatively by several institutions.

- The tax and customs authority (SUNAT) implemented trade facilitation policies and proposed a series of additional reforms that deepened these policies.
- INACAL was created through these reforms. It put into operation accreditation, standardization, and metrology systems for processes and products.
- The National Public Registry Office (SUNARP) managed SID to facilitate registration of signatures and patrimonial acts online.
- Using authority derived through the reforms, INDECOPI eliminated bureaucratic barriers to competition.
- The Ministry of Education and SUNEDU implemented reforms in education.
- The Ministry of Economy and Finance coordinated the reform program.

BENEFICIARIES

Beneficiaries of the reforms promoted by the program include students, companies, and workers. Students from 2,001 public schools accessed a higher-quality education, improved through the lengthened school day and the greater demand placed on teachers. Companies benefited from the reduced formalities and obstacles to market participation. Exporters
and importers also benefited from simplified customs procedures and access to standards and certifications necessary for international trade. Overall, these reforms benefit citizens who work for or with or otherwise interact with these companies.

**MOVING FORWARD**

The main challenge to underpinning Peru’s long-term growth is to improve government efficiency. Moving forward, this will require work (i) to improve public services providing development opportunities to all citizens, (ii) to promote social protection and disaster prevention policies, (iii) to improve the regulatory quality of the government, and (iv) to increase the available resources while maintaining fiscal sustainability. This effort has been addressed in the Peru Policy Notes recently published by the World Bank, which will be the main instrument of engagement with the new authorities.
Students at Ricardo Florés Gutiérreg Public School with full-school-day scheme in Peru. Photo: José Alva / Peru Ministry of Education.
Building Public Sector Management Capacity and Empowering Subnational Governments in Peru

The government of Peru undertook reform efforts (i) to improve the management and reporting of public expenditures in subnational and local governments; and (ii) to implement the government’s legal and institutional framework for public-private partnerships. New regulations were prepared to support implementation of the Strengthening Fiscal Responsibility and Transparency Law, leading to vastly improved compliance and results.
Population

32,971,846

Land

1,285,220 (sq. km)

IBRD/IDA lending commitments approved in FY20+FY21: 1,397 million

Active projects: 17

New and supplemental projects approved in FY20+FY21: 7

Salaverry port, Peru. Photo: ProInversion Peru.
The rapidly expanded PPP program lacked a strong quality control process, with many projects hastily prepared and often supply driven in response to unsolicited proposals submitted by private sector entities seeking public contracts.

**CHALLENGE**

The rapid decentralization process and expansion of public-private partnership (PPP) programs in Peru between 2005 and 2015 highlighted the need to improve these programs’ reporting and management frameworks to manage potential risks. Over this period, nearly all sectoral functions and associated financial resources were transferred to 26 regional governments (RGs) and to more than 1,800 local governments (LGs), regardless of their readiness and capacity. In 2014–15, subnational governments accounted for about 38 percent of total nonfinancial public sector spending and 60 percent of total public investment spending. Many subnational governments (SNGs) increased staff numbers to help build capacity, but most hiring was conducted in an uncompetitive manner. The rapidly expanded PPP program lacked a strong quality control process, with many projects hastily prepared and often supply driven in response to unsolicited proposals submitted by private sector entities seeking public contracts.

**APPROACH**

The SNGs’ weaknesses in public investment and budget management highlighted the importance of maintaining prudent fiscal management and of strengthening management capacity to implement public investment programs and PPPs at all levels to contain fiscal risks and accelerate project implementation. The government recognized the need to provide SNGs with fiscal rules and a strict reporting framework. While the overall PPP framework was strong, an additional step was needed to fully integrate SNGs into the public investment system and to deploy structured decision-making processes for the fiscal risks associated with PPP contracts.
The Peru Public Expenditure and Fiscal Risk Management Development Policy Finance—Disaster Drawdown Option (DPF-DDO) project supported key policy reforms through eight prior actions focused on (i) implementing the legal framework for SNG reporting; (ii) clarifying the institutional responsibilities for SNG monitoring; (iii) issuing regulations to clarify roles in implementing the new fiscal responsibility law; (iv) establishing a new human resource management (HRM) regime with a category of professional and competitively recruited public managers; (v) enacting a new PPP framework that integrated PPP projects into the budget process with selection criteria based on technical assessments and with a requirement for a favorable binding opinion from the Ministry of Economy and Finance (MEF) for new projects prior to contract signature; (vi) appointing MEF as the guiding entity for the review and approval of PPPs under the national public investment process; (vii) revising the procedures for receiving and processing unsolicited PPP proposals and putting a dispute resolution mechanism in place for PPP contracts; and (viii) designing a national private investment promotion system to guide PPPs through a clearer process with technical criteria and institutional roles.
RESULTS

The framework for subnational fiscal rules and transparency was established as early as 2000 through the Fiscal Responsibility and Transparency Law (Law 27245). Most SNGs experienced difficulties complying due to the complexity of the fiscal responsibility framework and the extensive number of fiscal rules.

In 2009, partly in response to the impact of the global financial crisis, efforts were renewed to ensure compliance by simplifying and improving coherence between fiscal rules on spending and debt limits.

Between 2009 and 2015, the Peruvian government issued regulations to strengthen the management and reporting framework for fiscal responsibility in SNGs, including the procedures for determining the fiscal targets and laying out the methodology, reporting, and disclosure requirements and sanctions for noncompliance with the fiscal rules. The following are key reforms and policies that resulted from the project:

- The national government granted authority to the General Directorate of Macroeconomic Policy and Fiscal Decentralization within MEF to monitor the SNGs’ fiscal and financial management performance.

- Regulations were prepared to implement the new Strengthening Fiscal Responsibility and Transparency Law. These created an independent Fiscal Council to evaluate (i) ex-post compliance and changes of fiscal rules; (ii) macro-fiscal forecasts considered under the Multiyear Macroeconomic Framework; and (iii) short- and medium-term fiscal policy in terms of stance and sustainability.

- All regional governments and 94 percent of local governments complied with fiscal rules for SNGs as of mid-2021, up from a baseline of just 50 percent at the end of 2014.

- Government-issued regulations to implement the professionalization of managers in the civil service created a new category of public managers for both national and SNG functions, subject to merit-based recruitment and regular performance evaluations.

- The new HRM regime, aimed at increasing competitive hiring of public sector managers from 30 to 80 percent of positions, had been implemented in 50 percent of selected entities as of early 2021.
• A new PPP framework was put in place with clearer roles and responsibilities and technical criteria for preparing, evaluating, and awarding contracts.

• Since late 2017, all PPP promoters (spending units) at all levels of government have issued their Multiannual Report on PPP Investment on a yearly basis.

• The number of unsolicited PPP proposals presented for evaluation by the authorities, targeted at 88, declined from 147 in 2015 to only 32 at the end of 2017.

• By the end of 2017, no PPP contracts at any level of government could proceed to tender without a favorable opinion from the Ministry of Economy and Finance.

The new human resource management regime aimed at increasing competitive hiring of public sector managers from 30% to 80% of positions, had been implemented in 50% of selected entities as of early 2021.
BANK GROUP CONTRIBUTION

The World Bank, through the International Bank for Reconstruction and Development (IBRD), provided a loan in the amount of US$1.25 billion to finance this project.

The DPF-DDO was closely coordinated and complementary with other key WBG-financed operations. For instance, the project enhanced the ability of the International Finance Corporation (IFC) to actively participate in new PPPs, something that has been precluded in part by the excessive issuance of public guarantees. In addition, the parallel Boosting Human Capital and Productivity DPF-DDO (2016) supported measures to enhance the education policy framework to enhance skill quality; facilitate entry, operation, and exit of firms; and reduce trade transaction costs. In Lima, a key SNG, the Lima Metro Project (2015) supported Peru’s largest PPP.

PARTNERS

The main partners for this project included other multilateral development banks supporting SNGs and PPPs in Peru (namely the Inter-American Development Bank and the Development Bank of Latin America), as well as the Ministry of Economy and Finance (particularly its technical unit in charge of monitoring SNG financing), the newly established PPP unit, and the national civil service authority (SERVIR) that oversees the design and roll out of the new HRM regime.

BENEFICIARIES

The main beneficiaries of the project are the technical staff in the Ministry of Economy and Finance responsible for SNG monitoring and the staff in PPP units, which now have clearer mandates to conduct technical project evaluations and make decisions regarding financing. Other beneficiaries include staff in the civil service authority and, most importantly, civil servants and professional Peruvians who can now apply for SNG managerial positions in filled through open and competitive recruitment.
MOVING FORWARD

Given the crucial importance of SNG and PPP financing to fiscal and economic management in Peru, both areas will continue to be included in the Bank’s overall economic monitoring and as part of stand-alone analytical work. The recently prepared World Bank Policy Notes for the incoming government covered both of these issues. Ongoing dialogue with the authorities includes potential operations focused on public financial management and investment management in SNGs.
Fueling an Engine of Sustainable Growth: Agricultural Innovation in Peru

Peru strengthened its national agriculture innovation system through a combination of institutional reforms, capacity strengthening activities, and supporting investments. A demand-driven competitive grants mechanism supported 541 subprojects, generating innovations that have been adopted by nearly 32,000 farmers, boosting their incomes by an average of 34 percent. In addition, more than 75,000 training days were provided to researchers and extension professionals, and 57 agriculture-related master’s degrees, including 25 for women, were granted.
Population

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Between 2000 and 2010, Peru’s public spending on agricultural research and development averaged less than 1% of agricultural GDP, extremely low by global standards.

CHALLENGE

For a long period after its creation in 1978 with a mandate to support innovation in the agriculture sector, Peru’s National Institute for Agricultural Innovation (INIA) made limited progress. Constraints included stagnant budgets, inadequate infrastructure, constant reorganization, and a high rate of staff turnover. Operating in an uncertain and constantly shifting policy environment, INIA faced difficulties establishing coherent priorities and implementing effective programs. INIA’s chronically weak performance led to waning political support that was soon reflected in a lack of financial backing: between 2000 and 2010, Peru’s public spending on agricultural research and development averaged less than 1 percent of agricultural GDP, extremely low by global standards. The resulting lack of innovation contributed to a productivity slowdown and kept the agriculture sector from achieving the high rate of sustained growth needed to improve food security and reduce poverty in rural areas.

APPROACH

The agricultural innovation model traditionally used in Peru was linear and dominated by public agencies: public research institutes were expected to generate improved technologies that could be passed to public extension agencies for transfer to end users. The World Bank, drawing on global experience and in partnership with the Inter-American Development Bank, set out to replace the linear model with a multi-actor innovation network in which public agencies, private firms, civil society organizations, and end users could interact through iterative feedback loops, allowing innovations originating in different places to flow throughout the system in response to supply and demand forces. To facilitate the emergence of the new
multi-modal innovation network, the National Agricultural Innovation Project (known as PNIA from its name in Spanish) supported activities on several fronts. One set of activities focused on strengthening INIA as the leader of the national agricultural innovation system by renovating aging infrastructure, modernizing equipment, training staff, and reforming institutional policies and operating procedures. A second set of activities focused on building the national agricultural innovation system by establishing regional bodies and supporting the design of localized innovation agendas. A third set of activities focused on promoting innovation on the ground, most notably through a demand-driven competitive grants program that directed funding to innovation activities via 541 subprojects implemented throughout the country.

RESULTS

PNIA, implemented between 2015 and 2021, achieved the following key results.

- **Strengthening INIA’s capacity.** PNIA supported necessary legislative changes in INIA’s legal status from a public agency to a Specialized Technical Organization, paving the way for reforms in governance arrangements and management systems. In addition, infrastructure at INIA’s 13 research stations was upgraded, and laboratory facilities and equipment were modernized and upgraded.

- **Consolidating the national agriculture innovation system.** PNIA helped establish 20 agricultural innovation technical commissions and dozens of regional meetings with local partners and stakeholders during which local innovation agendas were developed. Decentralized events coordinated by PNIA promoted collaboration between key actors to generate, transfer, and adapt knowledge and technology at the regional level.

- **Financing demand-driven innovation.** PNIA supported a competitive grants program that funded subprojects in several categories, including strategic research, adaptive research, extension, seed enterprise support, and capacity building. According to the project’s external impact evaluation, strategic research subprojects resulted in the publication of 136 articles in indexed scientific journals. Meanwhile, the adaptive research, extension, and seed enterprise support subprojects boosted agricultural incomes for nearly 32,000 subproject beneficiaries by 34 percent on average, compared to a control group.

- **Training the next generation of innovators.** PNIA established a Scholarship Fund that awarded scholarships for postgraduate study, internships, and technical training. The Fund financed 82 master’s students, and while some students had to cut their programs short due to the COVID-19 pandemic, 57 received their degrees (including 25 women). The Fund also supported 255 internships (66 national and 189 international).

- **Raising awareness of the innovation agenda.** PNIA supported activities designed to raise awareness of the innovation agenda and build political support for further public financing. These included annual agriculture innovation fairs, known as AGRONOVAs, that provided venues for
hundreds of exhibitors (many of them beneficiaries of PNIA financing) to showcase their innovations before thousands of participants. The CARAL National Innovation Prizes competition attracted enormous interest and highlighted innovation efforts in the fields of agrobiodiversity, value-chain development, climate change resilience, and sustainable development. The CARAL competition attracted 169 nominations, from which 20 initiatives were selected for recognition as outstanding examples of innovation promotion.

**BANK GROUP CONTRIBUTION**

The World Bank, through the International Bank for Reconstruction and Development (IBRD), approved a loan in the amount of US$40 million to finance this project. By project closing, more than 97 percent of the IBRD loan proceeds had been disbursed.

Other support for project preparation activities came through a grant in the amount of US$350,000 financed by the Spanish Fund for Latin America (SFLAC), a trust fund established by the Spanish Ministry of Economy and Competitiveness and administered by the World Bank. SFLAC is the only region-specific trust fund program and a critical instrument of the Bank’s work in the Latin America and Caribbean region.

PARTNERS

The government of Peru provided approximately US$37.4 million in counterpart funding to finance project costs.

In addition, many partners and stakeholders contributed to PNIA’s success.

- The Ministry of Economics and Finance supported the innovation agenda at the national level.
- The Ministry of Agriculture and Irrigation supported innovation at the sectoral level.
- The National Institute for Agricultural Innovation hosted the PNIA and embraced institutional reforms, including a change in legal status.
- The UN Food and Agriculture Organization provided technical assistance.
- National Agriculture Innovation System members participated actively in the national agriculture innovation system.

Project beneficiaries (individual producers, producer organizations, agribusiness firms) also participated actively in designing and implementing subprojects, including contributing approximately US$24.1 million in cash or in kind to access subproject financing through the competitive grant windows.

It is important to note as well that PNIA was part of the Peruvian government’s larger National Innovation Program, which received parallel financing from the Inter-American Development Bank in the...
amount of US$40 million. Teams from the two banks collaborated closely throughout the preparation and implementation phases, coordinating efforts in pursuit of a common development objective.

**BENEFICIARIES**

Carmen Chavez, a veterinary student from the Amazonas Region in Peru, is one of 189 students who benefited from PNIA’s international internship program. The program sent her to Sassari University in Sardinia, Italy, where she studied improved management practices for sheep milk production. She chose the topic because she is interested in identifying intensive livestock production strategies that could help slow deforestation in the Peruvian Amazon. In the first three months, Carmen carried out field work in the Caseificio Deidda processing plant, where she learned how to make dairy products. For the final six months, she worked on the Cuscusa farm, handling, feeding, and caring for goats and sheep. Carmen says,

“Thanks to this internship, I have realized my responsibility as a professional to contribute to the development of our country and particularly my region: Amazonas.”

MOVING FORWARD

The impressive results achieved by PNIA provide compelling evidence that supporting innovation at the sectoral level can be highly effective. Sustaining the results achieved under PNIA and building on the foundation it has laid will depend on strong ownership of the project by the government of Peru and sustained political and financial support. An active debate is currently under way in Peru concerning the relative advantages and disadvantages of supporting innovation at the sectoral level versus consolidating efforts within a single, more centralized agency or program. The outcome of this debate will likely influence whether the results achieved under PNIA can be maintained.
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