



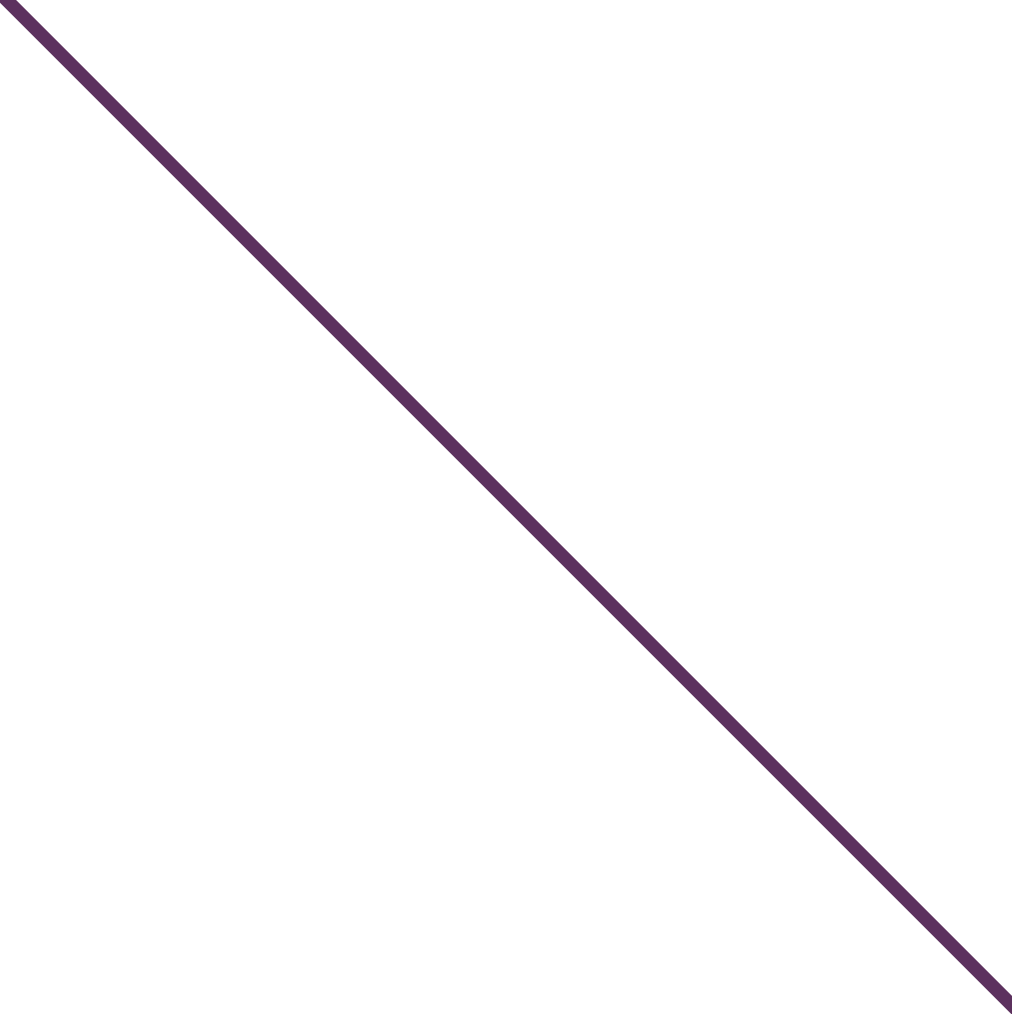
2023

ANNUAL REPORT

PUBLIC-PRIVATE INFRASTRUCTURE
ADVISORY FACILITY



PPIAF
Enabling Infrastructure Investment



PPIAF is the only global facility dedicated to strengthening the policy, regulatory, and institutional underpinnings of private sector investment in infrastructure in emerging markets and developing countries, as well as enabling finance for subnational entities. We call this the critical upstream.

While many initiatives focus on developing infrastructure projects with private sector participation, PPIAF sets the stage to make this possible by building institutions, strengthening the capacity of counterparties, and reducing policy, regulatory, and institutional risks.

Turning hundreds of thousands in grant financing into hundreds of millions in infrastructure investment—this is the role of PPIAF.

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2023

ANNUAL REPORT

PUBLIC-PRIVATE INFRASTRUCTURE
ADVISORY FACILITY

PPIAF Donor Partners



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wirtschaftliche Zusammenarbeit
und Entwicklung



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FOREWORD

A Message from the Program Manager

The need for infrastructure in development is vast, especially in developing countries. Numerous crises, including a global economic downturn, tight public budgets, climate impacts, and disasters—both natural and human-made—create an urgent need for sustainable, resilient infrastructure. As the world’s only multilateral technical assistance facility focused exclusively on enabling private investment for infrastructure development, the Public-Private Infrastructure Advisory Facility (PPIAF) has never been more relevant.

But PPIAF cannot tackle these challenges alone; partnerships are critical if we are to deliver results on the ground. PPIAF’s upstream work—addressing legislative and regulatory issues to create a better environment for public-private partnerships—only counts when it leads to private sector investments in actual infrastructure projects. To this end, we have

partnered with the Global Infrastructure Facility (GIF) and the Private Infrastructure Development Group (PIDG) to drive infrastructure development.

In FY 2023, we approved 51 activities totaling \$10.5 million across our four strategic pillars. We surpassed our target to approve 50 percent of activities with climate co-benefits, achieving 65 percent, and an overall 84 percent with top-up support from our Climate Resilience and Environmental Sustainability Technical Advisory (CREST). We are well on the way to reaching a new, ambitious target—where climate co-benefits comprise at least 70 percent of our portfolio. Already, 19 percent of approvals include climate co-benefits.

Going forward, PPIAF will focus on mainstreaming climate across its portfolio. We have already made progress in this regard—a key highlight is our

expanded work on biodiversity and ecosystem services through the new Adaptation Finance and Biodiversity program approved by our donors for FY 2024. Mainstreaming biodiversity in infrastructure development is critical for long-term sustainability. Under the program, we are developing tools and guidance to help policymakers, investors, and project developers integrate nature-based solutions and enhance ecosystem services in infrastructure investments.

We also continued our strong presence in Africa, where 35 percent of our newly approved activities are underway. An increased focus on Southeast Asia has resulted in a growth in our engagement in the East Asia Pacific region to 22 percent. Across all regions, over 55 percent of our activities took a programmatic approach for greater development impact.

PPIAF has also made significant strides in mobilizing private investment. We assisted governments in improving policies and regulations while building the institutional capacity critical for preparing projects with private participation in infrastructure (PPI). Downstream, initiatives like the City Creditworthiness Program are helping subnational entities become investor-ready and access commercial finance.

PPIAF played a pivotal role in catalyzing substantial private capital for infrastructure projects through its upstream support to four transactions, two of which

reached financial close, mobilizing \$1.76 billion in private capital—275 times PPIAF’s initial investment this year. In the last six years, PPIAF activities catalyzed over \$11 billion in private investment.

To maximize our impact, we must continue to scale up. The wide-ranging expertise of PPIAF and its partners can unlock private sector financing to address the world’s most pressing infrastructure challenges. But to do so, we need more resources. With strong donor support, PPIAF is well positioned to take on infrastructure development challenges.

We have built a strong foundation over the past two decades. Now is the time to reinforce and expand our efforts to drive sustainable, equitable, and resilient infrastructure development. On that note, I am pleased to share with you PPIAF’s annual report for FY23, highlighting our key achievements. Through our partnerships and with the invaluable support from our donors, we are making progress toward our mission to catalyze private investment for infrastructure in emerging markets. I thank our donors and partners for their continued collaboration.



Jane Jamieson

A Message from One of our Donors GERMANY

We live in a world where 75 percent of the infrastructure that will be in place by 2050 has yet to be built. This provides us with a range of opportunities to plan new infrastructure that is accessible, inclusive, affordable, efficient, and sustainable. High-quality infrastructure is key for our goal of a socially and ecologically just economic transformation. At the same time, the world faces numerous crises: the consequences of the COVID-19 pandemic, climate change, Russia's invasion of Ukraine, inflation, poverty and economic inequality, and the substantial loss of biodiversity. In particular, the economic impact of these multiple crises threatens much of the development progress made in recent years.

What insights can these concurrent crises offer us for the infrastructure of tomorrow?

Just as multifaceted crises are intertwined, infrastructure operates as an interconnected entity that transcends the boundaries of individual sectors or specific lifecycle phases. It extends beyond individual physical assets to encompass intangible services, regulations, and policies. When planning, financing, building, and operating this complex infrastructure, we therefore require a framework that embraces all elements as integral components of a larger, unified whole. If we don't, one faulty or missing part in the infrastructure system (for example, unsustainable construction practices, non-transparent

procurement guidelines, or weak private sector engagement policies) will negatively affect all the others.

Taking that systemic understanding of infrastructure as a starting point, the G7 launched the Partnership for Global Infrastructure and Investment (PGII) during the 2022 G7 Elmau Summit. The PGII represents a collective commitment by the G7 countries to strengthen both public and private investments in sustainable, inclusive, resilient, and high-quality infrastructure. Through this collaborative endeavor, the G7 seeks to mobilize \$600 billion by 2027 with the aim of bridging the investment gap in infrastructure across partner countries.

The PGII objectives not only include selected flagship projects but also prioritize long-term sustainable development through policies and other upstream support, such as promoting the adoption of standards, bolstering local capacities, and collaborating with partner governments to establish project pipelines. This stems from the recognition that creating an enabling environment for infrastructure in our partner countries is vital. The PGII collaborates with governments, the private sector, multilateral development banks, and financial institutions from the G7 and like-minded partners to deliver top-tier infrastructure that aligns with the G20 Principles for Quality Infrastructure Investment (QII).



We take pride in PPIAF's achievements to date. The German Federal Ministry for Economic Cooperation and Development has long supported PPIAF's efforts to build robust institutions for infrastructure planning and operation and mobilize private sector involvement worldwide. Since its inception, PPIAF has undertaken over 1,727 activities in 130 countries. Its enduring history and consistent funding from donors like Germany underscore the success of PPIAF's ongoing work. PPIAF deployed \$68 million across more than 280 activities between 2018 and 2022, mobilizing \$9.4 billion for national and subnational infrastructure projects. The German federal government recently provided PPIAF €3 million and an additional €3 million as part of its PGII contributions.

By adopting a demand-driven approach, PPIAF plays a vital role in laying the foundations for high-quality infrastructure that can drive prosperity as well as economic transformation in partner countries. With Germany's additional funds, PPIAF will identify existing infrastructure gaps and help create favorable conditions in a selected number of PGII partner countries. In the next two years, PPIAF will use some of these funds for the Africa Critical Upstream Initiative (ACUI). This initiative aims to identify key barriers to sustainable infrastructure development. It will also propose strategies to overcome these barriers in African partner countries. The ACUI will not only analyze the challenges faced by partner

governments but will also enhance capacity building for implementing sustainable infrastructure projects. This will represent an important building block of PGII engagement in these countries.

PPIAF has consistently taken a cooperative approach with donors as well as with other multilateral and bilateral infrastructure partners. We are pleased to observe PPIAF's ongoing collaboration with the GIF and the International Finance Corporation (IFC). This collaboration in different countries and sectors or on knowledge products such as the recent Climate Toolkits for Infrastructure PPPs ensures that our efforts are aligned for the benefit of partner countries. We understand that progress can only be achieved by simultaneously addressing all components of the broader infrastructure system and look forward to continued close collaboration with PPIAF.

Dirk Meyer is Director General of the Federal Ministry for Economic Cooperation and Development (BMZ) of Germany, responsible for multilateral development policy, transformation, and climate.



A Message from One of our Beneficiaries

THE GDPPP OF CAMBODIA

Over the past decade, Cambodia has made remarkable progress in establishing an environment conducive to PPPs, which play an essential role in fostering contributions from the private sector to infrastructure development. In particular, the PPP Law approved on November 18, 2021, provides private investors with sufficient incentives, protection, predictability, and new opportunities to participate in infrastructure projects.

Additionally, the government of Cambodia has successfully developed a set of standard operating procedures for PPP projects and other relevant guidelines to increase transparency and ensure the timely execution of PPPs. These detail the implementation process of PPP projects throughout the whole project cycle, from the project identification stage through to the implementation and management of contracts. Along with policy formulation and the legal and

regulatory framework, clear institutional arrangements have also been established to lead and manage the PPP mechanism in the country, including proposing policies, reviewing and managing PPP projects, as well as monitoring fiscal commitments and contingent liabilities arising from projects.

The success of this conducive enabling environment is reflected in the recently completed Phnom-Penh-Sihanoukville Expressway Project that connects the capital city of Phnom Penh to the deep-sea port city of Sihanoukville. This expressway project—the first in the country—contributes to Cambodia’s economic development by facilitating transport, logistics, and tourism. However, to maintain this success and support other PPP projects that have recently emerged in a manner that ensures fiscal sustainability, the government has prioritized strengthening its capacity and regulatory framework

to assess, analyze, and monitor the fiscal implications and associated risks arising from PPP projects. This priority will be put into action through the development of tools and a framework to collect relevant data and information, as well as through capacity building.

To obtain an in-depth understanding of those fiscal risks that might affect current and prospective projects, the government received technical assistance from the World Bank and PPIAF. Through various workshops and capacity building activities, the government, particularly the General Department of Public-Private Partnerships (GDPPP) of the Ministry of Economy and Finance, had the opportunity to strengthen in-house institutional capacity and gain a better overview of how to strengthen the current framework to manage PPP-related fiscal risks. A key method to managing these risks is the application of analytical tools to assess the potential fiscal costs and risks arising from PPP projects. With this knowledge, the government is now collecting data from ongoing PPP projects from relevant institutions to begin the digitalization process. This supports the monitoring of potential fiscal risks arising from these existing projects. The training provided by the World Bank and PPIAF has proved invaluable and has helped the government develop a better understanding of international best practices and new strategies to monitor, assess, and manage fiscal risks. Cambodia looks forward to continued support from PPIAF, which may include an in-depth comparative study on the different types of termination payments, triggers, reasons, and rationale behind early termination, and the different methods of termination calculations based on international practices.

The continuous partnership and support from the World Bank and PPIAF have not only allowed

Cambodia to strengthen the overall PPP investment climate but also improve its PPP management capacity. The government is appreciative of the support and the continuous collaboration from the World Bank and PPIAF in strengthening the PPP enabling environment, including providing inputs to and guidance on the PPP Law, the SOP documents, as well as other guidelines relating to fiscal risk management. In addition, PPIAF has also provided technical support to the Ministry of Transport and Public Works (MPWT) in the transport sector with studies on the potential for increasing the participation of the private sector in the roads sector, including the use of Output and Performance-Based Road Contracts (OPBRC), and exploring climate finance opportunities. Consequently, MPWT successfully tendered three packages totaling \$52 million under the World Bank-financed Road Connectivity Improvement Project for the improvement and maintenance of 132 kilometers of national and provincial roads through OPBRC.

The government looks forward to future collaborative and learning opportunities with the World Bank and PPIAF. We remain ambitious in the pursuit of creating a robust and attractive enabling environment for PPPs in Cambodia, especially in the realm of public infrastructure and service delivery. With the current positive economic outlook, there is no doubt that this objective can be achieved in the foreseeable future.

H.E. Om Macthearith is Director General of the General Department of PPP (GDPPP) of the Ministry of Economy and Finance of Cambodia.



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**FY23
HIGHLIGHTS**

THE FIRST YEAR OF PPIAF'S RENEW STRATEGY

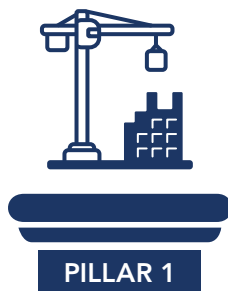
This year marks the launch of PPIAF's five-year Renew Strategy for FY23–FY27, which focuses on accelerating universal access to climate-smart, resilient, affordable, and inclusive infrastructure through increased private sector participation (PSP). The strategy comes at a critical time when the world continues to face unparalleled challenges. These include Russia's invasion of Ukraine, the global energy crisis, the mounting impacts of climate change, and the ongoing recovery from the COVID-19 pandemic. The World Bank recently estimated that low- and middle-income countries need to invest \$1.6 trillion annually through 2030 in low-carbon, climate-resilient infrastructure—4.5 percent of their GDP.

With global crises squeezing budgets and unprecedented demand for infrastructure, participation from the private sector is essential. Governments need the private sector's financial, business, technical, and managerial resources to meet their ambitious development goals. PPIAF's strategy aims to enable more

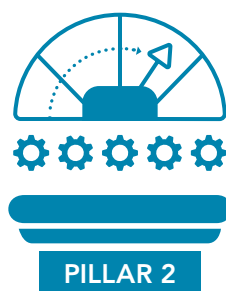
private participation in infrastructure development to help close the infrastructure gap. It focuses on addressing those most pressing challenges while driving key enablers of infrastructure progress, aligning with the World Bank's priorities, including the Evolution Roadmap and the Sustainable Development Goals (SDGs). In FY23, PPIAF successfully aligned its program around its four strategic pillars, funding 51 new activities with a total value of \$10.5 million. PPIAF also attracted significant co-funding—\$9 million from other parts of the World Bank, including the QII Partnership, the GIF, and IFC; other international financial institutions; and donor organizations.

This fiscal year, fragile and low-income countries accounted for 26 percent of PPIAF funding, and 65 percent of funded activities included climate co-benefits. To further advance our climate agenda, PPIAF allocated \$800,000 through CREST for 10 additional activities, enabling 84 percent of PPIAF activities to incorporate climate adaptation and mitigation.

PPIAF's Strategic Pillars



Improving competition, efficiency, and accountability in infrastructure markets



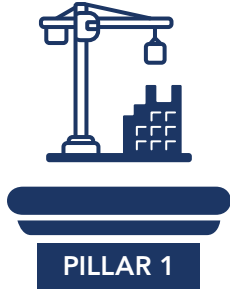
Accelerating PPI development and implementation



Reducing risk, increasing funding and financing in PPI programs



Mainstreaming climate and equity



PILLAR 1

Improving competition, efficiency, and accountability in infrastructure markets

DRIVER: Provide universal access to infrastructure and increase consumer welfare via affordability, market competition, and novel technology

Pillar 1 is driven by the need to provide universal access to infrastructure and increase consumer welfare. In this space, PPIAF seeks to achieve greater affordability through increased competition in infrastructure markets and continued adoption of technology and digitalization within network infrastructure and off-grid systems. To accomplish this, PPIAF promotes competition by offering policy and planning support to create markets and providing tools to encourage private participation, which leads to increased efficiency and affordability.

In Indonesia, PPIAF assisted in reviewing the railways sector's governance and business structure to attract PSP. PSP was also enabled in Bangladesh through PPIAF-facilitated legal and regulatory port sector reforms. PPIAF supported the government of the Lao People's Democratic Republic (PDR)

into strengthening its capacity to oversee the sustainable development of the hydropower sector, including the management and monitoring of concession agreements.

The following stories highlight activities approved, completed, and evaluated in FY23 under this pillar in greater detail. New activities in Ghana, Kazakhstan, and Mozambique are supporting the urban transport, information and communications technology (ICT), and electricity sectors. A project completed in Ukraine is enabling the government to better oversee PPPs, which will be critical for the post-war reconstruction of infrastructure. The ex-post review of an activity funded by PPIAF in 2020 highlights how Ethiopia dramatically reduced the costs of mobile internet services and greatly expanded access by enabling competition.

\$3.5M	\$4.5M	\$8M
Funds Deployed	Co-Funding Leveraged	Total Funding
17	20	11
Approved Activities	Completed Activities	Evaluated Activities

APPROVED ACTIVITY



GHANA

Mobilizing private investment to drive sustainable mobility in Kumasi

Ghana's rapid urbanization has led to mobility constraints and inadequate public transport systems in its major urban centers. Kumasi, the capital of the Ashanti region and the country's second most populated city, has a population of 3.5 million and is growing at 6 percent annually. Kumasi faces challenges like urban sprawl, increased commuting times, and lack of connectivity between low-income areas and jobs. The aging, inefficient minibus fleets of the informal transport sector, which filled service gaps left by the collapse of public operators in the 1990s, now provide unsafe, undependable transit.

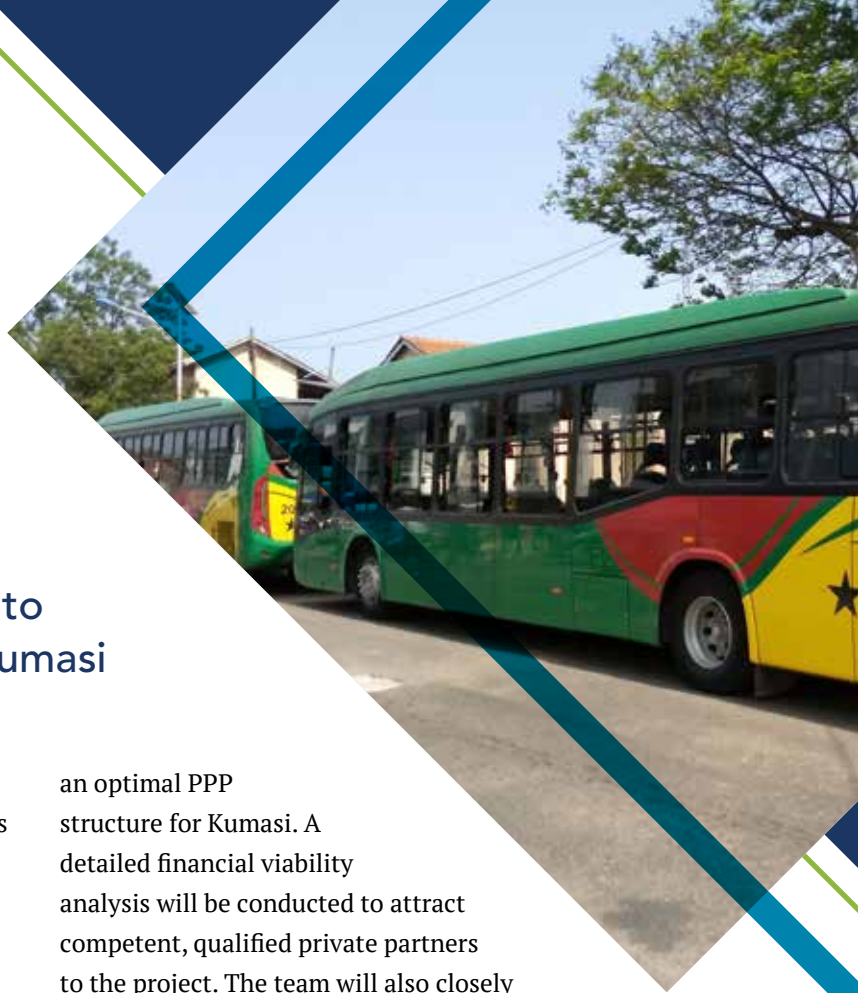
To improve mobility in Kumasi, the World Bank launched the Kumasi Urban Mobility and Accessibility Project (KUMAP) in November 2022. Aligned with Ghana's goals to reduce poverty, expand basic services, manage climate risks, and build resilience, KUMAP will support the development of modern, sustainable transport in the city. A key component of the project is a bus rapid transit (BRT) system to be delivered through PPPs.

PPIAF is supporting KUMAP with technical assistance that will mobilize private capital for KUMAP's transformational BRT initiative. With PPIAF funding, experts will thoroughly review Ghana's experience implementing transport PPPs, rigorously assess various BRT procurement models, and recommend

an optimal PPP structure for Kumasi. A detailed financial viability analysis will be conducted to attract competent, qualified private partners to the project. The team will also closely identify gaps in laws, institutions, regulations, and capacity that could hinder the implementation of complex BRT PPPs.

Beyond the analysis, PPIAF will provide hands-on inputs to strengthen the BRT business model and ensure close coordination between stakeholders. Extensive workshops will substantially build capacity in the transport agencies that are leading the implementation of KUMAP. The activity is expected to dramatically improve affordable mobility for the urban poor and significantly reduce emissions from Ghana's old, inefficient transport fleet.

This activity will demonstrate how strong public-private collaboration and climate-smart transit solutions can make urban mobility more sustainable, inclusive, and resilient. Ghana's proactive reforms and experience can then inform transport planning across Africa for years to come. With PPIAF's strategic assistance, Kumasi will serve as a model for accessible, modern public transport systems in the region.





KAZAKHSTAN

Bridging the digital divide

Kazakhstan faces significant challenges in expanding access to high-quality and affordable digital connectivity. With over 40 percent of the population in rural regions, telecom operators struggle with the high costs of deploying infrastructure across Kazakhstan's vast and sparsely populated territory. This has led to a pronounced rural-urban digital divide.

The country's institutional environment constrains competition and private investment in the sector. The telecom market is dominated by state-backed operators such as KT Corporation, which held 66 percent of the market in 2021. Additionally, Kazakhstan lacks an independent telecom regulator—the Ministry of Digital Development, Innovation and Aerospace Industry provides oversight of the sector.

To address these issues, the World Bank is launching a new project to mobilize private capital to deploy climate-smart broadband networks. The project will provide matching grants to qualified internet service providers and mobile operators to co-fund infrastructure deployments in underserved areas.

PPIAF will support this effort by informing the design of the grants scheme and conducting market outreach to the private sector. This will help maximize the impact of the World Bank project in catalyzing private investment.

In parallel, the government of Kazakhstan is working to improve international connectivity and cybersecurity through a new subsea cable linking Kazakhstan with Azerbaijan. Backed by funding from the GIF, preliminary studies and market research have been undertaken for this trans-Caspian cable project.

By boosting international capacity, this new infrastructure can enhance connectivity in Kazakhstan and reduce dependence on routes through Russia.

PPIAF and the World Bank aim to transform Kazakhstan's digital landscape through this multi-faceted engagement. By mobilizing private capital and expertise, they can help the government expand access to high-quality broadband for millions of underserved citizens. At the same time, support for emerging infrastructure like the Caspian cable will fortify Kazakhstan's long-term digital development efforts.



UKRAINE

Building government capacity to manage concession contracts

Ukraine's critical infrastructure has long faced immense challenges, which have only worsened since Russia's invasion of Ukraine. Before February 2022, Ukraine pursued an ambitious reform agenda focused on PSP in infrastructure. PPIAF provided early support to help establish Ukraine's PPP Agency and develop a pipeline of potential projects.

Two years after the Olvia and Kherson port concessions were awarded, PPIAF assisted the Ministry of Infrastructure and the PPP Agency in designing a monitoring system to oversee the concessions during the first critical years of operation. These ports have been operating under concession agreements with private partners aimed at modernizing operations through PPPs. While Russia's invasion of Ukraine has halted port activities, Ukraine has worked diligently with concessionaires and development partners to sustain these partnerships for the future.

The concession agreements laid out a framework for monitoring financial, operational, and property matters to facilitate implementation and identify issues early on. Regular meetings were held between the concessionaires, grantors, and stakeholders to review performance, address challenges, and ensure smooth operations. PPIAF's support enabled effective oversight during this startup phase, allowing productive long-term partnerships at these strategic ports. These efforts also supported IFC's work addressing technical, legal, communication, and regulatory issues.

The turmoil of Russia's invasion of Ukraine has demonstrated the value of this approach. With the Russian military targeting strategic infrastructure such as ports, the focus shifted to sustaining the concession relationships in times of crisis. PPIAF provided timely guidance on invoking Force Majeure clauses, recalculating concession payments, and extending contract timelines. This was crucial for the government to uphold concessionaire rights and obligations amidst the unrest.

Ongoing engagement with concessionaires has been critical, signaling Ukraine's commitment to restoring operations when feasible. Though physical assets require rehabilitation and commercial terms may need renegotiating, the concession relationships remain intact. The private partners and government entities continue collaborating and monitoring developments, ready to resume operations when Russia's invasion of Ukraine ends.

Ukraine has demonstrated remarkable dedication to its reform agenda. Its efforts to preserve partnerships with private port operators, with support from PPIAF and the World Bank, will be essential for recovery and building back better infrastructure. Sustaining engagement with concessionaires also sends a powerful signal—that Ukraine remains open for business, and private investment will continue driving modernization and growth when peace returns.



EVALUATED ACTIVITY

ETHIOPIA

Telecommunications reform and expanding access to mobile ICT services

Today, few countries retain a national monopoly in the telecommunications sector. Ethiopia was one of the last holdouts—as of 2018, the Ministry of Communication and IT (MCIT) had oversight over both the Ethiopian Telecommunications Agency (ETA), the regulatory authority for the sector, and Ethio Telecom, the state-run telecom operator responsible for developing, operating, and maintaining fixed, mobile, internet, and data communication services in the country.

Under the national monopoly, Ethiopia’s telecommunications sector performed poorly and regulation and oversight of the sector were minimal. Innovation was stifled, network expansion was constrained, and the scope of services offered remained limited year after year.

Although the government of Ethiopia had long maintained state ownership of enterprises in strategic sectors like telecommunications, its position changed with the appointment of Prime Minister Abiy Ahmed in May 2018. In June 2018, Prime Minister Ahmed declared that Ethiopia would liberalize its economy to spur competition in several critical sectors, including telecommunications. The main challenge for the government was transitioning from a fully government-owned and regulated telecommunications sector to a competitive, well-governed market with a legal and regulatory framework shaped by global and regional best practices.

Among the reforms planned was the establishment of an independent telecommunications regulatory agency that would “unbundle” the regulatory and

commercial responsibilities of ETA and Ethio Telecom and foster an environment that encouraged competition. To execute this strategy, the Ethiopian government requested assistance from the World Bank and PPIAF to help establish the new regulator, which allowed for the liberalization of the telecommunications sector in the country and create opportunities for competition and investment.

PPIAF, in cooperation with the GIF and IFC, helped establish the Ethiopian Communications Authority (ECA) as an independent telecommunication regulator. Their assistance included inputs to the law that established ECA in 2019, as well as a sector “white paper” that informed the sector reform on four main areas of action: 1) development of the Communications Law to establish the regulator, 2) initiation of the partial privatization of Ethio Telecom, 3) initiation of the market liberalization process and selection of the second operator, and 4) corporatization of Ethio Telecom.

PPIAF also provided capacity building for MCIT and the new regulator. Officials from Ethiopia and other African countries attended a three-day training event in Nairobi hosted by the United States Telecommunication Training Institute. The training covered the role of an independent telecommunications regulator, licensing frameworks, and regulatory best practices to encourage investment. Stakeholder consultation workshops were also held in Ethiopia to support ECA, MCIT, the Ministry of Finance, and Ethio Telecom’s move toward liberalization of the sector.

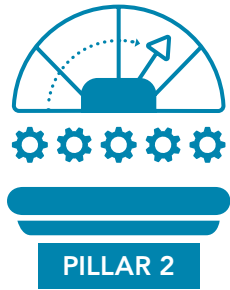
PPIAF’s support was critical for establishing ECA’s legal foundation. This led to further work in licensing

new operators under the World Bank’s \$200 million Ethiopia Digital Foundations Project, which covered ECA’s start-up costs and provided support for issuing licenses.

ECA was established under the Communications Services Proclamation No. 1148/2019, underpinning the liberalization of the telecommunications sector in Ethiopia. Since its establishment, ECA has been effective as an active, independent regulatory authority and has created opportunities for competition and investment and passed regulations on quality of service, tariffs, licensing, consumer rights and protections, and national roaming.

ECA issued its first license to a private operator in April 2021, following a competitive bidding process launched in October 2020 supported by IFC and the GIF. The license was awarded to a consortium led by Safaricom, which bid \$850 million for the license and pledged to invest \$8 billion in telecommunications infrastructure over the following 10 years. Safaricom began operating in Ethiopia in October 2022, and as of September 2023, they reportedly had 4 million subscribers; Ethio Telecom has around 70 million subscribers.

Customers have seen an increase in the quality of service because of the sector reforms. In May 2022, Ethio Telecom introduced 5G services for the first time in Addis Ababa to improve services before Safaricom entered the market. Prices for customers have since fallen. The price of unlimited mobile internet in March 2023 was about \$19 per month, whereas previously, it had been as high as \$100 per month.



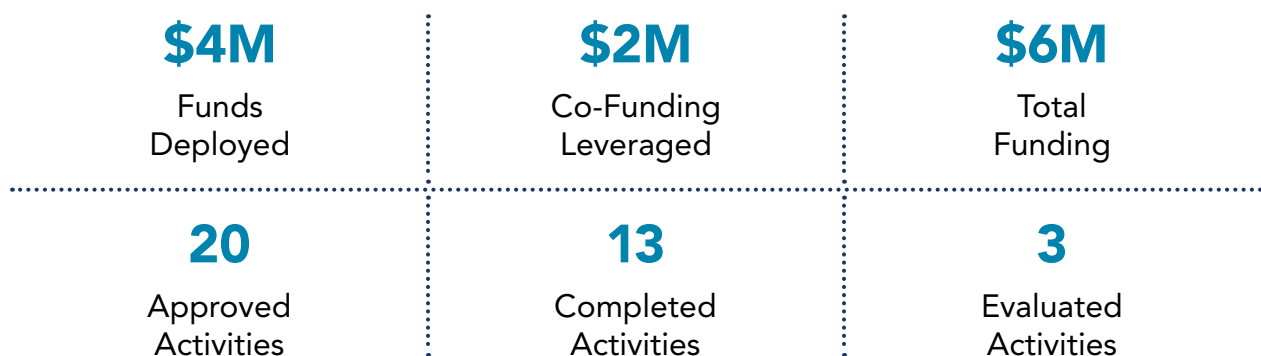
PILLAR 2

Accelerating PPI development and implementation

DRIVER: Accelerate the “conversion rate” of initiatives into capital mobilization and better infrastructure services by tailoring support to build frameworks, capacity, and institutions to develop PPP projects

Activities under Pillar 2 aim to mobilize capital and improve infrastructure services by providing tailored support that builds and strengthens PPP frameworks, capacity, and institutions. This is an ongoing process. As most emerging economies have now adopted PPP frameworks, PPIAF will continue building capacity and helping PPP frameworks mature as markets evolve, especially in frontier markets. This will help client countries transition from establishing PPP frameworks to realizing fully operationalized PPP programs. In India, for example, PPIAF will develop PPP frameworks and strengthen the enabling environment for renewable energy participation.

In the Philippines and Kenya, PPIAF is improving regulatory frameworks and developing local PPP programs. In Tanzania, we are strengthening PPP institutions and supporting project preparation. In Senegal, PPIAF is working on getting their newly established PPP fund off the ground. And in Timor-Leste, PPIAF is assisting in the preparation of a decree that will allow for a PPP concession for the expansion of Dili Airport. The following stories illustrate new activities in Indonesia (water and sanitation), Ecuador (waste management), Ghana (a completed project to build PPP capacity), and the ex-post review of a regional activity funded in 2020 aiming to leverage fiber optic capacity in West Africa.





INDONESIA

Engaging the private sector for irrigation

The government of Indonesia wants to improve the quality and coverage of irrigation services but lacks the capacity and resources to sufficiently invest in and manage irrigation infrastructure. Engaging the private sector through PPPs could leverage external financing and expertise to enhance irrigation system operations. The government is planning to outsource irrigation operations and management to private operators. A new PPIAF-funded activity is supporting the Ministry of Public Works and Housing (MPWH) in developing a PPP transaction model to do that. This activity is being complemented by a grant from the QII Partnership that leverages technology to improve governance and performance management.

The model will be piloted in reservoir-fed irrigation systems and allow private operators to undertake commercial ventures alongside irrigation, for example, fisheries, hydropower, solar power, or tourism. This integrated approach can potentially enhance financial viability and attract private sector interest. PPIAF's role includes:

- **Defining the PPP transaction model** for outsourcing performance-based irrigation complemented by associated commercial services. PPIAF will ensure alignment with Indonesian legislation and undertake market sounding to get perspectives from the private

sector. The roles of all stakeholders, including the private operator, MPWH, and farmers, will be clarified.

- **Proposing criteria for MPWH to identify suitable locations** based on financial, technical, climate, and other factors. PPIAF will synthesize inputs from the private sector in developing the proposed criteria.
- **Developing a financial model** by analyzing costs, revenues, and profit-sharing arrangements to demonstrate commercial viability. Sensitivities and risk allocation will also be assessed.

The transaction model will provide a framework that will allow MPWH to engage a transaction advisor and structure the PPP. PPIAF's advisory support, market intelligence, and financial analysis will inform the model design and pilot selection. This innovative approach can improve irrigation services through performance-based contracts while creating commercial opportunities and benefits for local communities.

The integrated model also leverages Indonesia's reservoirs and irrigation assets to attract private expertise and investment. With PPIAF assistance, MPWH can develop new models for using PPPs to sustainably manage water resources and develop inclusive agriculture.





ECUADOR

Beyond the landfills: A vision for sustainable waste management

Ecuador's waste management sector faces major challenges—with only 6 percent of waste being recycled and only 54 percent of municipalities using adequate disposal sites. Reliance on illegal dumps and inefficient infrastructure contributes to greenhouse gas (GHG) emissions, environmental damage, and lost economic opportunities.

As waste management falls under municipal jurisdiction, improving the sector requires enhanced local capacity and financing. Although Ecuador has a developed framework for private participation in the delivery of public services, including PPPs and concessions, the mechanism has yet to be fully adopted by subnational governments.

To tackle these issues, PPIAF and the World Bank are supporting Ecuador in developing a roadmap for regional solid waste management PPPs. This activity aims to provide a knowledge product that guides subnational governments in developing and implementing regional waste management services encompassing collection, disposal, recycling, and treatment.

The roadmap will provide legal, institutional, and economic analyses to guide subnational governments in crafting bankable regional waste PPPs. By leveraging private expertise and investment, these PPPs can introduce cleaner technologies, formalize recycling, improve climate resilience, and drive service efficiencies.

The roadmap will position Ecuador to capture more emissions from landfills and enable it to attract private sector investors as it pursues this goal. Beyond reducing harmful emissions, implementing well-structured PPPs and concessions will contribute to the dissemination of global standards and include recycling facilities that reduce pollution and offer improved employment opportunities for women.

Ecuador's Guayas region is a promising early partner, having expressed interest in piloting a regional waste PPP. As the country's largest metropolitan area, Guayas offers an ideal proving ground for demonstrating the potential of the PPP model in the solid waste management sector. Lessons from this effort can then inform similar initiatives across Ecuador.

COMPLETED ACTIVITY



GHANA

Operationalizing PPP program support

Recognizing the private sector's vital role in delivering critical infrastructure and vital services, the government of Ghana has taken steps to develop its PPP program. In 2011, it laid the groundwork by developing a PPP policy. Further steps included establishing sector-specific public investment units to appraise PPP projects, passing the 2020 PPP Law to provide a robust legal framework for the PPP program, and establishing an institutional structure for PPPs.

In support of the country's infrastructure plan and to effectively implement Ghana's PPP program, the government requested PPIAF's support to systematically operationalize the new PPP Law and develop a strategy in line with the country's Infrastructure Plan. Specifically, it needed assistance to prepare PPP regulations supporting the new law, build a sound pipeline of robust projects for PPP financing, and strengthen capacity for public entities to deliver PPPs.

PPIAF provided hands-on support to achieve several critical steps. These included supporting the development of instructions for Ghana's PPP regulations, developing a strategic plan detailing the investment

needs and public support required for 16 priority projects, providing training, recommending capacity building requirements, and incorporating guidance from the Climate Toolkit for Infrastructure PPPs into PPP regulations to ensure alignment with national and international climate commitments.

In addition, PPIAF worked with Ghana's PPP Unit to develop wider PPP ecosystem improvements, including the preparation of PPP guidelines, a framework for the management of fiscal commitments and contingent liabilities, and implementation guidelines for the Project Development Facility (PDF) and Viability Gap Facility (VGF).

Given Ghana's constrained fiscal space, projects with minimal viability gap requirements will be prioritized. Smaller projects could be bundled into larger packages to boost investor interest. Furthermore, the government may need to assess its capacity to support publicly funded projects; alternative financing sources may be required. Market sounding can help assess private sector appetite. Incorporating climate adaptation and resilience into infrastructure investments will also be critical.



EVALUATED ACTIVITY

WEST AFRICA

Leveraging fiber optic capacity through PPPs

Access to affordable and reliable internet connectivity remains a persistent challenge across many countries in West Africa. In Mali, Mauritania, and Senegal, the vast fiber optic network laid alongside hydropower infrastructure represented a major opportunity to bridge this digital divide. However, excessive regulations prevented fiber optic capacity from being leveraged to its full potential.

Recognizing this untapped resource, in 2014 PPIAF provided targeted support to OMVS, the regional organization overseeing the hydropower and fiber optic assets, and Société de Gestion de l'Énergie

de Manantali (SOGEM), which provides electricity, irrigation, and flood control for Mali, Senegal, and Mauritania. The initial assistance identified models to commercialize excess fiber optic capacity on OMVS's network through PPPs.

Subsequent PPIAF support in 2016 helped OMVS and SOGEM act on these recommendations. PPIAF recommended designing and structuring an innovative PPP concession to sell unused fiber capacity to a private wholesale operator. This aimed to boost affordable, regional connectivity and internet access, especially in rural communities.

PPIAF provided capacity building and international best practices that enabled the client to draft international tender documents, concession contracts, and regulatory approvals to pave the way for the resale of excess capacity of the fiber optic network. The project team also assisted with capacity building and knowledge transfer.

These efforts culminated in a successful open competitive tender in late 2020, awarding a 15-year PPP concession to a consortium with Senegal's Sonatel, a telecommunications company, and Mali's Envol Technologies, an IT firm. The partnership established the wholesale operator, Ikasira, to commercialize excess fiber capacity across borders.

This PPP is expected to unleash up to €33 million in cumulative revenues over 15 years, enabling further investments in the regional power grid while expanding internet access. The additional broadband capacity also promises to drive digital innovation and provide vital connectivity for businesses, government services, and citizens.

By designing a tailored PPP solution, PPIAF helped overcome regulatory hurdles to leverage idle infrastructure assets that can bridge connectivity gaps in OMVS member countries. This exemplifies PPIAF's role as an effective facilitator, providing just-in-time expertise to seize opportunities for high-impact, sustainable project development.

This progress is built on years of collaboration with Economic Community of West African States (ECOWAS) and its entities as well as other West African regional institutions, such as OMVS, OMVG, and UEMOA in the transport, energy, and telecom sectors. PPIAF enabled client countries to adopt PPP models that align incentives and tap private sector efficiencies. Broadband expansion will support more equitable access to the digital economy across borders, empowering rural communities. It also offers vital support for post-pandemic recovery efforts in the region. This creative reuse of available resources demonstrates the power of targeted reforms and partnerships to drive sustainable development.



PILLAR 3

Reducing risk, increasing funding, and financing in PPI programs

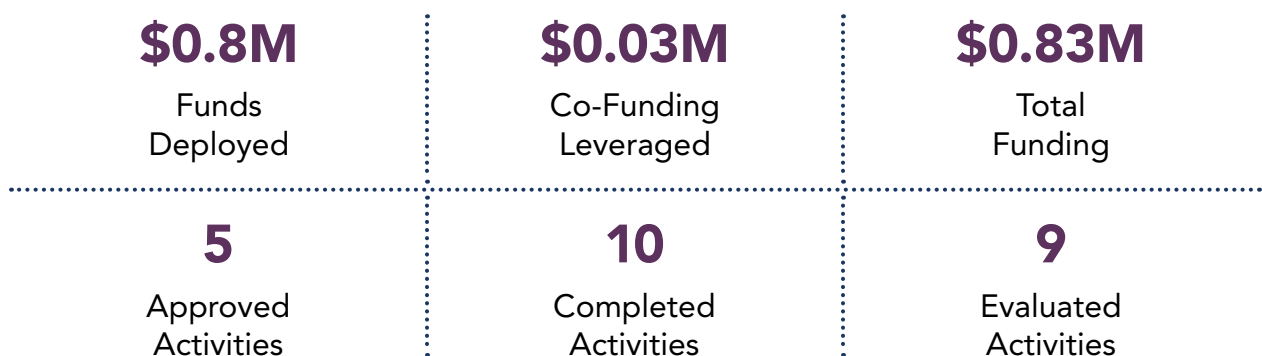
DRIVER: Address risks arising from high debt burdens and low creditworthiness of public contracting parties, diversifying sources of funding and financing for infrastructure services, improving SOE and municipal creditworthiness, and developing long-term, local currency financing

This pillar complements Pillar II by addressing risks from high debt burdens and low public creditworthiness while mobilizing new funding and financing. PPIAF supports PPP debt sustainability by providing guidance throughout the project cycle, the development of sustainable long-term, local currency financing, and builds capacity on available financing instruments and novel funding sources. Strengthening state-owned enterprises (SOEs) and subnational governments will be critical for achieving financial equilibrium.

Under this pillar, PPIAF continues assisting SOEs and subnational governments to improve creditworthiness through reforms, governance, investment planning, debt management, and, where needed, asset recycling and monetization. For example,

PPIAF is helping Jordan’s Greater Amman Municipality assess financial sustainability as it takes on more PPPs. In an environment of fiscal constraint, PPIAF is mobilizing innovative financing approaches such as land value capture for renewable energy in India. In Kenya, it is supporting the development of viability gap and contingent liability funds to more effectively use public funds to leverage commercial finance.

The following stories illustrate how new PPIAF activities support public land management in Pakistan and operationalize the PPP Project Facilitation Fund established under the 2021 PPP Law in Kenya. In Cambodia, an activity completed in FY23 is addressing PPP fiscal risk, while an evaluation of an activity in Angola shows PPIAF’s impact on mobilizing finance in the water sector.





APPROVED ACTIVITY

PAKISTAN

Unlocking the potential of public assets in Khyber Pakhtunkhwa

Effective public land management is critical in rapidly urbanizing Pakistan. Public land stocks offer key sources of land for planning green, livable cities and mobilizing financing for infrastructure amidst high-density development.

The government of Khyber Pakhtunkhwa has been discussing modernizing land administration with the World Bank since 2019. Despite postponing the land program due to floods, the World Bank is implementing an initiative that provides analytical and technical assistance on revenue generation.

The World Bank's initiative aims to review land administration and public asset management in Khyber Pakhtunkhwa, focused on increasing revenue. It encompasses a revenue systems analysis, a public asset management assessment, and the examination of land administration and geospatial frameworks. PPIAF funding specifically supports the public asset management component.

This activity promotes policies, institutions, and models for efficiently using, managing, and monetizing public assets in Khyber Pakhtunkhwa. Success requires clear policies, inventories, institutions, business models, governance, reporting, and performance monitoring. PPIAF will support an assessment and recommendations for improving policies, records, inventorying, management, monetization, and operations for public assets. It will also develop a comprehensive modernization plan to enhance public asset management and unlock access to land. Success could lead to similar engagements across South Asia.

Enhanced public asset management in Khyber Pakhtunkhwa can unlock access to land for development, attract PSP, and mobilize financing for provincial growth and climate resilience. This PPIAF-supported activity promotes improved policies and modern systems for strategically leveraging public assets.



KENYA

Innovative approaches to bridge the infrastructure gap

Kenya aims to transform its infrastructure landscape by 2030 as outlined in its Vision 2030 development plan. PPPs are a key mechanism for closing the estimated \$2.1 billion annual infrastructure financing gap. To strengthen PPPs in Kenya, the World Bank has provided assistance to Kenya's PPP Directorate through its Infrastructure Finance and Public-Private Partnership Project. PPIAF has contributed by supporting the government's institutional and technical capabilities through technical assistance.

Recent progress includes establishing the PPP Project Facilitation Fund (PFF) under the 2021 PPP Act to support the preparation and implementation of PPP projects in Kenya. The PFF contains two windows—the viability gap funding (VGF), which helps bridge the financing gap between the cost of PPP projects and the expected return by the private sector, and the contingent liabilities (CL) window to manage contingent liabilities that may emerge from PPP projects. The government expressed its commitment to fully operationalize the PFF.

PPIAF is providing targeted support by reviewing relevant PPP laws and regulations and consulting with stakeholders such as the National Treasury, the Public Debt Management Office, and contracting authorities. The aim is to understand VGF and CL expectations and align with international best practices. Additionally, PPIAF is supporting the Kenya PPP Unit in disclosing climate-related risks

to develop the final strategic business plans for each window.

The outcome will be strategic business plans enabling the PPP Directorate to operationalize the VGF and CL windows of the PFF. This will allow the effective allocation of resources for the specific purposes of VGF and CL. Operationalizing the funding windows will also boost private investment confidence and participation through proactive disclosure of climate risks.

PPIAF's assistance builds on years of collaboration with Kenya's PPP Directorate to establish robust capabilities and sound regulatory frameworks. Its support of strategic planning and climate integration will activate and optimize these instruments.

With targeted expertise in operationalizing innovative PPP financing tools, PPIAF's work is providing Kenya with the building blocks it needs for sustainable infrastructure development. Mobilizing private investment through PPPs will be crucial for Kenya to deliver Vision 2030. Operationalizing the VGF and CL windows of the PPP PFF is crucial for enhancing access to improved infrastructure services. This is particularly important for the increasing number of social sector PPP proposals, such as student accommodation, water treatment, and waste management, which have risk/return profiles less attractive to private investors.

APPROVED ACTIVITY



CAMBODIA

Strengthening PPP fiscal risk management

PPPs are seen as an important tool to help meet infrastructure investment needs in Cambodia. However, PPPs can also create substantial fiscal commitments and contingent liabilities for governments. Effective monitoring and management of these fiscal risks is therefore critical. The Ministry of Economy and Finance and the General Department of Public-Private Partnerships (GDPPP) aim to strengthen their capacity to better manage PPP fiscal risks. PPIAF is providing targeted support to help agencies properly assess, monitor, forecast, and report on fiscal exposures from PPPs, in alignment with broader fiscal risk management. Key activities include advanced PPP Fiscal Risk Assessment Model (PFRAM) training for GDPPP staff and case studies.

Additional support will develop a PPP reporting and disclosure framework coordinated with the public fiscal risk framework. Recommendations

will be provided on establishing a PPP project database to collect data for fiscal risk management. Workshops will also build capacity on PPP contingent liabilities.

The desired outcome is for GDPPP staff to have the skills to interpret PFRAM results and integrate them into overall government fiscal risk monitoring. Further goals are for GDPPP to implement guidelines for PPP reporting and disclosure and establish a PPP database within 12 months of the PPIAF support completion.

With strengthened capacities to assess and manage fiscal commitments from PPPs, Cambodia will be better equipped to strategically leverage PPPs for sustainable infrastructure development. PPIAF's targeted assistance facilitates the prudent use of scarce public resources and builds the foundation for responsible PPP implementation.



EVALUATED ACTIVITY

ANGOLA

Unlocking financing for water relief

Luanda, the rapidly growing capital of Angola, has seen its population grow by 4.5 percent annually, putting immense strain on its water infrastructure. In 2016, only 59 percent of Luanda's over 5 million residents had access to piped water, and 25 percent relied upon makeshift delivery by inefficient and costly tanker trucks to meet basic needs.

Angola's state-owned water utility, EPAL, was not equipped to address these issues financially or operationally. After years of low tariffs and poor collections, EPAL became dependent on heavy subsidies. Excessive water losses neared 50 percent, while breakdowns and intermittent service were routine, requiring rationing in many neighborhoods.

The human toll of the water crisis was significant. Many citizens had to spend hours each day collecting

water, which took time away from work and school. Contaminated water from tanker trucks posed health risks, especially for children. The congestion caused by roving tanker trucks further choked Luanda's already overburdened roads.

Recognizing the urgent water crisis, Angola's 2018–2022 National Development Plan prioritized upgrading the capital's decrepit water infrastructure. The ambitious Bitá Water Project was launched to construct a new treatment plant, transmission mains, reservoirs, and distribution centers. Upon completion, 2.5 million Luandans would benefit from reliable, affordable piped water.

However, the project's \$1.1 billion price tag exceeded public resources. After the 2014 oil crash, Angola's finances were severely constrained. Commercial

partners would be essential to finance the project, but Angola had limited experience structuring complex private infrastructure deals.

To address these challenges, the government requested assistance from the World Bank to develop the Bitá Water Project as a PPP. The Bank saw immense potential to demonstrate how private finance could be catalyzed to upgrade essential infrastructure.

Significant due diligence was a required first step to assess whether EPAL could support substantial commercial debt despite its financial difficulties. And bankable contracts had to balance public stewardship with private sector discipline appropriately.

Here, PPIAF played an instrumental role in laying the groundwork for mobilizing commercial finance. PPIAF supported vital diagnostic work by the World Bank to better understand the technical and financial challenges faced by EPAL. This evidence would prove pivotal in designing a sustainable solution.

PPIAF's analysis revealed that EPAL's shortfalls resulted not from insufficient revenue, but from operational inefficiencies. Most glaring was EPAL's failure to adequately meter, bill, or collect customer payments. Records were patchy at best, while enforcement was lax.

Physical water losses exceeded 50 percent due to damaged and leaking pipes. Poor maintenance led to intermittent supply, requiring rationing. Weak commercial management prevented EPAL from recovering its actual costs or financing investments.

PPIAF also assessed the preliminary Engineering, Procurement and Construction (EPC) contracts for Bitá signed between EPAL and contractors. The terms were grossly imbalanced, allocating excessive construction risk to EPAL.

These evidence-based findings fundamentally shaped the Bank's approach. It was clear EPAL first needed commercialization before assuming substantial debt. A Performance Improvement Plan was designed to curb water losses, enhance metering and billing, improve service quality, and optimize staffing.

The EPC contracts were renegotiated to enable EPAL to share risks with contractors. Only then was EPAL's creditworthiness enhanced enough to mobilize commercial finance.

In 2019, IBRD approved a partial risk guarantee of \$500 million, which backed a commercial loan of \$910 million for the \$1.1 billion Bitá Water Project. This pioneering deal was the Bank's first guarantee in the water sector and demonstrated the power of PPPs to bridge funding gaps for sustainable infrastructure.

Ongoing engagement supports EPAL's turnaround under the performance plan. Metering and bill collection have advanced considerably, reducing non-technical losses by 25 percent between 2018 and 2021. Water sales revenues rose to 7 percent, and operating margins nearly doubled.

With improved cost recovery, EPAL was able to meet its financial obligations under the Bitá deal. Construction has begun on the pipeline and distribution centers of the Kwanza River intake. On completion in 2025, 2.5 million Luandans will benefit from piped water connections.

The Bitá Water Project showcases how innovative project structuring can unlock private finance. EPAL's commercialization and enhanced creditworthiness were prerequisites to attract commercial partners and mitigate risks. The IBRD guarantee proved pivotal in bridging the viability gap.



PILLAR 4

Mainstreaming climate and equity

DRIVER: Dramatically increase climate adaptation, climate mitigation, biodiversity protection, and gender equity in privately delivered infrastructure

This pillar addresses the urgent need to address climate adaptation, mitigation, biodiversity protection, and gender equity in infrastructure developed by the private sector, particularly in fragile states. Key trends show bankability will be increasingly defined by resilience and sustainability. In line with increasing efforts towards building a livable planet, biodiversity considerations are also becoming increasingly key to bankability.

PPIAF will accelerate mainstreaming climate, adaptation, and biodiversity in its portfolio, building on the impact of activities funded through CREST, a special technical assistance funding window offered by PPIAF to support integrating climate risk management and environmental sustainability into infrastructure PPPs. This fiscal year, 65 percent of PPIAF-approved activities had climate co-benefits. PPIAF allocated \$800,000 through CREST to incorporate climate adaptation and mitigation in the remaining eligible activities and, as a result, climatized 84 percent of its portfolio. Collaboration with industry will be imperative for exploring biodiversity, sustainability, resilience, and financing standards. This pillar is cross-cutting as climate and gender continue to be mainstreamed across the entire PPIAF portfolio, enabling it to innovate at the forefront of climate and gender in infrastructure.

In addition to this mainstreaming approach, PPIAF targets interventions that push the boundaries of climate and gender in private infrastructure development. For example, in Vietnam, PPIAF will support the implementation of the low carbon financing program that will allow a reduction of carbon emissions and cost of operations for Ho Chi Minh City and leverage voluntary carbon markets. In Ghana, PPIAF will support building government officials' capacity to help them monitor their first non-revenue water performance-based contract. In Indonesia, PPIAF will help PT Perusahaan Listrik Negara (PLN, the national energy utility) develop environmental, social, governance, and green financing frameworks, as well as corporate policies, targets, guidelines, and processes. This will enable the company to raise market-based green financing for required investments to achieve Indonesia's net-zero target by 2060 or earlier.

The following stories demonstrate PPIAF's approach in this space. New activities address water loss in Jamaica, biodiversity protection and wastewater management in Bangladesh, and the environmental impact of maritime trade. A completed project is enabling renewable energy to be deployed in the Pacific region. On the climate and gender cross-cutting front, one activity is providing governments with tools to develop climate PPPs, while another showcases PPIAF's approach to gender considerations in the urban transportation sector.

\$2.2M Funds Deployed	\$2.5M Co-Funding Leveraged	\$4.7M Total Funding
9 Approved Activities	16 Completed Activities	2 Evaluated Activities



STEERING MARITIME TRADE

Towards a greener horizon

The oceans have long served as the main pathway for global trade, with up to 90 percent of goods moving by ship. However, shipping generates substantial GHG emissions—if it were a country, it would be the sixth biggest polluter on the planet.

Without action, the situation will only get worse. By 2050, GHG emissions by the shipping industry could grow as high as 130 percent from 2008 levels.

In 2023, the members of the International Maritime Organization, which oversees global shipping, unanimously agreed that the industry should aim for net-zero emissions by 2050. By 2030, 5–10 percent of the energy mix should be made up of fuel and technologies that produce zero or near-zero emissions. Furthermore, the strategy calls for implementing GHG fuel standards and pricing mechanisms by 2027.

Green ammonia and green hydrogen could offer a solution to the industry’s transition to net zero. These are produced using renewable energy sources, replacing carbon-intensive methods, resulting in minimal or zero GHG emissions. However, market-based mechanisms would be required to support the adoption of these fuels. In FY23, PPIAF provided financing to help Colombia, Morocco, and South Africa conduct fuel and port assessments and develop a roadmap for reaching net-zero emissions.

On a global scale, the activities support improvements to the Port Reform Toolkit. These provide guidance to governments and port authorities to ensure that port infrastructure modernization furthers net-zero commitments while meeting future demand. This will enable countries to continue developing international shipping ways that are kinder to our planet.



BANGLADESH

Supporting wastewater PPPs for a cleaner, climate resilient Dhaka

Greater Dhaka, home to 18 million people, contributes over one-third of the country's GDP. Economic opportunity attracts significant rural migration and stimulates industrialization. Both the population and businesses rely on the city's network of rivers and canals, which provide livelihoods and services such as transport and drainage.

However, the city sits on a low-lying delta, making it highly vulnerable to climate threats like flooding, rising sea levels, and industrial pollution. Effective river management, therefore, is critical for the city's continued climate resilience, quality of life, and economic growth.

To address Dhaka's wastewater management challenges, the government of Bangladesh in collaboration with the World Bank launched the Dhaka Rivers Ecological Restoration Project. It aims to improve wastewater management and enhance water flows in rivers and canals in and around Dhaka City. This is in line with the city's master plans and a new Umbrella Investment Program being finalized by the government.

Building on upstream work by the 2030 Water Resources Group, PPIAF supports the project by providing technical assistance to the Ministry of Local Government and the PPP Authority. Activities included a rapid assessment of

potential PPPs that can be supported by the Dhaka Rivers Project, the development of action plans for three projects, capacity building for managing wastewater PPPs, and analyses.

To illustrate, in collaboration with the Bank and IFC, PPIAF-supported analytics and stakeholder engagement led to a proposal for an 18-year, \$150 million Gazipur City wastewater management PPP, providing for a wastewater treatment facility, a fecal sludge plant, a sewer network, and vacuum trucks for desludging to service over 1.4 million residents by 2045.

The World Bank team is also conducting economic assessments of proposed PPPs and developing project plans for additional wastewater investments in Dhaka's surrounding cities. The Gazipur wastewater PPP transaction structure was approved in March 2023, and IFC expects to begin the tendering process by the end of the year. Under the activity, other potential PPPs that support the restoration of Dhaka's rivers will be explored.

Through this support, PPIAF is tapping into private sector expertise and financing to help Bangladesh improve wastewater management. This will restore Dhaka's river ecology and strengthen climate resilience, which will enhance the quality of life for millions in one of the world's most densely populated cities.

APPROVED ACTIVITY



JAMAICA

Reducing water losses through performance-based contracts

Jamaica struggles with high levels of non-revenue water (NRW)—water produced but lost before reaching consumers, primarily due to leaks. NRW averages over 75 percent nationwide, with physical losses accounting for 59 percent of production and commercial losses of 16 percent. This strains Jamaica’s water resources, especially as climate change exacerbates drought risks.

Consequently, the National Water Commission (NWC), Jamaica’s main water utility, faces substantial technical and financial losses from NRW. The utility supplies 190 million gallons of potable water each day to more than 400,000 registered accounts representing about 2 million people across the country. However, its ambitious transformation program has been impeded by a lack of the capacity and equipment needed to significantly reduce leaks.

To tackle this challenge, NWC is exploring performance-based contracts (PBCs) with private contractors. Through PBCs for NRW reduction, contractors take on leak detection and repair activities in a designated area and are paid based on performance metrics like lowering NRW. This incentivizes efficient work while transferring risks away from the utility.

PPIAF is now supporting NWC to lay the groundwork for successful NRW-focused PBCs. PPIAF will provide advisory services to help NWC craft an effective contracting strategy, conduct procurement, and monitor contractor performance.

The activity focuses on designing PBCs that leverage private sector innovation and efficiency to slash NRW rates. This will significantly curb water losses, boost revenues, and improve service delivery for Jamaicans. At the same time, well-structured performance metrics and oversight will ensure contractors stay on track to meet targets.

Moreover, this initiative can be replicated and scaled up across the country. As a global leader in PBCs, PPIAF will draw on lessons from its experience to shape knowledge products that promote effective NRW-PBC models worldwide.

By blending private sector participation with public oversight, NRW PBCs offer Jamaica a promising solution for transforming water service sustainability. With PPIAF’s guidance, NWC can pioneer an approach to reduce losses and substantially improve water service resilience nationwide.





PACIFIC ISLANDS

Turning the tide with renewable energy

Pacific Island countries face major challenges transitioning to renewable energy systems. These island nations are highly vulnerable to climate change but rely heavily on costly imported fossil fuels. This leads to high emissions and a heavy economic burden. Renewable energy can alleviate these difficulties, but integrating solar and wind power into their power grids requires overcoming technical and financial hurdles.

To address these issues, PPIAF supported an analysis to determine options for integrating renewable energy and battery storage energy systems (BESS). The study mapped out PPP models tailored to the context of each country.

The findings and recommendations were included in a report that outlined various variable renewable energy scenarios with specific PPP structures. Options included variable renewable energy

combined with BESS, leasing of BESS, mini-grid concessions, and more. The report was shared with the Pacific Power Association and the utilities of each Pacific Island country. Some larger power companies now plan to incorporate the PPP models into their renewable energy strategies.

The analysis will help Pacific Island countries fulfill their Paris Agreement commitments to reduce emissions by phasing out expensive imported diesel. Renewable mini grids and solar battery systems are starting to come online, slashing fuel costs and emissions while increasing access to energy.

While each island faces unique circumstances, they now have common tools to achieve an energy future free of costly fossil fuel imports. With PPIAF's support, Pacific Island countries can transform their energy systems and become models of sustainability.



CLIMATE TOOLKITS

Mobilizing climate finance for sustainable infrastructure

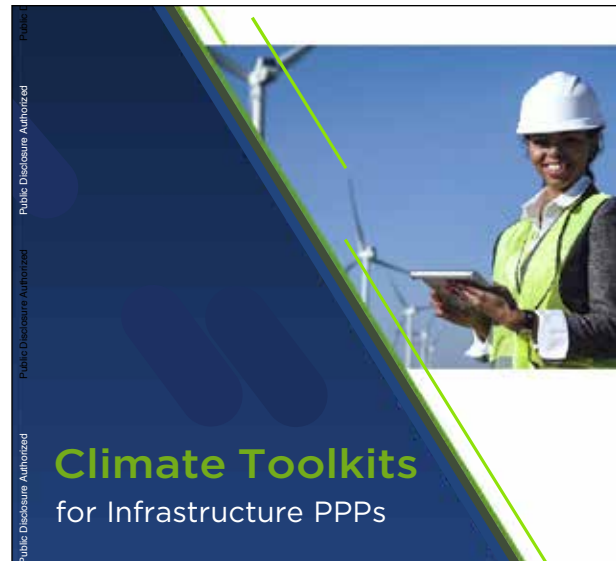
Climate change poses immense risks to infrastructure and sustainable development. But it also creates opportunities for innovation to build resilience and cut GHG emissions. As governments face fiscal constraints, PPPs are vital to mobilizing climate finance and technologies for low-carbon, climate-resilient infrastructure.

Recognizing this potential, PPIAF developed the Climate Toolkits for Infrastructure PPPs (CTIP3)—in collaboration with the GIF and IFC—to provide practical guidance on systematically integrating climate considerations across PPP project lifecycles.

The CTIP3 suite includes an Umbrella Toolkit, published in 2022, which establishes the overarching methodology. This is complemented by five sector-specific toolkits released in May 2023 covering hydropower, solar and wind power, road transportation, water production and treatment, and ICT.

The toolkits aim to address climate uncertainty and risk in PPPs. With proper structuring, PPPs can increase climate mitigation and resilience by leveraging private sector expertise in technologies and risk management. Well-defined, long-term contracts also provide stability against climate variability.

The sector-specific toolkits offer hands-on guidance for planning climate-smart PPPs. This includes assessing emissions and climate risks, balancing climate and affordability goals, allocating risks appropriately, translating climate decisions into



technical specifications and contracts, tapping into climate finance, and evaluating climate credentials in procurement.

Practical resources like templates, checklists, and indicators facilitate the integration of climate considerations into bankable PPPs across critical sectors. The toolkits help translate national climate commitments into on-the-ground solutions by mainstreaming climate into infrastructure PPPs. They provide a bridge to urgently needed finance and skills for low-carbon, resilient development.

Initial results are promising. The Umbrella Toolkit was presented at major conferences such as COP27 and is being piloted in 16 countries. The sector-specific toolkits are also being piloted in several countries and will be widely disseminated, including at the upcoming COP28 in Dubai.

The CTIP3 suite equips policymakers and investors to confront complex climate challenges through sustainable infrastructure PPPs. The actionable resources empower practitioners to embed climate considerations at each step of PPP delivery. With growing urgency to act, these toolkits unleash the potential of PPPs to drive finance and technologies for the transition to a net-zero carbon and resilient future.



HIGHLIGHT ON GENDER

Since FY 2015, PPIAF has been a leader in incorporating gender into private infrastructure investment. From enhancing our capacity to understand the implications of infrastructure for women and girls to the implementation of the 100 percent gender-informed policy for PPIAF activities, gender is central to PPIAF's approach.

From the primer Gender Equality, Infrastructure and PPPs launched by PPIAF in 2019 to the Preliminary Findings Report on Gender Inclusive Approaches in Private Participation in Infrastructure, produced by PPIAF and the GIF as an input to the G20-Infrastructure Working Group under the

Indonesian Presidency in FY23, PPIAF's approach explores and demonstrates how addressing project-related gender gaps can enhance the overall sustainability of those projects.

In FY23, PPIAF continued to incorporate gender in all its activities and increased its gender mainstreaming capabilities through the PPP Gender Toolkit, which will be published in early 2024. The Toolkit will have practical guidance on how to reduce gender gaps at all stages of the PPP project cycle to better design activities and achieve tangible results in this space for greater positive impacts.



GENDER IN THE SPOTLIGHT

Improving urban transportation for women in Sierra Leone

In post-conflict Sierra Leone, poor infrastructure and limited government capacity constrain mobility in the capital of Freetown. Public transport is provided by the state-owned SLRTC bus company and informal private mini-buses, taxis, and motorcycles. However, aging vehicle fleets, inefficient operations, and inadequate regulation impair service.

The government requested World Bank support to restructure SLRTC to improve efficiency and explore opportunities to attract PSP in the sector. PPIAF-funded studies provided critical diagnostics on the bus company, the legal and institutional environment, and analyzed the user experience with a focus on women's mobility constraints.

Surveys and focus groups captured the opinions of diverse public transport users. An astonishing 18 percent of women reported sexual harassment on public transport, and half cited physical violence as the biggest barrier to using public transport. Recommendations for addressing these problems included restructuring SLRTC into a regulator, enabling private operators to contract services, and establishing priority corridors.

PPIAF's work directly informed the \$50 million World Bank Integrated and Resilient Urban Mobility Project (IRUMP) in Sierra Leone. The bus renewal program, which requires private operators to form companies and repay loans, is expected to leverage an additional \$10 million in private financing. PPIAF's gender analysis shaped provisions for women's safety and mobility in IRUMP's design and helped establish indicators for measuring results.

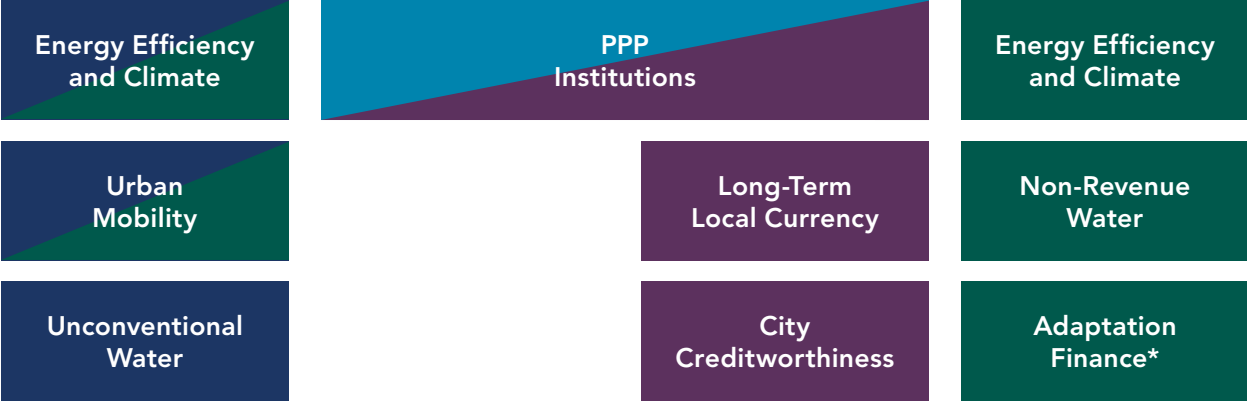
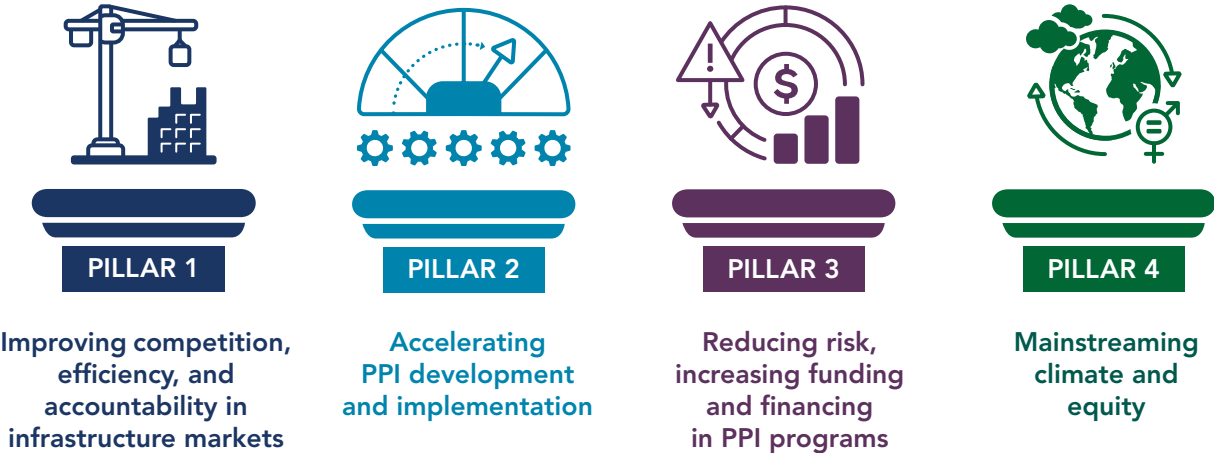
Despite delays, IRUMP continues to work toward the long-term goal of private participation in bus operations. PPIAF's outputs will remain relevant while implementation is ongoing.

By evaluating mobility from a gender perspective, PPIAF provided key diagnostics on Sierra Leone's bus sector and informed World Bank transport investments. Its work spotlighted women's needs—paving the way for safer, more inclusive public transit as IRUMP upgrades the system. PPIAF's strategic support is catalyzing major infrastructure upgrades to benefit all Freetown residents.

PPIAF PROGRAMS

PPIAF’s technical assistance and knowledge activities follow specific programmatic themes (see below) and are implemented using standard frameworks across countries in partnership with other organizations. This approach has proven to be

efficient, allowing for adaptability, rapid replication across countries, and the consolidation of lessons in real time. In FY23, PPIAF approved nearly \$6 million (43 percent of total approvals) for five programs.



Strategic Focused Areas PPIAF Funds

* To be launched in 2024.

Program Results in FY23

The **Non-revenue Water Program** promotes better practices for PBCs in NRW management. PPIAF has supported eight activities with total funding of about \$4.5 million across various countries. Ongoing activities include preparatory work for NRW PBCs in Liberia, Tanzania, and Togo. The program is demonstrating concrete results— Ethiopia awarded a four-year, €15.4 million, non-revenue PBC contract and Ghana awarded a two-year, \$20.5 million contract to reduce 23,000 m³/day of water loss.

Phase I of the **PPP Institutions Building Program**, launched in 2020, undertook a global review of upstream support for the PPP program. It aimed to identify the drivers of success to improve PPP program support using practical tools that can be incorporated into a range of country engagements. Two years of research confirmed there is no “one-size-fits-all” solution that will guarantee success. Key lessons were identified in capacity building, legal and institutional frameworks, project development and preparation, financing, and contract management. This knowledge was distilled into a series of [Practice Notes](#). Phase 2 will continue in four areas: dissemination and capacity building, fiscal commitments and contingent liabilities, establishing PDFs, and updating the framework for disclosure in PPPs.

The program is already demonstrating concrete results. With over 50 distinct activities totaling over \$16 million, PPIAF’s **PPP Institutions Building Program** has enabled over 40 countries to improve their legal and regulatory frameworks to unlock private participation in infrastructure. More than 15 PPP laws, PPP regulations, and guidelines were successfully adopted in Lao PDR, Panama, Senegal, Tanzania, Vietnam, and at the regional level in West Africa (ECOWAS). [See the results brief here.](#)

The City Creditworthiness Program (CCP) enables municipalities to attract private financing for their infrastructure investment needs. It identifies and addresses obstacles to increase their creditworthiness, for example, by strengthening the enabling environment at the national and subnational levels and building government capacity. The initiative was designed and implemented in collaboration with IFC’s municipal finance team. So far, the initiative has completed 15 academies involving over 250 city governments and 600 officials from 26 countries. In India, the 2022 academy’s results were incorporated in the design of the new National Urban Mission. In Indonesia, 13 subnational governments participating in the academy later borrowed funds from the government’s dedicated infrastructure financing facility which is also supported by World Bank financing.

PPP INSTITUTIONS BUILDING PROGRAM AT A GLANCE



Source: www.ppiaf.org/documents/6116, April 2023.

CLIMATE & ENERGY EFFICIENCY PROGRAM HIGHLIGHTS

PPIAF & ESMAP: A Partnership Driving the Transition to Clean Energy

The climate crisis demands urgent action, but transforming energy systems requires private sector expertise and investment—particularly in developing countries, where access to climate financing is critical. To address these challenges, since 2015, PPIAF has been working with the World Bank’s Energy Sector Management Assistance Program (ESMAP) on a joint climate program to encourage PSP and attract commercial financing for renewable energy and energy efficiency projects.

PPIAF brings unique expertise that mobilizes private capital and improves the enabling environments for private participation in renewable energy, complementing ESMAP’s energy sector reform engagements. PPIAF complements ESMAP’s work by funding activities that enable private participation in renewable energy, energy efficiency, and transport electrification. PPIAF also works to strengthen the creditworthiness and financial

governance of SOEs—which often struggle to attract private finance—by addressing financial management and governance issues.

In FY23, PPIAF approved \$1.2 million in climate activities and currently manages an active \$7.7 million climate portfolio. The partnership will increasingly focus on innovative financing solutions with cross-sector impact. This includes energy storage and electric vehicle charging to optimize renewable power and exploratory work on green hydrogen.

The climate challenge is enormous, but so are the opportunities for improving energy efficiency. With supportive policies and targeted technical assistance, private capital can be unlocked to accelerate the transition to clean energy. The PPIAF-ESMAP partnership demonstrates the power of collaboration to help developing countries shift towards decarbonization.



ETHIOPIA & UGANDA

Paving the way for pay-as-you-go financing for electricity

The lack of electricity access continues to plague many rural communities across Africa. The overall electrification rate in Ethiopia, for example, stands at 51 percent, with a massive disparity between urban and rural areas. Urban households enjoy 96 percent electricity connectivity, but only 27 percent of rural households have access.

As Ethiopia aims to achieve universal access by 2030 under its National Electrification Program (NEP) 2.0, providing affordable and reliable off-grid energy to remote regions is crucial. NEP 2.0 adopts a mixed approach, with 65 percent of connections to be grid-based and the remaining 35 percent through off-grid solutions. Off-grid solar, especially solar home systems with a pay-as-you-go (PAYGO) model, is seen as a solution. PAYGO-enabled products to follow a lease-to-own structure, allowing users to repay the unit's cost over time through installments. This approach reduces upfront costs and encourages digital financial inclusion through services like mobile money for repayment.

These PAYGO-enabled solutions are pivotal in facilitating access to affordable energy, thereby contributing to the nation's electrification targets, economic advancement, and digital development goals. Over two million solar products have been sold in Uganda since 2014, with about half employing PAYGO financing. Despite the challenges posed by the COVID-19 pandemic, more than 140,000 PAYGO-enabled off-grid solar products were sold in 2020, boosting energy access from 18 percent in 2017 to 38 percent in 2020.

Despite this progress, significant gaps remain. PAYGO initiatives intersect with policies and regulations spanning the electricity, finance, and information and communication technology (ICT) sectors. These frameworks were not designed to work with PAYGO technologies and business models. Establishing a favorable policy and regulatory landscape for the PAYGO sector could spur growth by attracting investment, mitigating risks, and fostering responsible consumer financing practices.

Recognizing these challenges, PPIAF stepped in to facilitate critical policy dialogue between governments, the private sector, and civil society in Ethiopia and Uganda. The aim was to develop comprehensive national "roadmaps" to create an enabling environment for PAYGO and solar home systems to scale sustainably.

The roadmaps establish a strategic blueprint for advancing reforms through stakeholder coordination and clear allocation of roles. Key government entities in both countries have officially endorsed these roadmaps, such as Ethiopia's Ministry of Water and Energy and Uganda's Ministry of Energy and Mineral Development.

With PPIAF's support, Ethiopia and Uganda have established foundations to unlock the full potential of PAYGO solar energy to connect millions to affordable, reliable, clean electricity. The roadmaps provide a model for other African nations to create enabling environments for off-grid solutions.



SPOTLIGHT ACTIVITY

SOUTH AFRICA

Supporting a just transition to low-carbon energy

South Africa's power sector plays a central role in its transition to sustainable, low-carbon growth. However, the state-owned utility, Eskom, is grappling with operational, financial, and structural crises that threaten the entire sector. Key problems include aging generation assets, stagnating electricity demand, unsustainable debt burdens, revenue-cost mismatches, and weak governance. This has led to frequent load shedding, which impedes South Africa's economic progress.

As the world's 14th largest emitter of greenhouse gases, South Africa makes an outsized contribution to global GHG emissions. Its overdependence on coal has major climate impacts: it locks in high emissions, degrades local air and water quality, and leaves the system vulnerable to supply disruptions.

Consequently, the transition toward cleaner renewable sources like wind and solar is essential.

Working towards a just transition

Shifting to a low-carbon trajectory is essential for achieving the nation's climate goals under the Paris Agreement. However, given coal's role as a major source of employment, the country needs a just transition strategy that transforms the power system while also protecting vulnerable workers and communities that rely on coal value chains. If harnessed strategically, the transition offers significant opportunities for job creation and investments—potential investments are estimated to be nearly \$600 billion by 2030. Complementary policies can help displaced coal workers transition into new “green economy” jobs through training and other support programs.

South Africa has built a robust policy foundation to support the transition to low-carbon energy. The National Development Plan outlines a vision for a low-carbon, resilient, and equitable society by 2030. The Nationally Determined Contribution commits the country to a peak, plateau, and decline trajectory for emissions. These targets are to be achieved through mechanisms like carbon taxation, sector emission targets, and the scaling up of renewable energy and electric mobility. However, translating policy aims into actual implementation has proven challenging.

To support South Africa in creating a dynamic energy efficiency market, PPIAF has provided technical assistance to South Africa's Department of Mineral Resources and Energy and the South African National Energy Development Institute. The focus was an analysis of the Energy Service Company (ESCO) sector in the country that identified viable pathways to develop it. ESCOs are an especially impactful efficiency vehicle. They install upgrades like smart lighting, optimization of heating, ventilation, air conditioning, and cloud-based controls that repay upfront costs through energy savings.

The research assessed constraints on ESCO industry growth while diagnosing key steps to enhance

financing availability. Findings revealed that mainstream markets are not optimized for energy-efficiency lending. Instead, an innovative, specialized financing facility would offer the best path forward.

Based on these insights, recommendations included establishing a dedicated revolving debt fund tailored to the ESCO sector's needs. This requires an organizational framework, a defined ownership and governance structure, management protocols, funding sources, a robust business model, and financing. A blueprint for execution envisions the fund becoming operational in approximately 18 months.

Unlocking the full potential of the ESCO sector could be a game changer for South Africa—it could address electricity shortages, reduce dependence on fossil fuels, and lay the foundation for a thriving energy efficiency market that advances the country's sustainable economic development. As South Africa charts its complex course to a decarbonized future, robust engagement between government, international partners, and the private sector will remain indispensable. The World Bank and PPIAF's involvement illustrates the collaboration needed to implement a just and equitable energy transition.



Paving the Road to Sustainable Urban Mobility

Urban transportation systems in developing countries often struggle with informality, poor service quality, and lack of sustainability. But well-designed reforms can pave the way for modern, equitable, and low-carbon mobility. The PPIAF Urban Mobility Program provides hands-on support for this transition.

A key focus since 2017 has been disseminating lessons from initiatives to improve the financial viability of BRT systems—a major advancement over informal transit—in Sub-Saharan Africa. For example, drawing from its previous experience, PPIAF began assisting Freetown, Sierra Leone, in formalizing its network of small-scale *poda-poda* buses into professionalized companies capable of delivering high-quality BRT services.

Another important development is the integration of electric mobility solutions. PPIAF is helping Jakarta's BRT agency review business models and contracts to achieve its target for a completely electric fleet by 2030 with participation from the private sector. Similar work in the Middle East

and North Africa region is creating frameworks to facilitate the adoption of electric vehicles.

PPIAF is also contributing to efforts to electrify paratransit vehicles like mini-buses and tuk-tuks. It assesses regulatory needs and provides recommendations for institutional, legal, and regulatory arrangements required for e-mobility. It also supports the development of PPP strategies to accelerate the transition.

Because of the climate crisis, cities must transition to inclusive, zero-emission transport. But this requires overcoming technical and financial hurdles. PPIAF's on-the-ground support is helping cities lay the policy foundations, build institutional capacity, and access finance. Its expertise catalyzes public-private collaboration for transformative change.

The path to sustainable urban mobility is complex. But with targeted assistance, developing cities can leapfrog to efficient low-carbon systems. PPIAF's work empowers cities to chart a course toward safe, clean, and affordable transit for all.



MOZAMBIQUE

Climate-smart solutions for Greater Maputo

Mozambique's Greater Maputo region has undergone rapid population and economic growth in recent years. This urban expansion has led to increased transport demand and mobility challenges. The movement of people and goods has risen considerably, resulting in worsening traffic congestion due to road network constraints. Public transportation relies heavily on privately operated mini-buses known as chapas that are rented out to drivers who collect fares to cover costs. Larger buses also operate but they overlap routes with the chapas.

The region, encompassing the cities of Maputo and Matola, along with the districts of Boane and Marracuene, is projected to expand from 2.2 million residents in 2012 to over 3.7 million by 2035.

While municipal authorities oversee transport planning and regulation, coordination issues persist across the interconnected metropolitan area. This led to the establishment of the Maputo Metropolitan Transport Agency (AMT) in late 2017 under the Ministry of Transport and Communications. AMT is tasked with managing the master transportation plan for Greater Maputo. However, as a new agency, AMT needs support to define mandates, staffing, and financing frameworks, and is positioned to administer bus route contracts across municipalities in the region.

Recognizing the need for technical expertise to advance these ambitions, the Transport Ministry and AMT sought World Bank assistance. The \$250 million Greater Maputo Transport Program aimed

to establish the first BRT system in the city, which includes structuring bus concessions and building AMT's institutional capacity. PPIAF supported an analysis of the proposed BRT system's commercial and operational viability, under different climate scenarios using guidance from the CTIP3. Under current average fare assumptions, the study found operators would likely only cover operating expenses, with higher fares needed to finance capital expenditures.

The assessment concluded that options like concessional financing rates, extended tenors, or direct subsidies are necessary to ensure the BRT's viability at existing fares. PPIAF's work provided pivotal insights for the Greater Maputo Transport Program, incorporating key recommendations on BRT structuring, financing, and operations.

Through targeted capacity building support, PPIAF equipped the nascent AMT with the foundation to effectively coordinate and regulate the region's complex transport networks. The evidence-based viability study offered vital data to inform planning decisions tailored to the local context.

With these building blocks now in place, Maputo is well positioned to execute transformative upgrades to public transit systems. PPIAF's support also unlocked targeted World Bank financing and expertise at a crucial time to address the pressing mobility needs of Greater Maputo's rapidly growing population. The progress promises more sustainable, inclusive, and climate-smart transport solutions for residents and businesses.

KNOWLEDGE MANAGEMENT

PPIAF's knowledge portfolio provides best practice and guidance to help governments deliver resilient, sustainable infrastructure and improve service delivery. PPIAF rolled out 13 publications in FY23, including resources on the impact of digital and technical innovations in the transport sector, managing fiscal risks in infrastructure, climate tools for PPPs, data techniques to inform paratransit strategy in African cities, managing unsolicited proposals (USPs), infrastructure tokenization, and more.

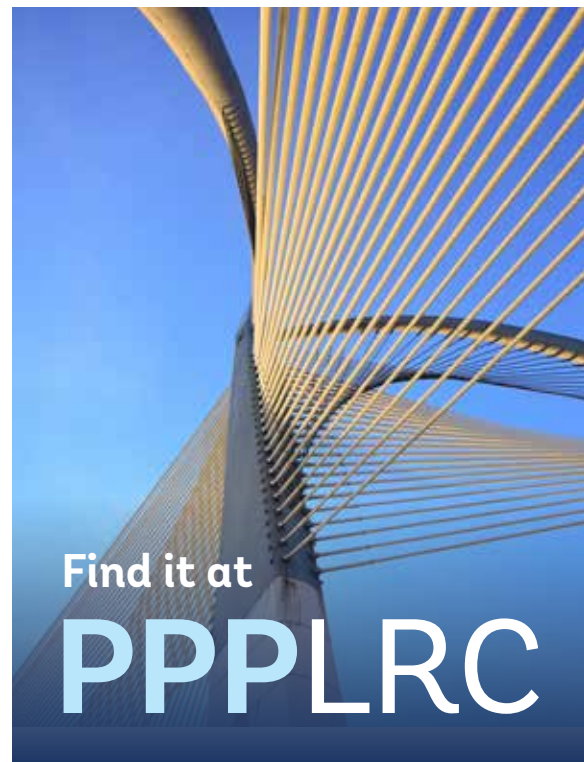
PPIAF will continue supporting critical knowledge and data resources such as the PPI database, which has proven to be an invaluable benchmarking tool for improving competition, efficiency, and accountability in infrastructure markets.

PPIAF supported the development of a number of innovative toolkits and high-traffic platforms focusing on infrastructure PPPs and building capacity to scale infrastructure delivery.

PPP Legal Resources Center

PPIAF has supported the PPP Legal Resources Center (PPPLRC) since its inception in 2006.

This is the most comprehensive source of publicly available, free content on PPPs on the internet. It aims to support governments and practitioners by providing laws, regulations, toolkits, contracts, risk matrices, and checklists on good practices in PPPs. Site visits demonstrate the need and usefulness of the content: it consistently attracts about 70,000 unique visitors from over 200 countries each month and over 1 million views per year. PPPLRC also serves as the platform where knowledge products produced by the Bank can be showcased to a large external audience. The site is supported by PPIAF and other partners, including the African Legal Support Facility (ALSF) and the World Bank. The team is also in discussions with IFC Upstream for possible support. These partners are providing financial and technical support to the PPPLRC website, including the identification of key issues for PPPs and the provision of content for the site.



Access at <https://ppp.worldbank.org/public-private-partnership/>



PPI Database

PPIAF has supported the PPI Database since 2007. This platform aims to identify and disseminate information on PPI in infrastructure projects in low- and middle-income countries. It provides information on more than 100,000 infrastructure projects dating from 1984 to 2023. The database highlights the contractual arrangements used to attract private investment, the sources and destinations of investment flows, and information on the main investors.

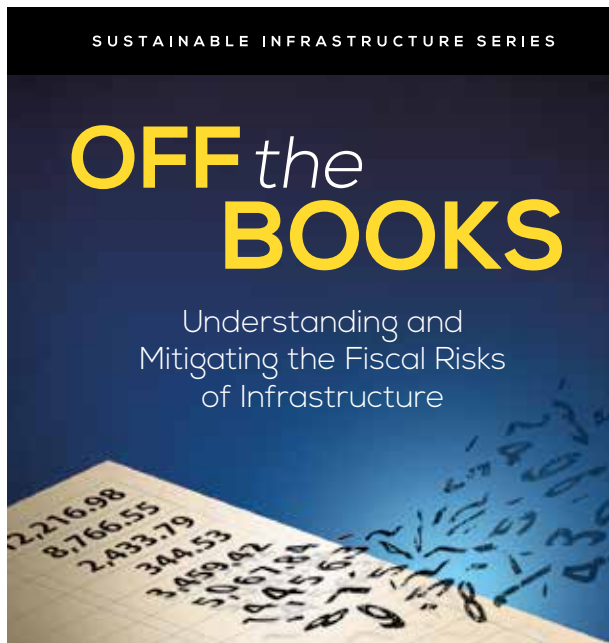
Access at <https://ppi.worldbank.org/en/ppi>



Infrastructure Tokenization: Does Blockchain Have a Role in the Financing of Infrastructure?

The purpose of this report is to assess whether digitizing the equity or debt financing used for infrastructure projects using blockchain, that is, tokenized infrastructure, provides enough benefits to justify the use of this technology. The information presented here aims to inform policymakers and financiers on the potential use of tokenization for infrastructure projects. The conclusions are based on interviews with tokenization start-ups, experts, and the review of current and planned regulatory frameworks in selected jurisdictions and use cases and pilots to date.

Access the report at <http://wrlid.bg/zqcC50Q0F4I>



Off the Books: Understanding and Mitigating the Fiscal Risks of Infrastructure

Developing countries face massive infrastructure needs, but public infrastructure spending is inadequate and declining. Rising debt and tightening fiscal conditions further pressure infrastructure funds, heightening the importance of spending efficiency. Off the Books demonstrates how infrastructure delivery models, including public provision, state-owned enterprises, or PPPs, bear significant fiscal risks in both good and bad economic environments. As a result, infrastructure often costs more than expected, eroding fiscal space. This publication shows how the fiscal risks of electricity and transport infrastructure in low- and middle-income countries can help target high-impact reforms and lays out an agenda for taking action.

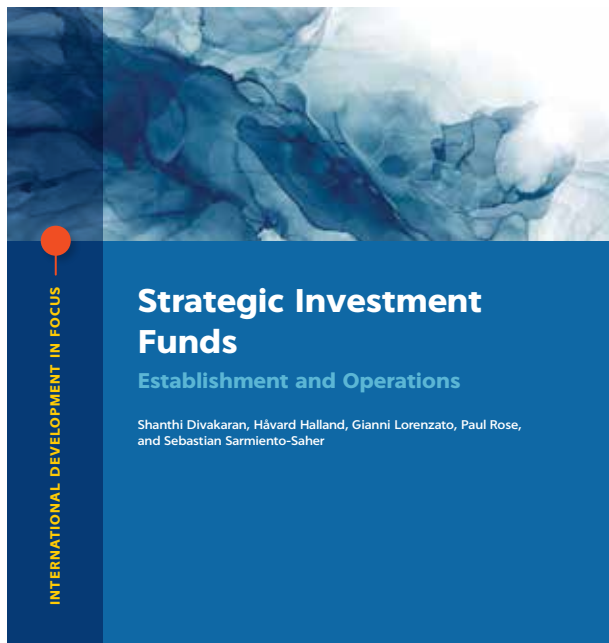
Access the report at <http://wrlld.bg/40Fi50Q0EzA>



Improving Paratransit in Maseru and Gaborone: Using Innovative Data Techniques in a Diagnostic Approach to Inform Strategy

This report shows how to improve urban mobility in cities in Sub-Saharan Africa through building incrementally on the existing paratransit sector, informed by innovative data techniques and data-driven diagnostics. It is based on assessments of paratransit undertaken in Gaborone and Maseru in Botswana and Lesotho respectively and aims to identify short-term, practical initiatives to improve mobility in these cities. It summarizes the outcome of an in-field data collection in the project cities; documents paratransit sector assessments of mobility demand, constraints, and conditions; outlines the operating environment faced by the paratransit sector; and proposes recommendations in policy, regulations, infrastructure, and services in the local context.

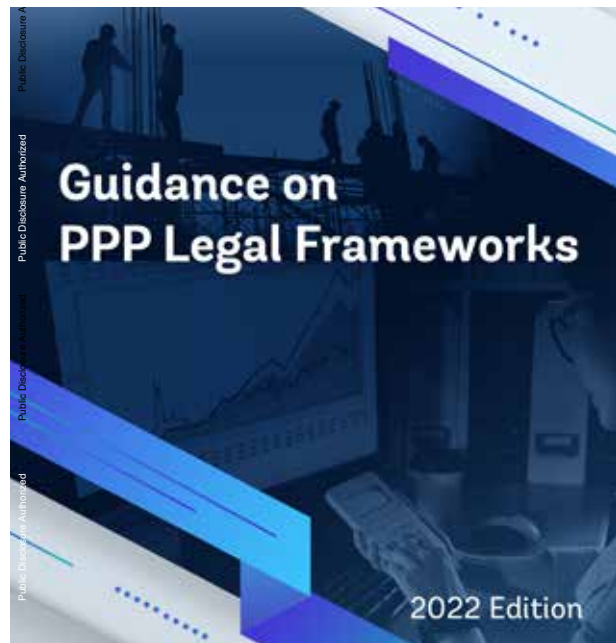
Access the report at <http://wrlld.bg/1MSK50Q0F7r>



Strategic Investment Funds: Establishment and Operations

Strategic investment funds (SIFs) have gained prominence over the past two decades as governments and other public sponsors globally have increasingly co-opted the investment fund model to further policy objectives. Since 2000, more than 30 SIFs have been formed at the national level, typically to boost economic growth through infrastructure or small and medium enterprise investments. The book provides a reference for policy makers who are creating or strengthening the operations of SIFs, particularly as governments examine the value of such funds as a policy instrument in the aftermath of the COVID-19 pandemic, where little widely available, practice-based experience has been documented and disseminated.

Access the report at <http://wrlld.bg/fUYx50Q3VsX>



Guidance on PPP Legal Frameworks

Drawing on good practices and benchmarks, this Guidance serves as a resource for government officials in establishing suitable PPP legal frameworks. Designed as a succinct and easy-to-understand practitioner's guide, the Guidance does not cover every possible aspect of a PPP legal framework or analyze PPP's advantages and disadvantages. Rather, it sets out considerations and examples tailored to a government's specific circumstances. It provides guidance on drafting legislation, establishing the legal basis for PPP institutions, interacting between the legal framework and wider legal system, and incorporating key budgetary, environmental, and social policy objectives. This ensures fiscal sustainability and green, resilient, inclusive development are considered at all stages of a PPP project so that PPPs align with broader government objectives.

Access the report at <http://wrlld.bg/nulW50Q3ZZt>



2

**FY23
OVERVIEW**



Since its inception, PPIAF has funded **1,727 activities in 130 countries.**

Global & Cross Regional

251 Activities

Europe & Central Asia (ECA)

135 Country Activities
20 Regional Activities

Middle East & North Africa (MENA)

103 Country Activities
17 Regional Activities

South Asia (SAR)

153 Country Activities
19 Regional Activities

Latin America & the Caribbean (LAC)

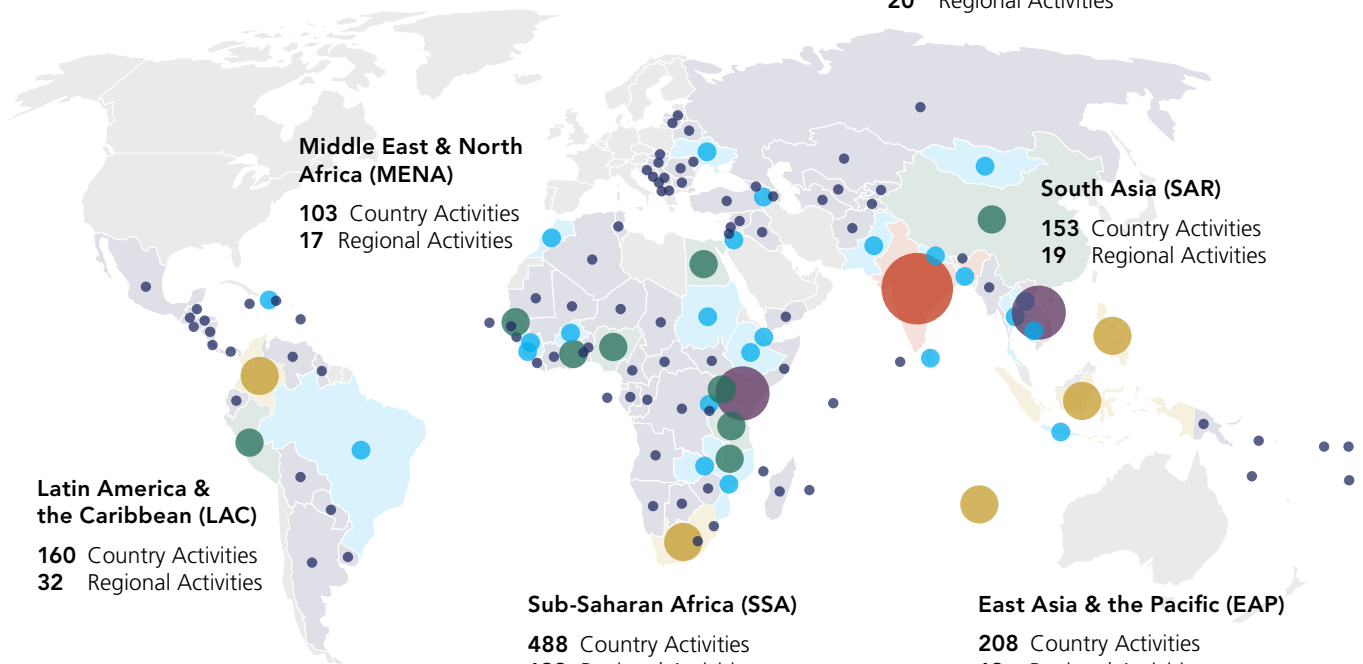
160 Country Activities
32 Regional Activities

Sub-Saharan Africa (SSA)

488 Country Activities
122 Regional Activities

East Asia & the Pacific (EAP)

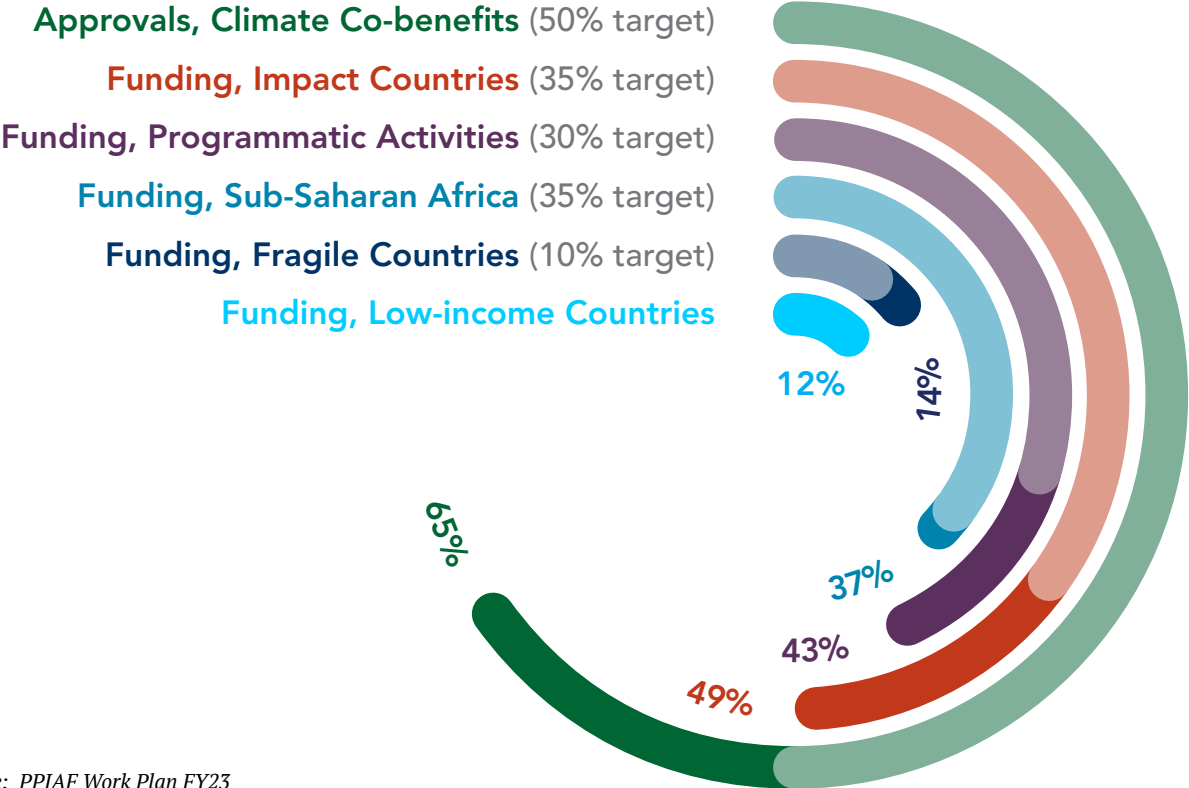
208 Country Activities
19 Regional Activities



In FY23, 51 activities were approved by PPIAF with a total value of \$10.5 million.



In FY23, PPIAF exceeded its **annual targets**.



Source: PPIAF Work Plan FY23

FY23 PPIAF Funding Allocation

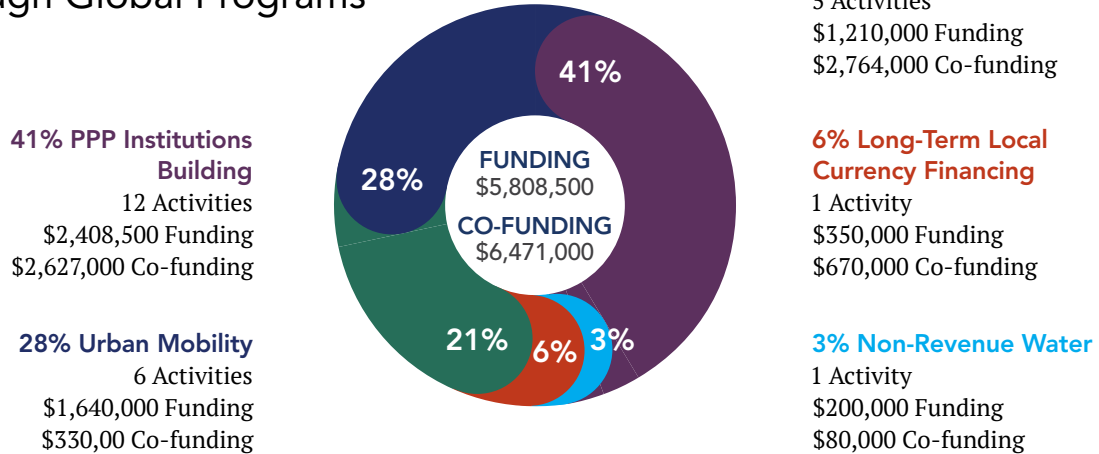
Funding Approved in Impact Countries

In FY23, 49 percent of PPIAF total funding was allocated to impact countries. East Asia Pacific impact countries accounted for 35 percent of impact country funding in FY23. Indonesia received the most PPIAF funding at around \$1 million, approved for five activities. The MENA region was the second-largest beneficiary, accounting for approximately 21 percent of approved funding. Jordan, another impact country, received the second highest amount at \$510,000 for three activities.

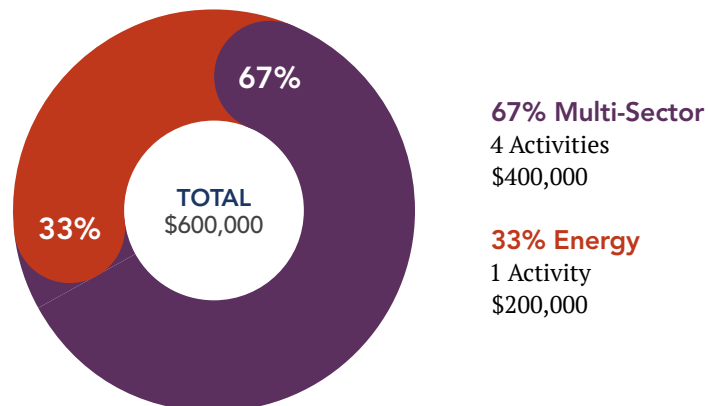
IMPACT COUNTRY	TOTAL AMOUNT APPROVED	NUMBER OF ACTIVITIES
Colombia	\$ 310,000	2
Djibouti	\$ 300,000	1
India	\$ 405,000	2
Indonesia	\$ 1,050,000	5
Jordan	\$ 510,000	3
Kenya	\$ 300,000	1
Lebanon	\$ 150,000	1
Malawi	\$ 300,000	1
Morocco	\$ 150,000	1
Nepal	\$ 140,000	1
Peru	\$ 300,000	2
Philippines	\$ 500,000	1
South Africa	\$ 150,000	1
Ukraine	\$ 303,500	1
Vietnam	\$ 300,000	1
Grand Total	\$5,218,500	24

FY23 Work Program

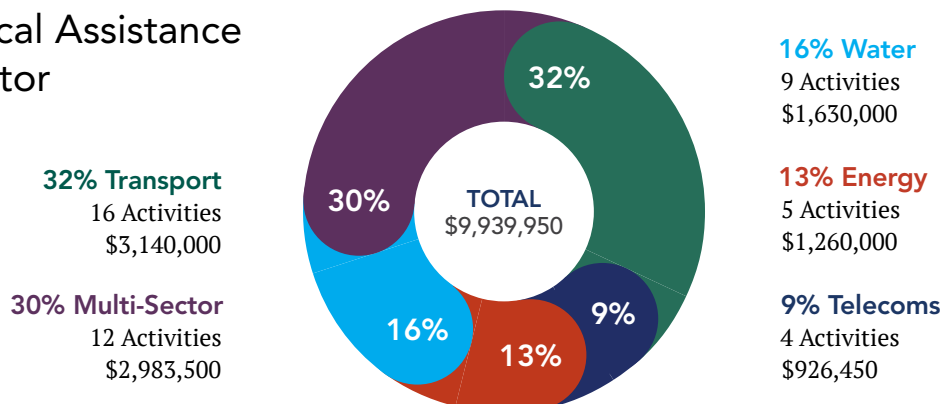
PPIAF Support Channeled through Global Programs



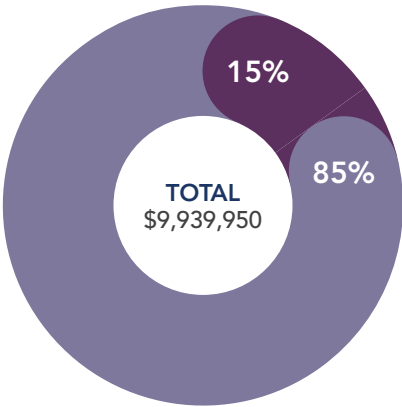
Global Knowledge Activities by Sector



Technical Assistance by Sector



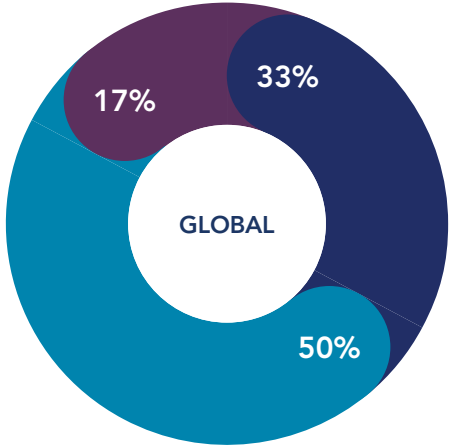
Technical Assistance
Approved in FCV
Countries



15% FCV Countries
6 Activities
\$1,453,000

85% Non-FCV Countries
40 Activities
\$8,486,950

Global Activities
by Pillar

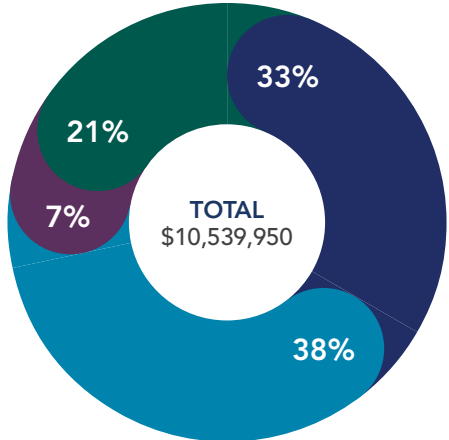


33% Pillar 1

50% Pillar 2

17% Pillar 3

Technical Assistance
by Pillar



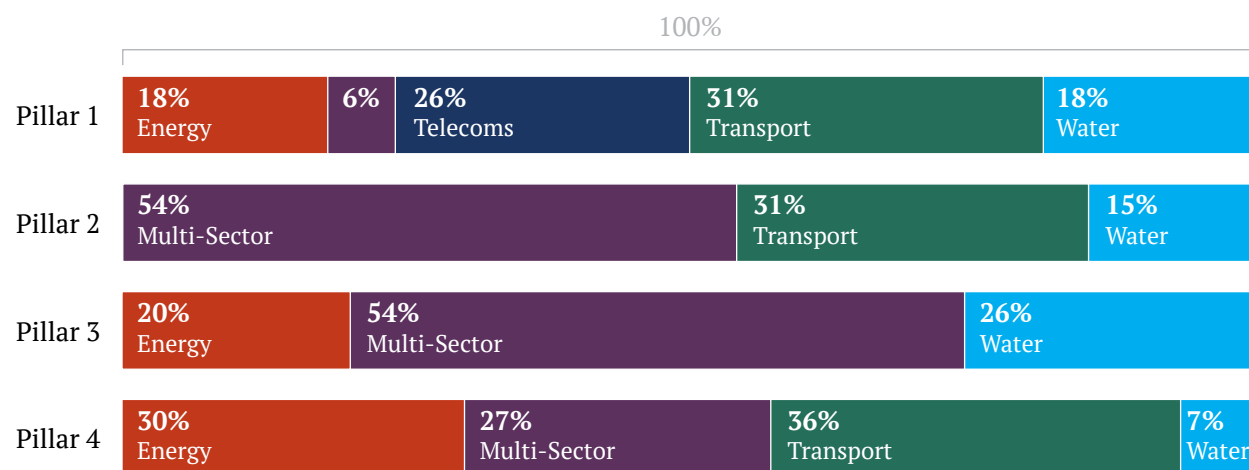
33% Pillar 1
17 Activities
\$3,516,450

38% Pillar 2
20 Activities
\$4,038,500

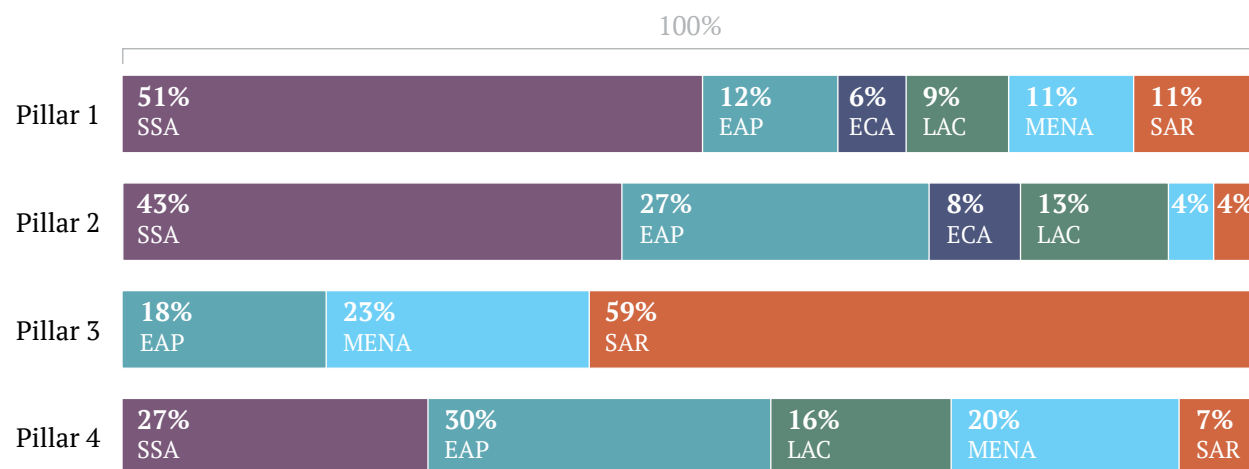
7% Pillar 3
5 Activities
\$785,000

21% Pillar 4
9 Activities
\$2,200,000

Technical Assistance by Pillars & Sector



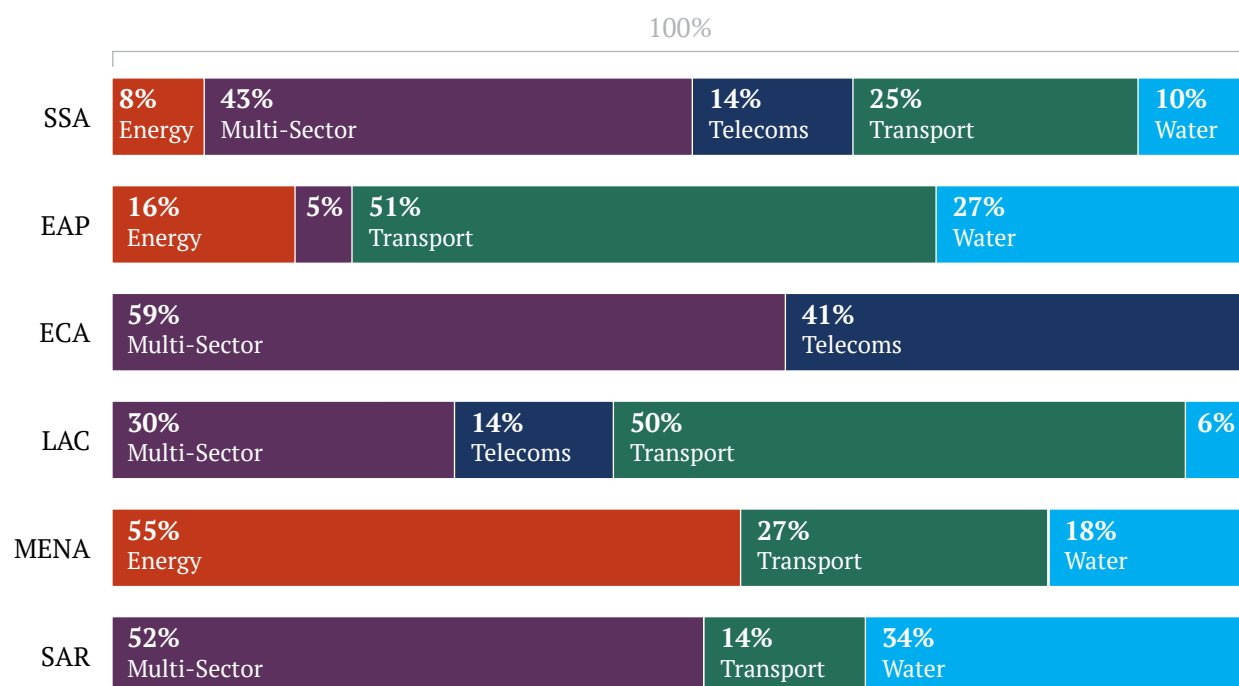
Technical Assistance by Pillars & Region



Technical Assistance by Region & Fiscal Year

REGION	FY22	FY23	DIFFERENCE
SSA	59%	39%	-20%
EAP	9%	22%	13%
ECA	5%	5%	0%
LAC	9%	12%	3%
MENA	8%	11%	3%
SAR	9%	11%	2%

Technical Assistance by Region & Sectors

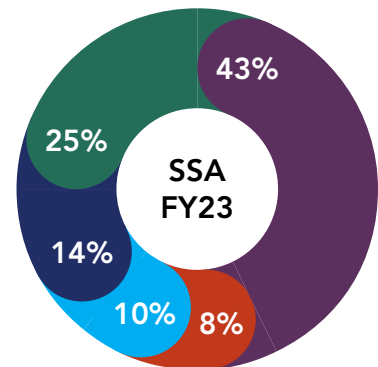


Technical Assistance by Region: Highlights

● Energy ● Multi-Sector ● Telecoms ● Transport ● Water

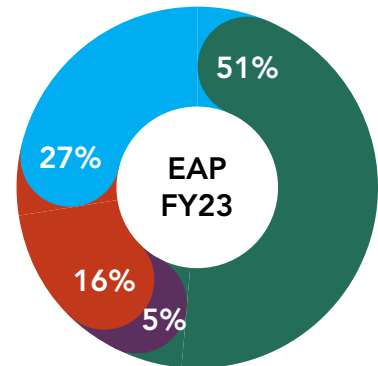
SUB-SAHARAN AFRICA

FUNDS DEPLOYED	CO-FUNDING LEVERAGED
\$3.9 million	\$3.5 million
ACTIVITIES APPROVED	ACTIVITIES CLOSED
14	28



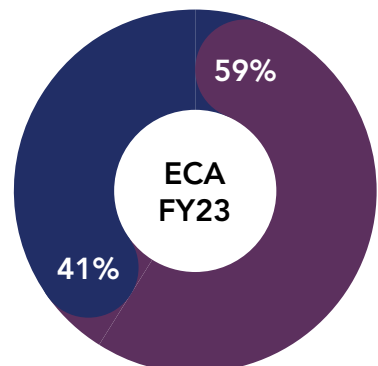
EAST ASIA & THE PACIFIC

FUNDS DEPLOYED	CO-FUNDING LEVERAGED
\$2.2 million	\$0.92 million
ACTIVITIES APPROVED	ACTIVITIES CLOSED
10	4



EUROPE & CENTRAL ASIA

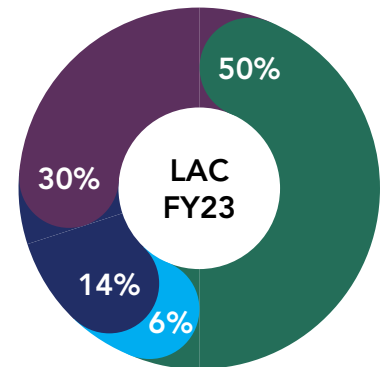
FUNDS DEPLOYED	CO-FUNDING LEVERAGED
\$0.5 million	\$0.93 million
ACTIVITIES APPROVED	ACTIVITIES CLOSED
2	6



● Energy ● Multi-Sector ● Telecoms ● Transport ● Water

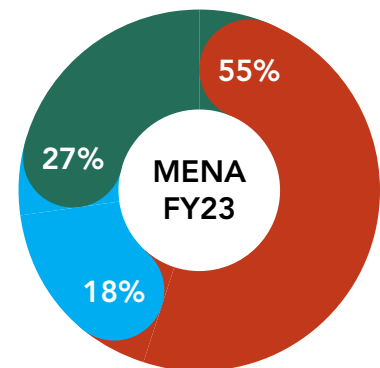
LATIN AMERICA & THE CARIBBEAN

FUNDS DEPLOYED	CO-FUNDING LEVERAGED
\$1.2 million	\$1.27 million
ACTIVITIES APPROVED	ACTIVITIES CLOSED
8	3



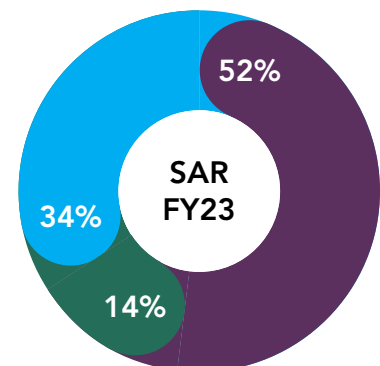
MIDDLE EAST & NORTH AFRICA

FUNDS DEPLOYED	CO-FUNDING LEVERAGED
\$1.1 million	\$1.58 million
ACTIVITIES APPROVED	ACTIVITIES CLOSED
6	3

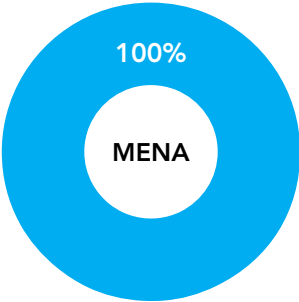
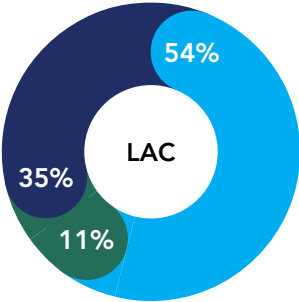
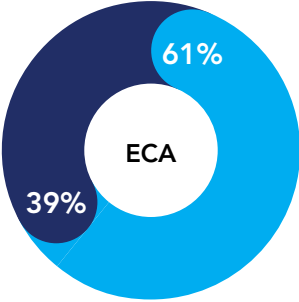
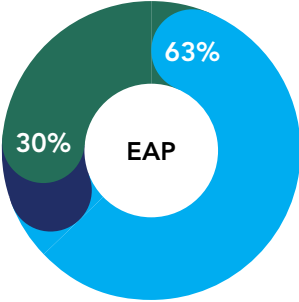
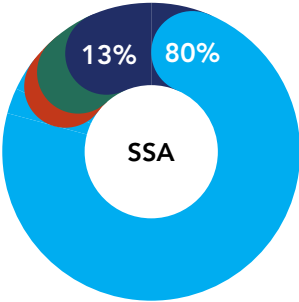
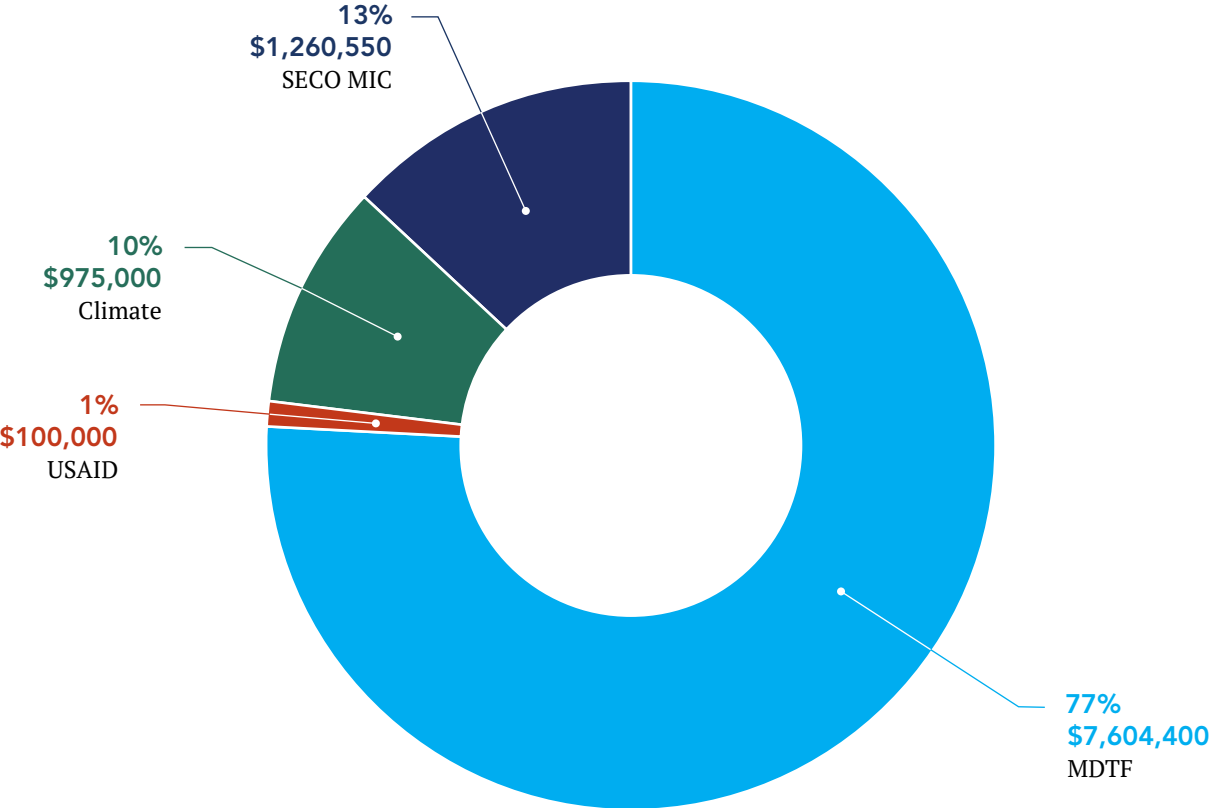


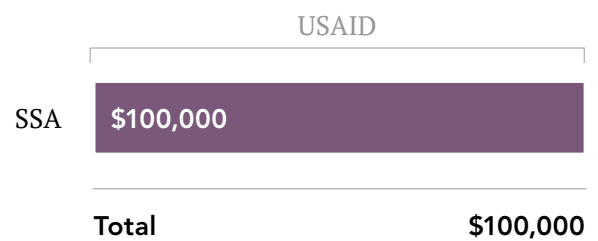
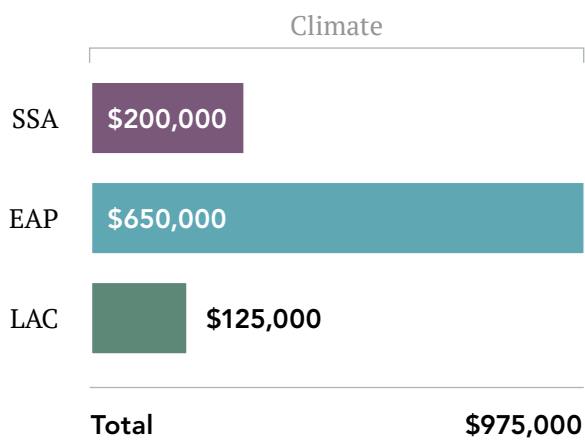
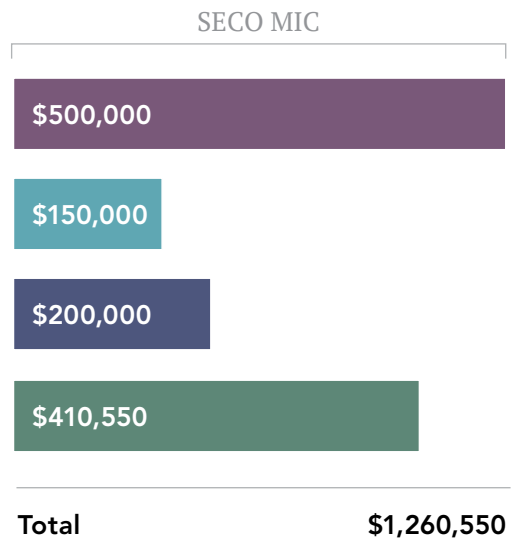
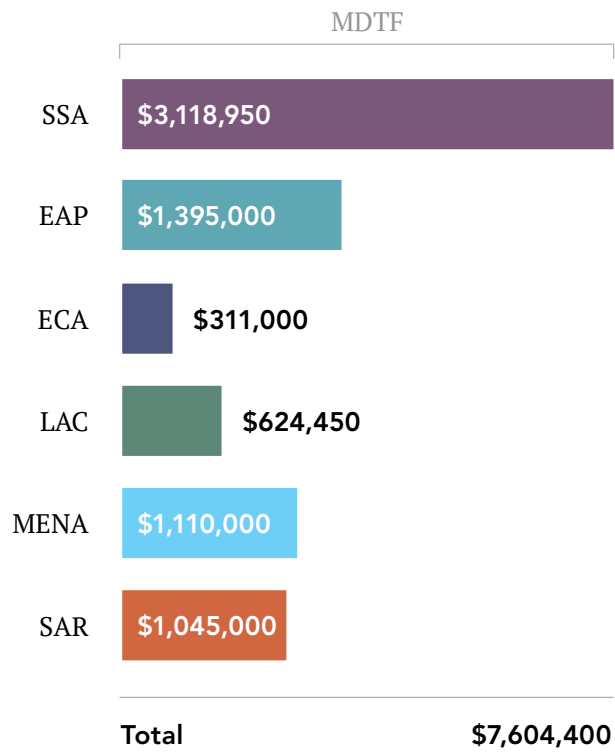
SOUTH ASIA

FUNDS DEPLOYED	CO-FUNDING LEVERAGED
\$1.1 million	\$0.33 million
ACTIVITIES APPROVED	ACTIVITIES CLOSED
6	1



Technical Assistance by Region & Trust Fund







3

FY23
ACHIEVEMENTS

COUNTRY ASSESSMENT OF PPIAF'S IMPACT IN PERU

PPIAF conducts a targeted country review annually to examine how a country's infrastructure projects, facilitated through PPIAF assistance, have progressed. This year, the focus was on Peru.

Over the past few decades, the government of Peru has strongly pushed private investment in infrastructure, with marked success in awarding numerous PPP contracts across various sectors. As a key partner, PPIAF has consistently played an instrumental role in this process, offering technical assistance and support that has tangibly transformed the nation's infrastructure landscape.

Peru introduced reforms in the 1990s and has since refined its PPP framework with significant laws in 2003, 2008, and 2018. The results have been striking. From 2002–22, the government awarded 96 PPP contracts worth \$28.9 billion, mainly in the transportation, energy, water, and telecom sectors. High-profile PPPs include Lima's Metro Line 2, the Southern Gas Pipeline, and the Taboada wastewater treatment plant. Peru's Private Investment Promotion Agency, ProInversion, is preparing 45 more PPP projects, with plans to award \$3 billion in 2023.

Since 2000, PPIAF has supported 27 activities in Peru, totaling \$5.13 million. PPIAF's main focus areas in all sectors encompass: modernizing institutional, regulatory, and legal frameworks; providing technical assistance for establishing sustainable financial management; and enhancing corporate governance, creditworthiness, and microfinancing lending capacity. This support has focused on six sectors, mainly transportation, energy, telecommunications, and water and sanitation, as well as cross-cutting support—for example, providing access to capital markets and modernizing institutional, regulatory, and legal frameworks. Technical assistance also included establishing sustainable financial management and microfinancing lending capacity.

Working extensively with government agencies, sector ministries, regulators, utilities, and subnational governments, PPIAF has enabled public institutions to identify and take advantage of PSP opportunities; strengthen policy, regulatory, and institutional frameworks; and improve the technical and fiscal capacities of subnational entities so that they can secure financing without sovereign guarantees.

PERU'S ACHIEVEMENTS AT A GLANCE

96
PPP Contracts
Awarded (FY02–FY22)

\$28.9B
PPP Contract
Value (FY02–FY22)

\$3B
PPP Investment
Expected (FY23)

Overview of PPIAF support in Peru

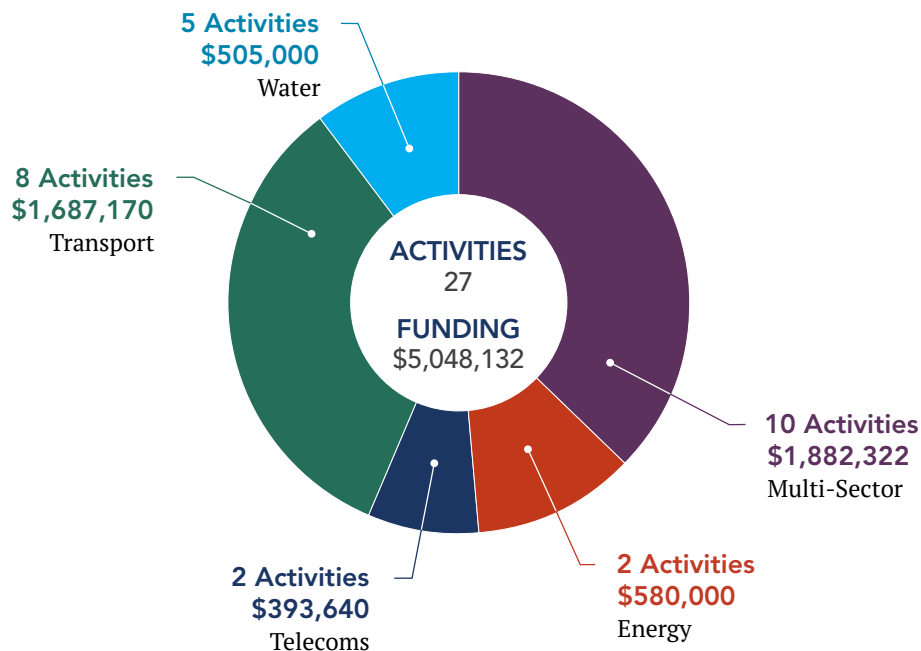
The Country Assessment findings show that PPIAF’s support has been highly relevant across all sectors. Wherever positive outcomes were achieved, PPIAF’s impact was high:

At the multi-sector level, PPIAF’s support was extremely useful for officials within the Ministry of Economy in dealing with informal requests from concessionaires who requested compensation from the state due to lower demand for the projects’ services early in the COVID-19 pandemic. PPIAF’s recommendations for the Project Management Offices within line ministries were adopted into amendments to Peru’s PPP Framework Law and other regulations in 2022.

At the subnational level, PPIAF’s support also had a major impact, supporting Peru’s subnational entities to access the capital market. PPIAF technical assistance enabled the Metropolitan Municipality of Lima

(MML) to acquire a credit rating from an international credit rating agency and secure a commercial bank loan of \$70 million from BBVA Banco Continental in 2010. A further technical assistance carried out in 2011 allowed MML to secure a credit facility of \$120 million (in local currency PEN 360 million) with BBVA and Scotiabank in 2013. Both loans were the largest market-based financing that a subnational entity in Peru had ever received, with record maturities and low interest rates. The proceeds from the loans obtained by MML have been used to fund the first corridor of the Metropolitan Bus Rapid Transit system, also supported by the World Bank, as well as debt consolidation (PEN 92 million), and socially inclusive infrastructure projects (PEN 268 million). The regional government of Arequipa secured a \$10 million loan from a local commercial bank without a sovereign guarantee (the first time a regional government in Peru borrowed in such a manner), which was used to pay for a regional road rehabilitation program.

PPIAF Support in Peru, Inception–FY22





In the transport sector, PPIAF supported MML to access over \$190 million in commercial financing, enabling major transport projects. PPIAF recommendations also led to the creation of the Lima Transport Authority. **In the port sector**, PPIAF’s short support to promoting PSP in port terminals has been highly effective. The National Ports System Law was passed shortly after, providing a legal framework for port terminal concessions and mandating the National Port Authority to promote and facilitate private concessions for the development of ports infrastructure. The increase in port terminals under concessions (from one to eight in the last 20 years) has led to total exports increasing from \$7 billion in 2001 to \$42.4 billion in 2020—a six-fold increase. Ports under concession generated a direct investment flow of \$1.7 billion during the same period.

In energy, PPIAF informed Peru’s law promoting private participation in rural electrification, catalyzing rapid growth in access in the energy sector. PPIAF also supported Peru on its power sector reform to improve the environment for renewable energy and storage companies, facilitating their entrance and expansion in the sector. Following PPIAF support, the Ministry of Energy and Mines presented a bill (Proyecto de Ley 4565/2022-PE) in late March 2023 to modify the Efficient Electricity Generation Law.

In telecoms, PPIAF-informed reforms helped close the rural digital divide, allowing utilities in Lima and Arequipa to raise capital for infrastructure projects. Reforms in the telecoms sector also allowed for greater private sector involvement in providing rural internet access.

In the water sector, the scope of PPIAF support has focused on three key areas: i) tariff-setting reforms; ii) direct support to water utilities; and iii) enhancing the creditworthiness of municipal banks (Cajas Municipales de Ahorro y Crédito—CMACs) to increase access to finance for sanitation programs for low-income groups. PPIAF supported the government in adopting a new tariff framework—the Superintendencia Nacional de Servicios de Saneamiento (Sunass) adopted the General Tariff Regulation of 2007—Resolución de Consejo Directivo N° 009-20 t 07-SUNASS-CD, which continues to underpin Peru’s general water supply and sewerage tariff regulation today. PPIAF also developed a tariff study and Master Plan scenario analysis for the structuring of the Obras de Cabecera PPP, a water supply and distribution project in the Lima Municipality. Finally, PPIAF helped three municipal banks improve their capacity to provide microloans for sanitation products. These banks successfully launched a micro-finance product for household sanitation improvements. Following PPIAF’s technical assistance, the MiBaño initiative was developed in 2015, delivering “bathrooms-in-a-box” for low-income groups and reducing customer transaction costs by 40 percent.

PPIAF’s involvement in Peru has markedly bolstered the nation’s infrastructure development with tangible outcomes across infrastructure sectors. PPIAF’s pivotal role in driving PSP and enhancing regulatory structures demonstrates its impact. Looking ahead, PPIAF remains committed to furthering its partnership with Peru and playing a valuable role in the evolution of the country’s infrastructure.

PORTFOLIO PERFORMANCE

Effective monitoring underpins PPIAF’s achievements. PPIAF thoroughly monitors each funded activity from inception to 24–36 months after legal closure to ensure efficient design, quality-driven implementation, timely dissemination of results, and the capture of lessons learned. Key performance indicators are collected and monitored throughout the project implementation and reported in balance scorecards (see below). The scorecards aggregate PPIAF’s portfolio performance indicators for this fiscal year.

FY23 marked the first year implementing PPIAF’s Renew Strategy. PPIAF funded over 51 activities

totaling \$10.5 million, with an average grant size of \$205,000. This included \$9.9 million for country-facing technical assistance and \$0.6 million for global knowledge products. In FY23, PPIAF met all funding allocation targets. This year, 14 percent of funding went to fragile countries, 49 percent to impact countries, 37 percent to Sub-Saharan African countries, and 43 percent to programmatic activities. Sixty-five percent of activities had climate co-benefits. PPIAF also allocated \$0.8 million through CREST and incorporated climate adaptation and mitigation to the remaining eligible ones, and as a result climatized 84 percent of its portfolio.

Activity Design

INDICATOR	FY23	ANNUAL TARGET FY23
Percent of TA funding towards the impact countries	49%	35%
Percent of approvals in SSA	37%	35%
Percent of approvals in FCV countries	14%	10%
Percent of activities, including global knowledge products, that have climate co-benefit potential	65%	50%
Value of activities in Southeast Asia, US\$	\$2.1 million	\$2.1 million
Percent of activities with strategic fitness score rated standard or outstanding fit	98%	98%
Percent of activities which are part of programmatic engagements	43%	30%
Percent of approvals in LIC countries	12%	NA

For ongoing activities, 98 percent of the deliverables were rated satisfactory or highly satisfactory. Only 7.4 percent of the portfolio demonstrated slow utilization of funds.

Implementation

INDICATOR	BASELINE FY22	FY23	ANNUAL TARGET FY23
Percent of portfolio with slow utilization	14%	7.4%	9%
Percent of activities with quality of deliverables rated satisfactory or above	100%	98%	97%
Percent of activities rated “Satisfactory” (“on track”)	84%	85%	80%

PPIAF exceeded all completed activity monitoring targets. Ninety-eight percent of deliverables were rated satisfactory or better, and 90 percent of activities were on track at closing. Of post-completion reviews, 88 percent of post-completion reviews demonstrated satisfactory outcomes, representing a 1 percent increase from FY22.

Completion

INDICATOR	BASELINE FY22	FY23	ANNUAL TARGET FY23
Percent of activities with quality of deliverables rated as satisfactory or above	100%	98%	95%
Percent of activities “on track” at closing	96%	90%	77%
Number of activities incorporating climate resilience and environmental sustainability	NA	8	NA
Number of activities incorporating gender analysis	NA	4	NA

Post Completion

INDICATOR	BASELINE FY22	FY23	ANNUAL TARGET FY23
Percent of outcome realization evaluations reporting outcome satisfactorily achieved	87%	88%	74%

PPIAF'S RESULTS FRAMEWORK

PPIAF's Results Framework demonstrates the progression from delivering specific outputs to its overarching objectives—accelerating access to climate-smart infrastructure through private participation. The Results Framework maps a pathway from PPIAF activities and outputs to more and better infrastructure services and greater development impact. The underlying Theory of Change suggests PSP in infrastructure can improve access to essential services and the overall quality of life.

At the output level, PPIAF reviews knowledge products and recommendations from technical assistance to ensure that World Bank quality standards are met and client needs are fulfilled. PPIAF also collects data on the number of government officials trained in PPIAF-supported training events and workshops.

PPIAF's strategy has four interim outcome pillars that show the direct results of its activities aligned with the PPIAF strategy:

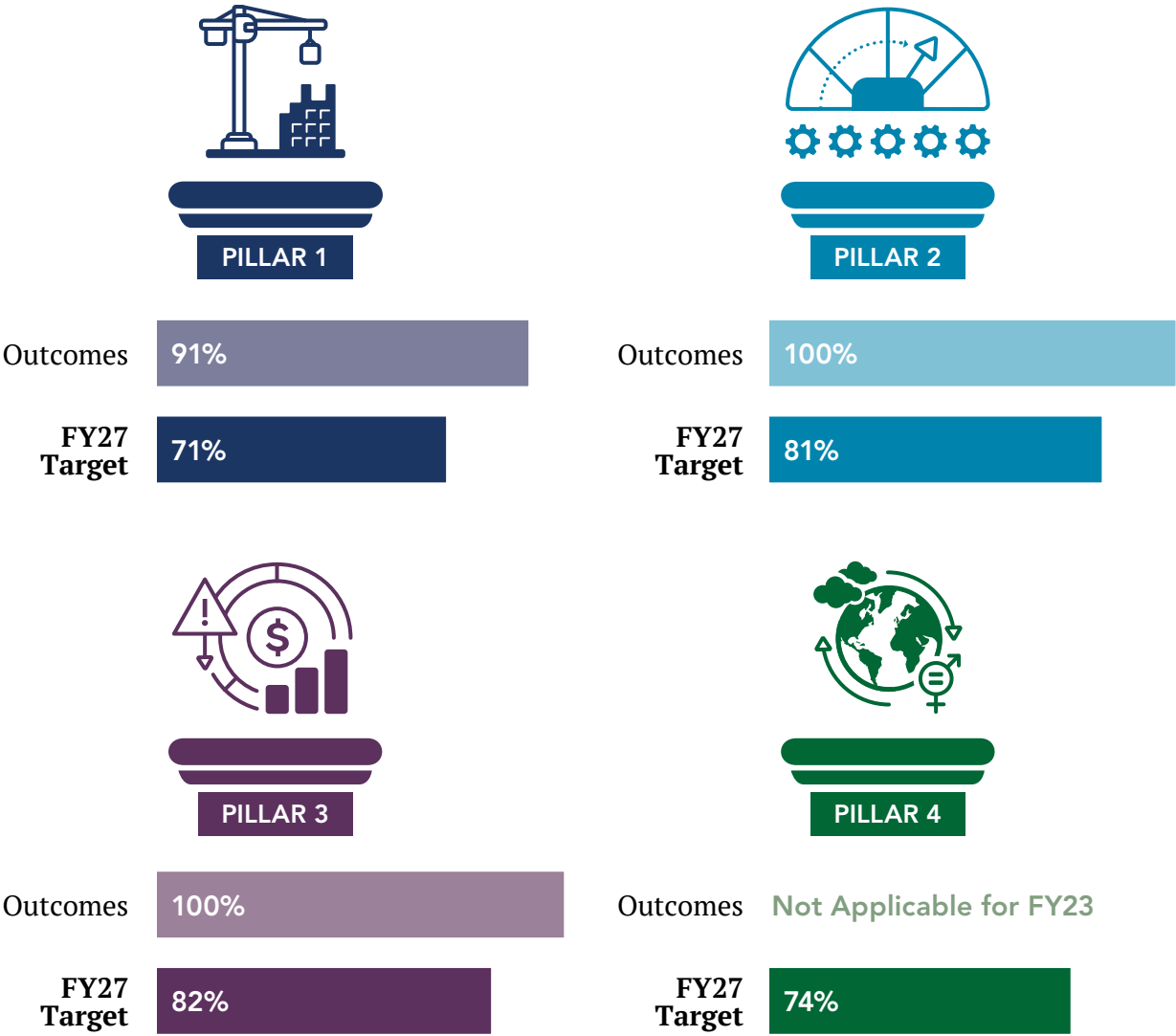
- Pillar 1: Improving competition, efficiency and accountability in infrastructure markets
- Pillar 2: Accelerating PPI program development and implementation
- Pillar 3: Reducing risk, increasing funding and financing in PPI programs
- Pillar 4: Mainstreaming climate and equity

The first pillar focuses on supporting the development of policies, plans, and regulations to promote open markets, increased competition, adoption of technology and digitalization, and greater efficiency

and accountability. The second pillar aims to accelerate the “conversion rate” of initiatives into capital mobilization and improved infrastructure services. This is done by providing tailored support to build frameworks, capacity, and institutions to develop PPP projects. The third outcome pillar supports country clients in reducing PPI risks and diversifying infrastructure financing sources, for example, through improved creditworthiness, alternative financing mechanisms, and long-term local currency financing. Pillar 4 aims to increase climate adaptation, climate mitigation, biodiversity protection, and gender equity in privately delivered infrastructure, particularly within fragile countries.

PPIAF measures progress towards interim outcomes, collects lessons learned, and applies those lessons in designing new grants, thus closing the feedback loop. Results for interim outcome indicators are collected through post-completion reviews 24–36 months after the activity's completion (the outcome realization process). In FY23, PPIAF reviewed 25 activities concluded in FY20 (50 percent of the FY20 portfolio), a representative sample totaling an investment of \$6.4 million. For 88 percent of the activities reviewed, the interim outcomes were achieved satisfactorily, a significant achievement. The Interim Outcome of activities under Pillar 1 had a 91 percent success rate; 11 activities were reviewed across all sectors, including three activities in telecommunication. One hundred percent of the activities falling under Pillars 2 and 3 were successful, with 12 activities reviewed in total.

Percent of PPIAF activities reviewed in FY23 that were effective in meeting their interim outcomes



At the outcome level, PPIAF monitors the progress of its client countries in terms of the volume of private investment in infrastructure and the number of PSP transactions. PPIAF also monitors and evaluates its contributions toward an improved

enabling environment for PSPs at the interim outcome level. At the development impact level, PPIAF uses open-source data to track progress in infrastructure availability across 35 countries in the energy, transport, and water sectors.

OBJECTIVE:	Accelerated universal access to infrastructure services through private participation, in particular in climate-smart infrastructure		TARGET 20/35
	Number of “PPIAF Impact Countries” (ICs) with acceleration in the availability of water, transport, energy and communications infrastructure	Number of ICs with acceleration in the access to and use of renewable energy sources	

HIGHER LEVEL OUTCOME:	Accelerated PPI investment in infrastructure in ICs, in particular in climate-smart infrastructure			
PPI investment volume in ICs (US\$, millions)	Number of PPI projects in ICs which reached financial close	Number of PPI projects in Universally Paris Aligned infrastructure sub-sectors in ICs	PPI investment volume in Universally Paris Aligned infrastructure sub-sectors in ICs (US\$, millions)	
TARGET 5.5%*	TARGET 6%*			

OUTCOME:	Governments in PPIAF impact countries are systematically able to, and are adopting policies, regulations and programs that improve the enabling environment for private participation in infrastructure.		
	Number of ICs that are improving their PPP enabling environment score		TARGET 24/35

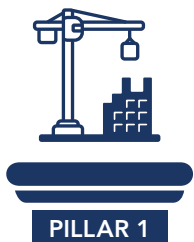
INTERIM OUTCOMES

TECHNICAL ASSISTANCE OUTPUTS:	High-quality technical advice on private sector investment in infrastructure is delivered to client country satisfaction.		
High-quality technical advice on engaging the private sector in a manner that supports climate resilience and environmental sustainability is delivered to client country satisfaction.	Gender analysis is incorporated in the final TA.		TARGET 97%

KNOWLEDGE OUTPUTS:	High-quality knowledge products on private sector investment in infrastructure prepared and shared to demonstrate how private sector investment in infrastructure can add value.		
High-quality knowledge product on engaging the private sector in a manner that supports climate resilience and environmental sustainability successfully passed the World Bank’s review process.	Gender analysis is incorporated in the final knowledge product.		TARGET 93%

* Percentage per year compound interest

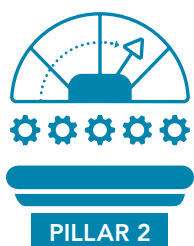
INTERIM OUTCOMES



PPIAF improves competition, increases efficiency and accountability, and further opens infrastructure markets to private participation.

Governments adopt policies, plans and regulations to promote open private participation markets, increased competition, adoption of technology & digitalization, and greater efficiency and accountability.

TARGET
71%



PPIAF supports PPP upstream policy and program development & builds capacity of PPI ecosystem actors.

Governments introduce and improve PPP institutional frameworks accelerating capital mobilization.

PPIAF accelerates PPP program development and implementation, strengthening capacity and PPP institutions along the way.

Ecosystem actors enhance their capacity to manage PPI programs through training, access to knowledge, tools and scalable platforms.

TARGET
81%



PPIAF supports the development of financing tools for infrastructure, helps reduce risks in PPI programs, helps to increase creditworthiness of contracting authorities & supports program development for long-term local currency financing.

Governments diversify sources of financing for infrastructure services by (1) generating alternative public benefits, (2) reducing PPI risks, (3) improving SOE and municipal creditworthiness and developing long-term local currency financing.

TARGET
82%



PPIAF mainstreams climate and equity in PPI programs.

Governments adopt policies, plans and regulations for greater climate mitigation, adaptation and resilience building; and promotes biodiversity and equity in privately delivered infrastructure

TARGET
74%

FY23 RESULTS IN A NUTSHELL

PPIAF plays a major role in catalyzing private investment

This year, PPIAF played a pivotal role in catalyzing substantial private capital for infrastructure projects through its upstream support to four transactions—three of which reached financial close. PPIAF catalyzed a total of \$1.76 billion in private investment. In June 2023, the Lao PDR transaction only reached commercial closure; and due to the confidential nature of the transaction in West Africa the final figure cannot be officially confirmed.

In the last six years, PPIAF activities catalyzed over \$11 billion in private investment. These successes demonstrate how PPIAF fulfills its mandate to accelerate private participation in emerging markets infrastructure, aligning with Pillars 1, 2, and 3 of the Renew Strategy.

In Angola, PPIAF backed the \$1.1 billion Bita Water Supply Guarantee Project, which mobilized \$910 million in private capital. This project set records as the World Bank’s largest guaranteed financing and the first IBRD water sector guarantee. In Ethiopia, PPIAF helped establish the telecom regulatory authority ECA, underpinning the sector’s liberalization. ECA has since issued licenses enabling major private investment, including \$8 billion pledged by Safaricom. In Lao PDR, PPIAF supported reforms allowing private participation in the power sector, including a 25-year transmission concession deal with China Southern Power Grid expected to catalyze \$2 billion in investment. In West Africa, PPIAF helped structure an innovative PPP for a fiber optic cable involving \$33 million in private financing.

PPIAF’S CATALYZING PRIVATE INVESTMENT AT A GLANCE



\$910M
Mobilized
in Angola



\$850M
Mobilized
in Ethiopia

\$1.76B
Total
Mobilized



These examples show that PPIAF drives open, competitive infrastructure markets and supports pioneering transactions that crowd in significant amounts of commercial finance. These results were facilitated through PPIAF’s specialized expertise and experience in creating the conditions for private sector participation.

Angola Bitá Water Project



Ethiopia ICT Sector Support





Implementing PPIAF's Renew Strategy

Under this first year of implementation of PPIAF's Renew Strategy, the Results Framework has been refined to better reflect the full depth of what is being achieved and better aligned with the PPIAF strategy. Each level of the Results Framework is assigned specific indicators—these are specific markers that measure the achievement of inputs, outputs, outcomes, and impact of PPIAF's work. Under the FY23 outcome realization exercise, PPIAF results were reported against the Renew Strategy for the first time. The indicators for the interim outcome level of Pillars 1, 2, 3, and 4 of the Results Framework were revised to ensure proper reporting of detailed results at both the national and subnational levels.

This year's highlights across Pillars 1 and 2 include the strengthened capacity of five institutions, as well as the training of nearly 300 government officials in preparing, selecting, and managing projects with private sector participation. PPIAF support was essential to build consensus among stakeholders on five PPP reforms and market liberalization.

Finally, PPIAF support supported the adoption of two PPI regulations: in Lao PDR, PPIAF supported the adoption of the Electricity Law enacted in August 2018, and in Ethiopia PPIAF supported the creation of the Ethiopian regulation Authority (Communications Service Proclamation No. 1148/2019).



PILLAR 1

Improving competition, efficiency, and accountability in infrastructure markets

INTERIM OUTCOME	SECONDARY INDICATORS	TOTALS
Governments adopt policies, plans and regulations to promote open private participation markets, increased competition, adoption of technology & digitalization, and greater efficiency and accountability.	Institutions created/strengthened	5
	Sector-specific policies adopted, legislation passed/amended, or regulation issued/revised	2
	Consensus built on market creation/liberalization	4
	Number of stakeholders (government officials, civic group representatives) trained	191
	Number of women trained	34
	Count of transaction with private sector that reached financial close	1
	Private financing leveraged (in millions, USD)	850



PILLAR 2

Accelerating PPI development and implementation

INTERIM OUTCOME	SECONDARY INDICATORS	TOTALS
Governments introduce and improve PPP institutional frameworks accelerating capital mobilization.	PPP Institutions created/strengthened	1
	PPP policies adopted, legislation passed/amended, or regulation issued/revised	1
	Consensus built on PPP reforms	1
Ecosystem actors enhance their capacity to manage PPI programs through training, access to knowledge, tools and scalable platforms.	Number of PPP pipelines developed	0
	Number of stakeholders (government officials, civic group representatives) trained to prepare, procure and manage PPI projects	99
	Number of women trained to prepare, procure and manage PPI projects	8
	Number of PPP knowledge products/tools/platforms developed	6
	PPP transactions supported that materialized	1
	Amount of transactions (in millions, USD)	0*

* Due to the confidential nature of the transaction, the final figure cannot be confirmed and therefore not included in the Results Framework.

PPIAF shows strong results for activities falling under Pillar 3. Under this pillar, at the subnational level, PPIAF strengthened the capacity of 13 institutions and trained nearly 700 government officials. In Columbia, PPIAF supported the adoption of two regulations to enable the development of Tax Increment

Financing (TIF), introduced in the Colombia National Development Plan 2018–2022 (Ley 1955/19). PPIAF worked with subnational entities in Vietnam and Ukraine, and as a result eight credit ratings were issued. Two subnational entities in Angola and Mali improved their creditworthiness with PPIAF support.



PILLAR 3

Reducing risk, increasing funding, and financing in PPI programs

INTERIM OUTCOME	SECONDARY INDICATORS	TOTALS
Governments diversify sources of financing for infrastructure services by (1) generating alternative public benefits, (2) reducing PPI risks, (3) improving SOE and municipal creditworthiness and developing long-term local currency financing.	Policies adopted, legislation passed/amended, or regulation issued/revised	2
	Plans/strategies adopted by national and subnational entities towards diversifying source of funding and enhancing access to finance	1
	Number of PPI programs which fiscal risks are managed/reduced	0
	Number of projects financed via novel financing instrument or enabling through guarantee and source of funding	1
	USD amount of projects financed via novel financing instrument or enabled through guarantee and innovative source of funding/financing mechanism	910
	Number of national stakeholders (government officials, civic group representatives) trained	683
	Number of women trained	0
	Amount of financing leveraged without sovereign guarantee (in millions, USD)	0
	Number of subnational financing projects developed	0
	Number of credit ratings produced for subnational entities	8
	Number of subnational/national entities whose capacity was strengthened	13
	Number of subnational entities creditworthiness improved	2



PILLAR 4

Mainstreaming climate and equity

INTERIM OUTCOME	SECONDARY INDICATORS
<p>Governments adopt policies, plans, and regulations for greater climate mitigation, adaptation, and resilience building; and promotes biodiversity and equity in privately delivered infrastructure.</p>	Number of countries that adopted the Climate Toolkit for Infrastructure PPPs
	Number of clients who adopted PPIAF recommendations to meet their climate adaptation policy targets. Examples: NDC, long-term strategies, national adaptation plans
	Number of clients who adopted PPIAF recommendations to meet their biodiversity commitments and policy targets (e.g., adoption of the Post-2020 Global Biodiversity Framework)
	Number of climate resilience-building PPI transactions
	USD amount of climate resilience-building PPI transactions
	Number of low-carbon PPI transactions
	USD amount of low-carbon PPI transactions
	Number of biodiversity-positive PPI transactions
	USD amount of biodiversity-positive PPI transactions
	Number of entities enabled to access climate funds
	Number of entities enabled to access biodiversity funds
	Number of national entities that introduced dedicated climate adaptation and mitigation units
	Number of national entities that strengthen their capacity to improve eligibility for climate finance
	Number of subnational entities that strengthen their capacity to improve eligibility for climate finance
	Number of entities that strengthen their capacity to improve eligibility for biodiversity finance
	Number of stakeholders (government officials, civic group representatives) trained in climate
Number of stakeholders (government officials, civic group representatives) trained in biodiversity	
Number of Paris-Aligned World Bank/MDB projects informed by PPIAF assistance	

ANNEX 1

PROGRAM FINANCES

FY23 Contributions

MDTF	FY23
Australia (DFAT)	\$5,513,600
Netherlands	\$2,000,000
Switzerland (SECO)	\$3,500,000
Total	\$11,013,600

CRITICAL UPSTREAM (G7)	FY23
Germany (BMZ)	\$3,169,800

FY23 Balance Position

INFLOWS (US\$, millions)	
Beginning Cash Balance FY23	12.98
Donor Receipts FY23	14.18
Investment Income	1.35
Reflows	4.54
Total Inflows	33.06
OUTFLOWS (US\$, millions)	
Transfer to Programming Activities	14.60
Transfer to PMU FY23 Budget	2.41
Transfer to PMU FY24 Budget	1.19
Umbrella MDTF Admin Fee	0.57
Total Outflows	18.77
Ending Cash Balance FY23	14.30
CALLS ON BALANCE* (US\$, millions)	
Umbrella MDTF Admin Fee Liability	1.71
Activities Pending Grand Funding Request	3.20
Total Calls on Balance	4.91
Cash Balance (Net of Calls of Balance) End of FY23	9.39
ACTIVITY LEVEL USES (US\$, millions)	
Program Activity Disbursements	12.07
PMU Expenses, including indirects	2.36
Total Disbursements	14.43
Program Activity Commitments	6.44
PMU Commitments	0.05
Total Commitments	6.48
Program Activity Available Balance	13.51
PMU Available Balance	1.19
Total Available Balance	14.70



ANNEX 2

ACTIVITIES APPROVED IN FY23

PILLAR 1

Improving competition, efficiency, and accountability in infrastructure markets.

COUNTRY: ACTIVITY TITLE	SECTOR	AMOUNT
Indonesia: Port Tariff Reform in Indonesia	Transport	\$150,000
Cambodia: Support to Development of a Framework for Sustainable Piped Water Supply (PWS) Expansion with PSP in Cambodia	Water & Sanitation	\$150,000
Kenya: Expanding Access to Decentralized Sanitation Services through Private Sector Participation	Water & Sanitation	\$300,000
South Sudan: Technical Assistance and Capacity Building for the Ministry of Information, Communication, Technology and Postal Services	Telecoms	\$299,500
Bangladesh: Maritime Port Sector Reform	Transport	\$150,000
Jordan: Support to Government of Jordan for Solid Waste Management	Water & Sanitation	\$200,000
Indonesia: Railways Sector Improvement in Jakarta	Transport	\$100,000
Global: Private Sector Participation through Operations Concessions in Electricity Distribution	Energy	\$200,000
Mozambique: Power Sector Transition and Reform	Energy	\$300,000
Colombia: Support to the Government of Colombia to Devise a Pilot Model of Connectivity in a Remote Region	Telecoms	\$160,000
India: Attracting Private Participation in Urban Services in Hyderabad	Multi-Sector	\$200,000
Benin: Sustainable Urban Mobility Project in Grand Nokoué	Transport	\$290,000
Cross-Regional: Analysis of Innovative Private Sector Financing Models for Expansion of Digital Public Infrastructure	Telecoms	\$259,450
Cross-Regional: South-South Academia Cooperation — Establishment of a Sustainable Knowledge Sharing Platform to Explore PSP in Transport Sector with SSA Universities	Transport	\$250,000
Kazakhstan: Support to the Government of Kazakhstan for ICT Sector Strategy as it Relates to Attracting PPI	Telecoms	\$207,500
Peru: Informing Private Sector Mobilization for Smart Traffic Management in Lima	Transport	\$150,000
Lebanon: Designing Alternative Electricity Distribution Models	Energy	\$150,000

PILLAR 2

Accelerating PPI program development and implementation.

COUNTRY: ACTIVITY TITLE	SECTOR	AMOUNT
Ecuador: Support to Implement PPP Legal Framework in Ecuador	Transport	\$150,000
Congo, Democratic Republic of: Identifying Low-Carbon Public Private Partnership Opportunities for Rural and Peri-Urban Water Supply in DRC	Water & Sanitation	\$100,000
Ghana: Technical Assistance on Mobilizing Private Capital to Bus Rapid Transits (BRTs) in Kumasi	Transport	\$250,000
Malawi: Support in Development of PPP Regulations, Guidelines and Project Development Fund	Multi-Sector	\$300,000
Vietnam: Private Sector Participation in Solid Waste Management	Water & Sanitation	\$300,000
Jordan: Support the Government of Jordan to Establish a Tolling Policy	Transport	\$150,000
Nepal: Support to PPP Program (Phase 2)	Multi-Sector	\$140,000
Ecuador: Support to Government of Ecuador for the Establishment of Solid Waste Management Regional Project	Water & Sanitation	\$75,000
Timor-Leste: Airport Project Specific Decree	Transport	\$75,000
Global: PPP Regulatory Reforms and Sustainability	Multi-Sector	\$100,000
Global: PPPLRC Fiscal Year 2023 Support	Multi-Sector	\$100,000
Cross-Regional: ECOWAS PPP Phase II Support	Multi-Sector	\$350,000
Ukraine: Support to Strengthening Reconstruction & Resilience through Private Participation in Infrastructure	Multi-Sector	\$303,500
Togo: PPP Program Support – Institutional Strengthening and Capacity Building Support	Multi-Sector	\$300,000
Global: PPP Certification 2.0 – Country Support	Multi-Sector	\$100,000
Dominican Republic: Support to Government of Dominican Republic for the Introduction of Road Maintenance Contracting Models (CREMA) Pilot Program	Transport	\$125,000
Indonesia: Engagement of Private Sector for Irrigation Operation and Management	Water & Sanitation	\$150,000
Philippines: Options and Impacts Study for Piloting High-Quality Bus Services (QBS) in Metro Manila	Transport	\$500,000
Tanzania: Strengthening of the PPP Institutional Framework and Preparation of the PDF	Multi-Sector	\$320,000
Peru: Support to the Government of Peru to Enhance its Capacity in PPP Infrastructure Project Preparation and Implementation	Multi-Sector	\$150,000

PILLAR 3

Reducing risks in PPI programs and increasing creditworthiness of public counterparties.

COUNTRY: ACTIVITY TITLE	SECTOR	AMOUNT
Cambodia: Strengthening the PPP Fiscal Risk Management Framework	Multi-Sector	\$120,000
Pakistan: Unlocking Access to Land in Khyber Pakhtunkhwa through Better Public Land and Building Asset Management	Multi-Sector	\$200,000
Global: Suite of Fiscal Commitments and Contingent Liabilities (FCCL) Identification and Assessment Related Tools (PFRAM 3.0)	Multi-Sector	\$100,000
India: Enhancing Punjab Cities' Access to Private Financing for Water Supply — Phase 2	Water & Sanitation	\$205,000
Jordan: Support to Jordan Ministry of Finance in Evaluation of Fiscal Risks from Energy Sector Projects	Energy	\$160,000

PILLAR 4

Mainstreaming resiliency, equity and climate co-benefits.

COUNTRY: ACTIVITY TITLE	SECTOR	AMOUNT
South Africa: Zero-Carbon Shipping — South Africa Port & Fuel Storage Assessment and Port Tool Kit Update	Transport	\$200,000
Morocco: Zero-Carbon Shipping — Morocco Port & Fuel Storage Assessment	Transport	\$150,000
Bangladesh: PPPs Under the Dhaka Rivers Ecological Restoration Project	Water & Sanitation	\$150,000
Cross-Regional: Options for Private Sector Solutions for Coastal Infrastructure in West Africa	Multi-Sector	\$400,000
Indonesia: E-mobility in the Jakarta Region	Transport	\$300,000
Colombia: Zero-Carbon Shipping — Colombia Port & Fuel Storage Assessment	Transport	\$150,000
Indonesia: Green Finance Facility for Renewables	Energy	\$350,000
Djibouti: Renewable Energy Access Project	Energy	\$300,000
Jamaica: Support the Government of Jamaica in Developing a Non-Revenue Water Program	Multi-Sector	\$200,000



ANNEX 3

REVIEWED ACTIVITIES

REGION	SECTOR	ACTIVITY	TOTAL APPROVED
LAC	Multi-Sector	Colombia: Financing Infrastructure for Urban Redevelopment Subnational Technical Assistance Program – Phase II	\$600,000
SSA	Transport	Cross-Regional: Leaders in Urban Transport Planning – Cities Needs Analysis Workshop	\$114,145
Cross-Regional	Energy	Cross-Regional: Leveraging the Existing Regional Energy Infrastructure to Improve Internet Connectivity in Mali, Mauritania, and Senegal through Private Sector Participation (Phase II)	\$610,000
Cross-Regional	Multi-Sector	Cross-Regional: Maghreb Infrastructure Diagnostic (MID)	\$400,000
SSA	Telecoms	Ethiopia: ICT Sector Support	\$99,500
Global	Multi-Sector	Global: Assessing Direct and Indirect Public Investment in Infrastructure in Low and Middle-Income Countries	\$150,000
Global	Multi-Sector	Global: Guidance on PPP Contractual Provisions, 2019 Edition	\$125,000
Global	Transport	Global: Guidebook on PPP Railway Station Redevelopment	\$180,000
Global	Multi-Sector	Global: Operational Guidebook and Training Module for Municipal Administrators on Property Tax Reform	\$200,000
Global	Energy	Global: Private Financing of Loss Reduction and Efficiency Improvement of Electricity T&D Enterprises in Developing Countries	\$125,000
Global	Multi-Sector	Global: Strategic Partnership on Islamic Finance & Infrastructure PPPs	\$200,000
MENA	Transport	Jordan: Private Sector Participation in Jordan's Road Sector: Support for Amman Ring Road Development Corridor Phase 2 in the context of Jordan Roads InfraSAP	\$86,300
SSA	Water & Sanitation	Kenya: Component 1 of the Financing Universal Access to Water Supply and Sanitation-Kenya Country Assessment	\$135,000

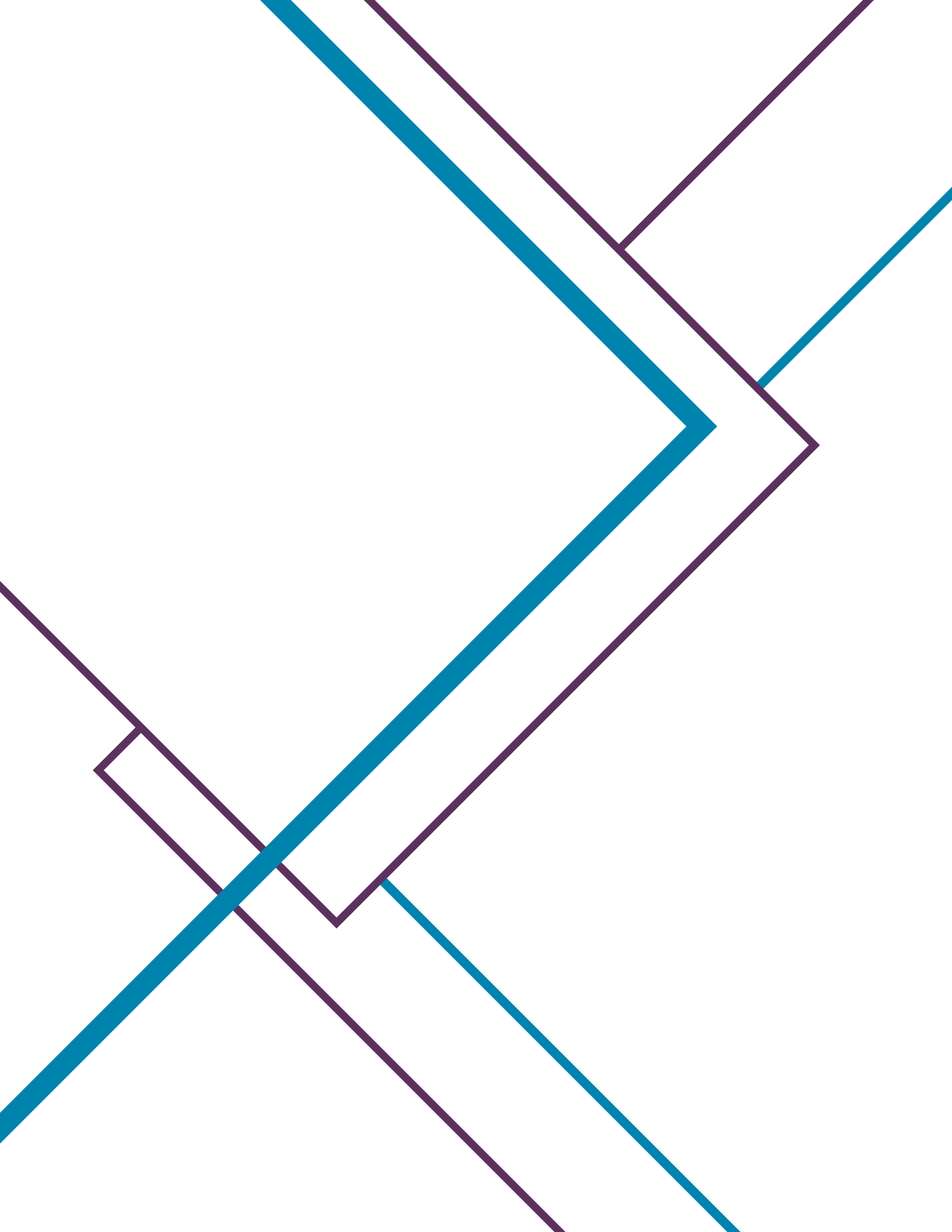
REGION	SECTOR	ACTIVITY	TOTAL APPROVED
EAP	Energy	Lao PDR: Sustainable Hydropower Development and Integrated Water Resource Management	\$740,000
SSA	Energy	Mali: Revitalizing the Energy Sector through Enhanced Private Sector Participation	\$375,000
MENA	Multi-Sector	Morocco: Strengthening Municipal Finance through Improved Creditworthiness, Better Performance Management, and Tailored Urban Financing	\$200,000
SAR	Water & Sanitation	Pakistan: Water Resources Option Study for Karachi	\$100,000
EAP	Energy	Papua New Guinea: Support to Private Sector Participation in Sustainable Hydropower Development	\$371,007
LAC	Water & Sanitation	Peru: Component 1 of the Financing Universal Access to Water Supply and Sanitation	\$100,000
SSA	Transport	Sierra Leone: Enhancing Efficiency and Private Sector Participation in Sierra Leone Road Transport Corporation (SLRTC)	\$150,000
SSA	Telecoms	Somalia: Supporting ICT Sector and Broadband Connectivity in Somalia Using PPP (Phase 2)	\$406,790
SSA	Multi-sector	Uganda: City Creditworthiness Initiative – Implementation of Action Plans for Selected Ugandan Local Authorities	\$400,000
SSA	Water & Sanitation	Uganda: National Water and Sewerage Corporation – Support in Preparing for Market Finance	\$340,000
ECA	Transport	Ukraine: Assistance to Carry Out a Credit Rating of the City of Mariupol	\$50,000

ACRONYMS & ABBREVIATIONS

ACUI	Africa Critical Upstream Initiative	JIT	Just-In-Time grant
BESS	Battery Storage Energy Systems	LAC	Latin America and the Caribbean Region
CCAP	Climate Change Action Plan	LLC	Life-cycle Costing
CREST	Climate Resilience and Environmental Sustainability Technical Advisory	M&E	Monitoring and Evaluation
DRM	Disaster Risk Management	MDB	Multilateral Development Bank
EAP	East Asia and Pacific Region	MDTF	Multi-Donor Trust Fund
ECA	Europe and Central Asia Region	MENA	Middle East & North Africa Region
ECOWAS	Economic Community of West African States	MOOC	Massive Open Online Course
ESCO	Energy Service Company	NRW	Non-revenue Water
ESMAP	Energy Sector Management Assistance Program	PBC	Performance-based Contract
FCV	Fragility, Conflict, and Violence	PGII	Partnership for Global Infrastructure and Investment
GHG	Greenhouse Gas Emissions	PIDG	Private Infrastructure Development Group
GIF	Global Infrastructure Facility	PPIAF	Public-Private Infrastructure Advisory Facility
G20	The Group of 20 (a group of the world's major economies)	PPI	Private Participation in Infrastructure
GRID	Green, Resilient, Inclusive Development	PPP	Public-Private Partnership
ICT	Information and Communications Technology	PSP	Private Sector Participation
IFC	International Finance Corporation	QII	Quality Infrastructure Investment
IPG	Infrastructure Finance, PPPs & Guarantees Global Practice	SAR	South Asia Region
JICA	Japan International Cooperation Agency	SDGs	Sustainable Development Goals
		SOE	State-owned Enterprise
		SSA	Sub-Saharan Africa Region
		TDLC	Tokyo Development Learning Center

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