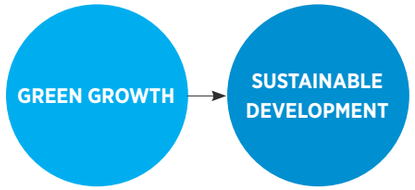
World Bank Group

Korea Green Growth Trust Fund

Annual Report 2017–18

THE WORLD BANK GROUP AND REPUBLIC OF KOREA PARTNERSHIP

The World Bank Group was established in 1944 with the mission to provide infrastructure funding and technical expertise to countries unable to qualify for loans and lacking in technical experience. Over the years its role in the world has expanded and it is now focused on the dual goals of reducing poverty and promoting shared economic prosperity. Because of its global presence and wide range of technical expertise, the World Bank Group is uniquely positioned to identify innovative solutions to development challenges being applied around the world and to share these solutions with other countries facing similar challenges.



What is Green Growth?
We define Green Growth as a comprehensive innovative framework to achieve sustainable development and mitigate the impact of climate change. By promoting sector integration and leveraging technical expertise, green growth investments can support job creation, increase resilience to extreme weather events and drive long-term sustainable economic growth.

In 2011, the World Bank Group and the Republic of Korea agreed to work together to support developing countries as they shift to a "green" development pathway that reduces poverty while mainstreaming the ability of future generations to meet their own goals for economic growth and environmental protection.

Korea's visionary leadership in green growth policies, integration of ground-breaking technologies, and long-term sustainable thinking is an inspiring story for governments around the world. Its first-hand experience implementing integrated solutions across the urban, transport, information and communication technology, energy, environment, agriculture and water sectors is highly relevant for countries working to design and implement robust green growth investments and build a sustainable future through green growth.

Under the partnership, the Korea Green Growth Trust Fund (KGGTF) was established to strengthen and expand the World Bank's global green growth portfolio by tapping expertise from Korea's successful experience and investment through public and private resources. Its central approach is to support the World Bank and its clients to operationalize inclusive green growth initiatives, strategies, and investments.

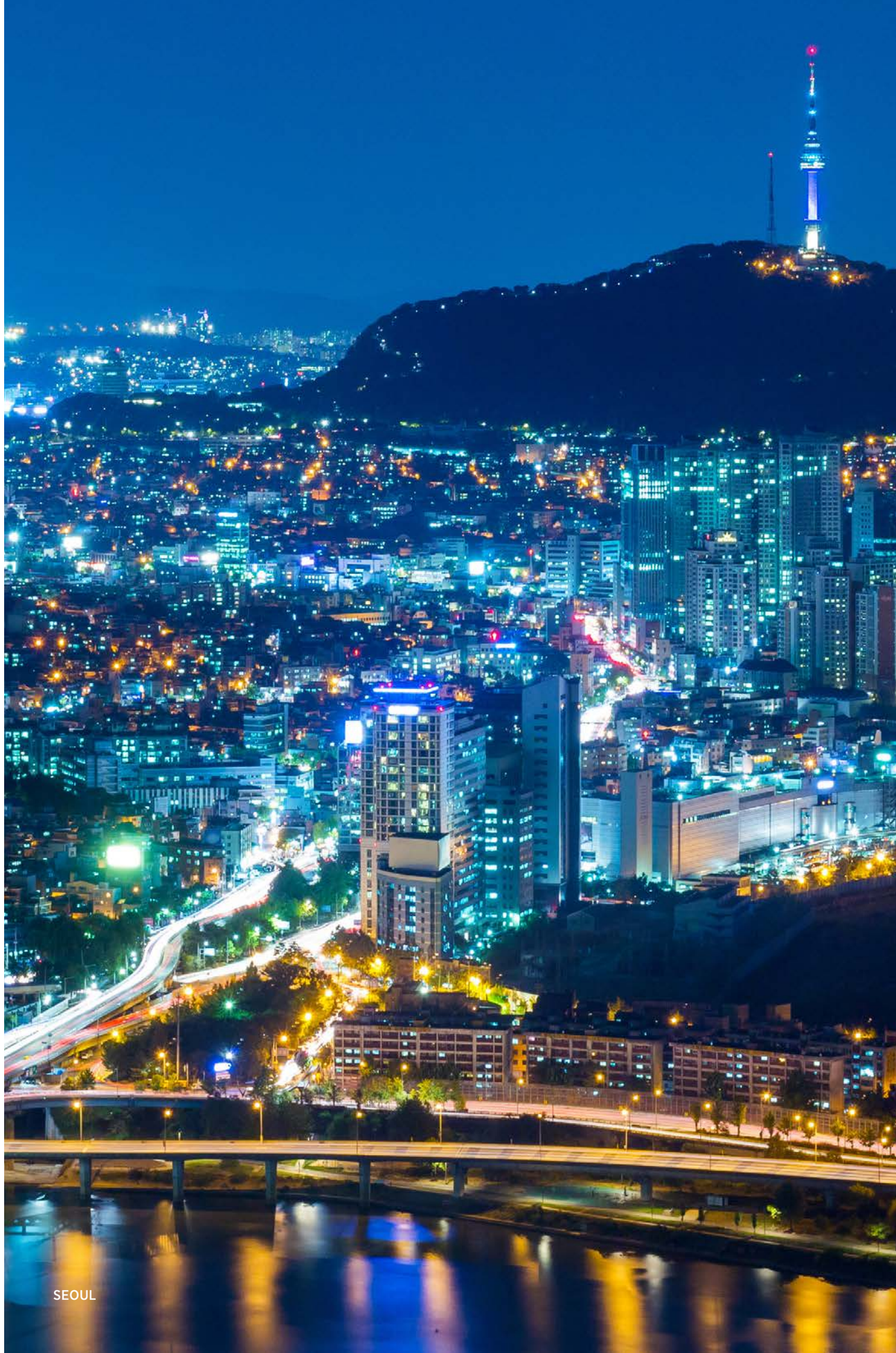
The Republic of Korea is honored to provide leadership to countries adopting green growth strategies to achieve sustainable development.

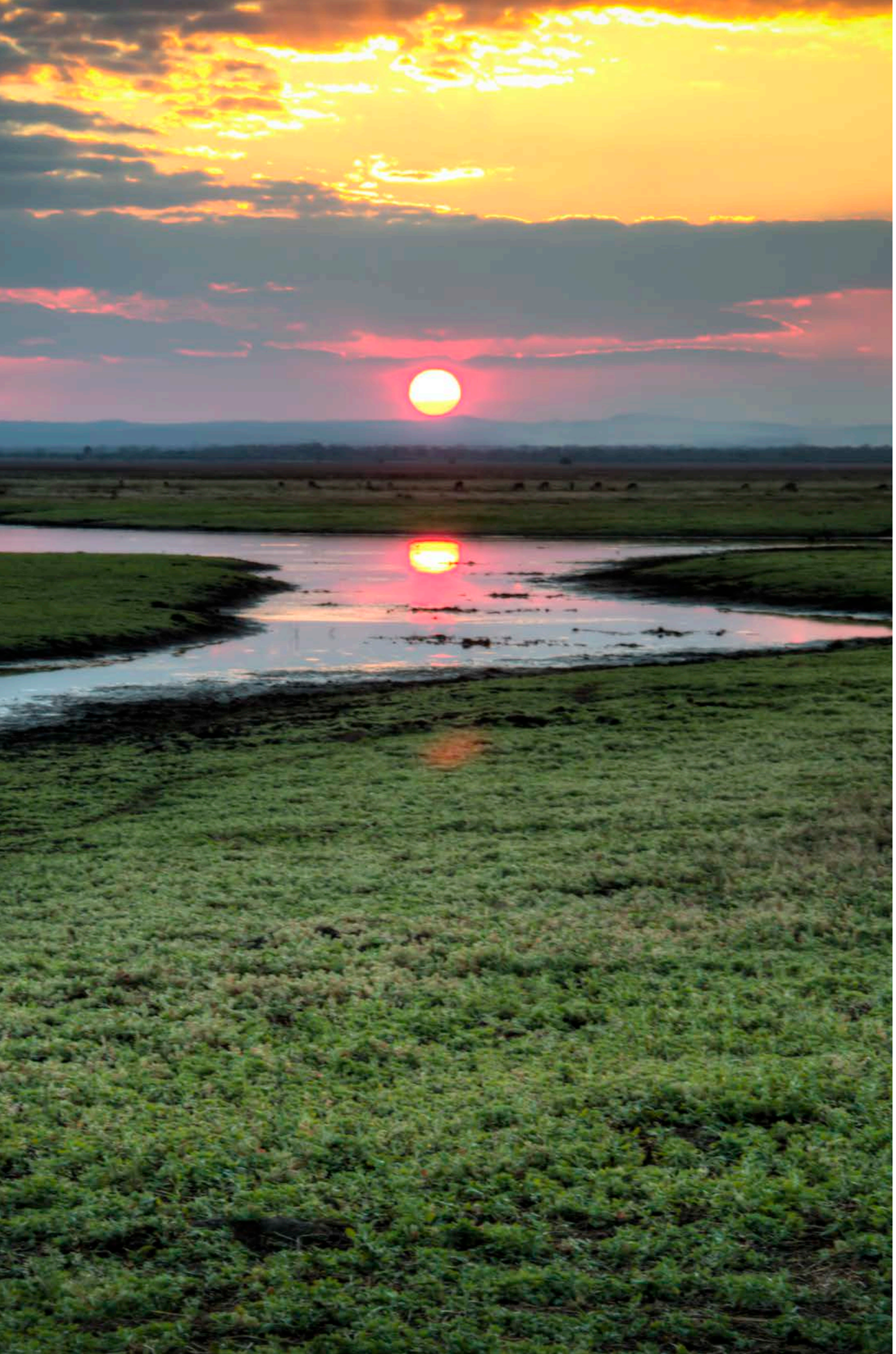
We are proud of our strong partnership with the World Bank, and the impact that is being created by the Korea Green Growth Trust Fund. The objective of the Korea Green Growth Trust Fund is to support World Bank client countries to identify and implement the most innovative, technical and operational solutions to their specific development challenges.

From the beginning, the KGGTF has worked to mainstream inclusive green growth throughout the World Bank's lending operations. This has included the development of a green growth technical knowledge base, and the capacity building of World Bank staff and clients to design and implement robust green growth investments. Through the KGGTF, Korea is sharing evidence-based and practical knowledge globally, and in doing so, it is setting an example for how cities, countries and regions can benefit economically, socially and environmentally from investment in, and commitment to green growth.

Over just a few decades, the Republic of Korea has undergone a complete economic transformation. It is now our great joy to provide financial and technical support to our colleagues around the world, so that they too can grow their economies in a resource-efficient, clean and resilient way, and work towards shared economic prosperity and a safe and sustainable future.

Director Dongjoon Kim
Director of Development Finance Division
Ministry of Economy and Finance (MOEF)
Republic of Korea


SEOUL



It has been an honor and a pleasure to partner with the Government of Korea since the **Korea Green Growth Trust Fund** was established in 2013.

The KGGTF is a tremendous partner and a highly valued thought leader on green growth and sustainable development. Korea's economic success story is a testament to how economic development can be achieved using the framework of green growth and sustainable development. The innovative policies and technical expertise Korea has developed provide relevant examples for other developing countries as they strive towards economic growth and sustainability.

To date, the KGGTF has influenced roughly $13 billion in project lending to World Bank client countries. Perhaps more important, the KGGTF has been transformative in shaping our approach to planning and investments. This is best illustrated by the Decision Making Under Deep Uncertainty (DMDU) framework, now undergirding projects across the World Bank. The KGGTF is greatly appreciated for its generous support of client countries in all aspects of their operational and technical development. The Republic of Korea and the Ministry of Economy and Finance have shown visionary leadership in green growth policies, the integration of groundbreaking governance models and long-term sustainable development plans.

The World Bank looks forward to building on the Trust Fund's accomplishments to date, and continued collaboration in the upcoming years.

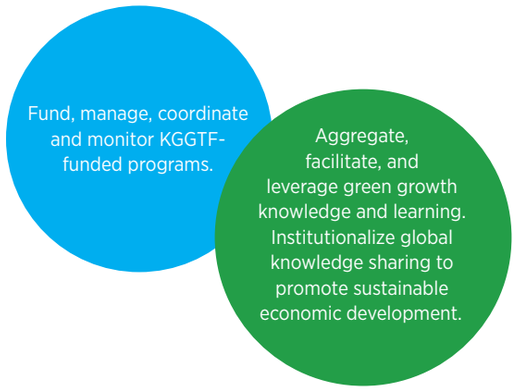
Marianne Fay
Chief Economist
Sustainable Development Group Practice

KGGTF's Role and Approach

KGGTF provides funding, capacity building, and technical assistance to World Bank teams around the world, partnering with client countries as they adopt green growth strategies and plan for their futures. The Trust Fund partners closely with World Bank Global Practices (GPs) as they work with client countries to develop a holistic green growth strategy, and most importantly, implement the projects identified in their strategies.

The programs that the KGGTF supports are transformational. By supporting new methodologies and technologies, investing in innovative approaches, and facilitating learning from around the world, KGGTF-funded activities are operationalizing and mainstreaming green growth through the World Bank's lending operations.

WHAT WE DO



KGGTF PORTFOLIO

KGGTF at a Glance

$88 MILLION FUND

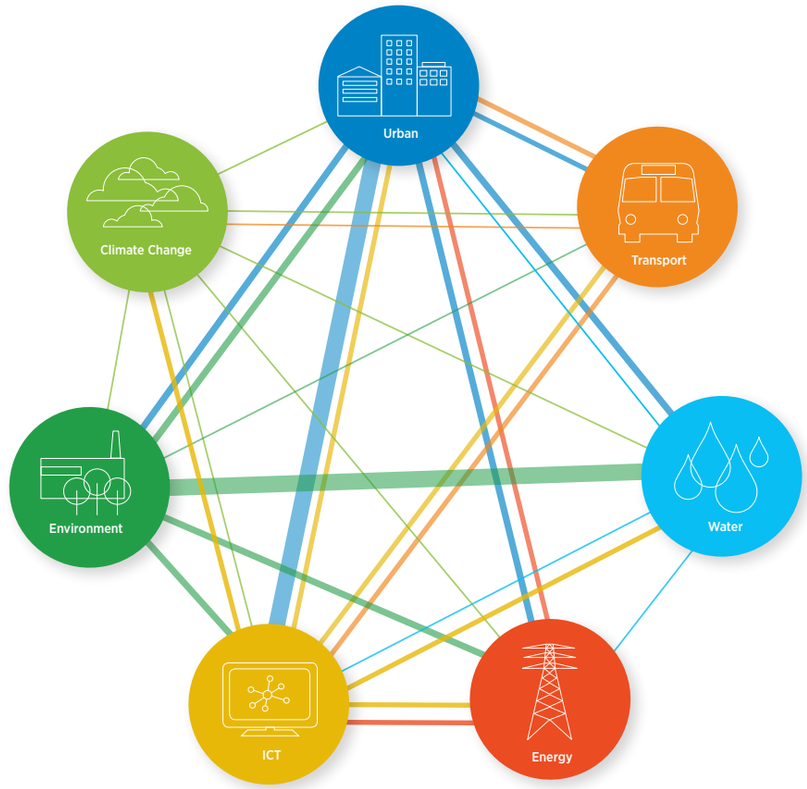
132 GRANTS TO DATE

SECTORS

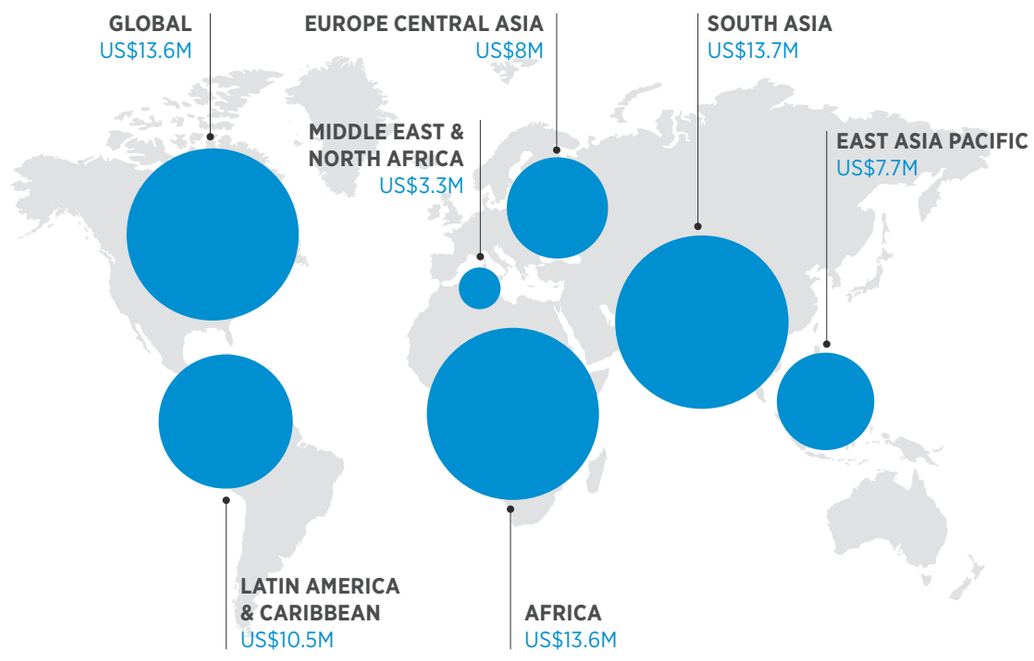
URBAN | TRANSPORT | ENERGY | ICT | ENVIRONMENT | CLIMATE CHANGE | WATER

KGGTF ALLOCATION BY SECTOR

SECTOR INTEGRATIONS



KGGTF ALLOCATION BY REGION



Program Criteria

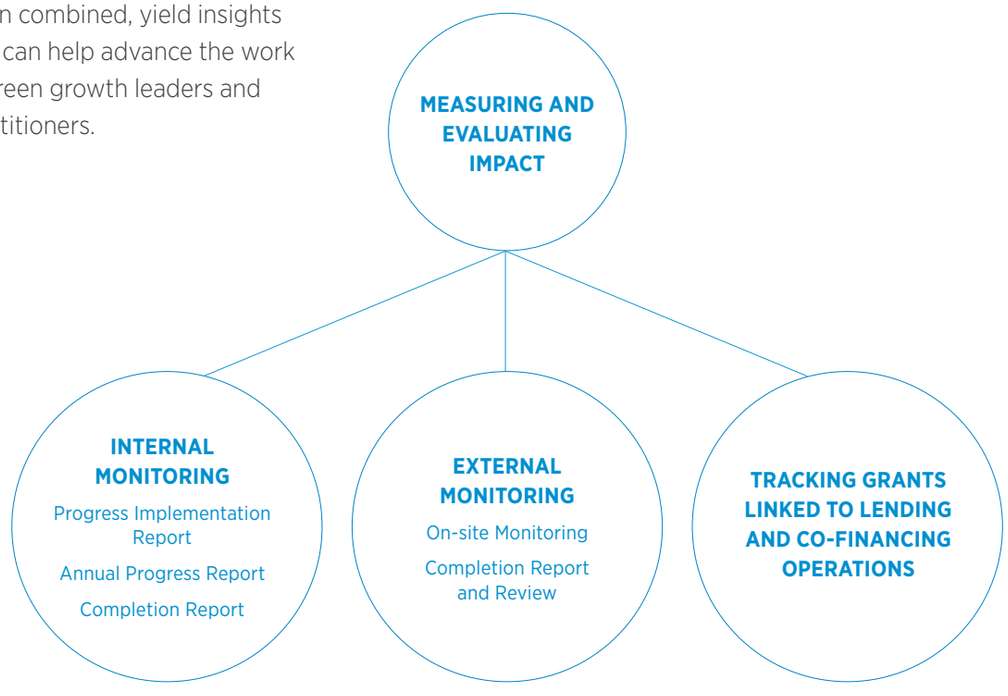
KGGTF prioritizes programs that:

- Focus on low and lower-middle income economies.
- Operationalize green growth and sector integration.
- Outline green policies and programs that increase productivity and create jobs.
- Provide clear and specific technical concepts and activity planning.
- Have the potential to become large-scale projects led by the WBG or client countries.

PHOTO: ©WORLD BANK GROUP

Measuring and Evaluating Impact

We capture learnings and track impact in three ways which, when combined, yield insights that can help advance the work of green growth leaders and practitioners.

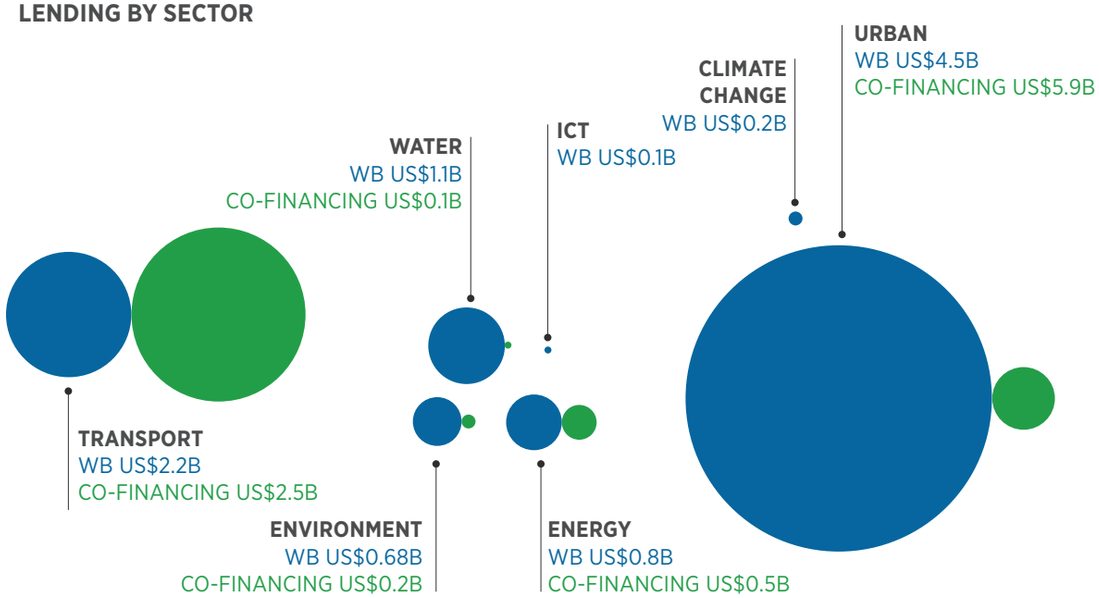


World Bank Lending and External Co-Financing

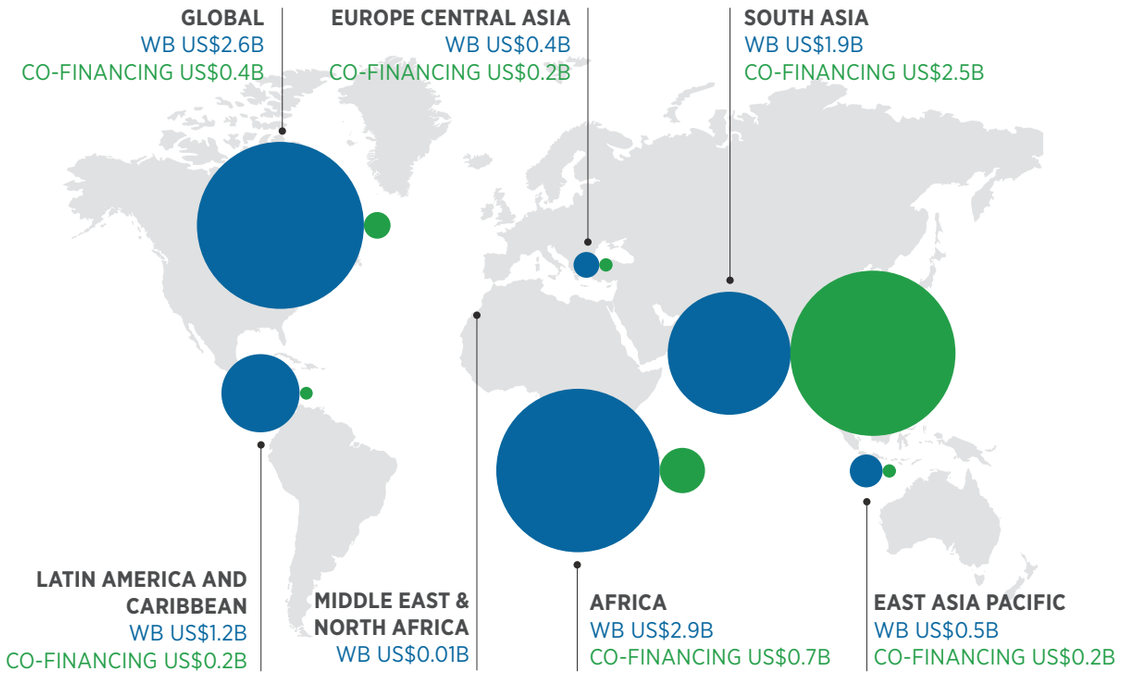
TO DATE **$9 BILLION** LINKED TO WORLD BANK LENDING OPERATIONS

AN ADDITIONAL **$4 BILLION** LINKED TO EXTERNAL CO-FINANCING

LENDING BY SECTOR

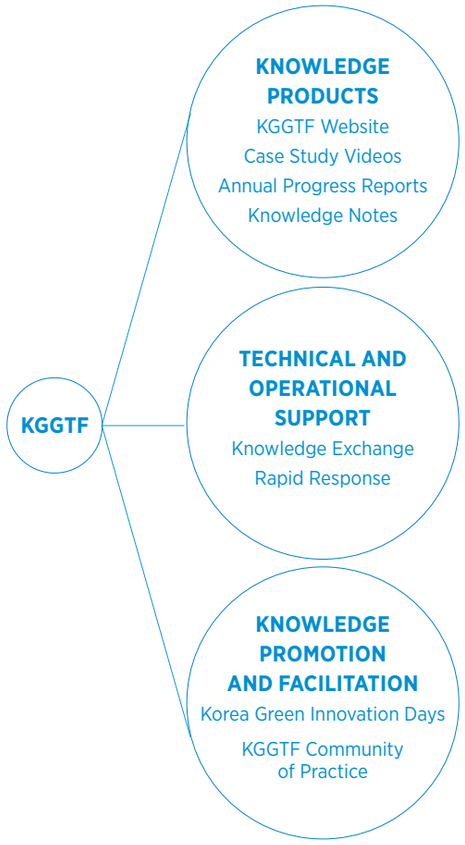


LENDING BY REGION



Supporting Green Growth Knowledge

The KGGTF approach is to operationalize inclusive green growth initiatives, strategies, and investments. We work with country leaders to develop a comprehensive strategy that includes identifying appropriate policies, technical innovations and capacity building requirements to achieve long-term objectives of shared economic prosperity and sustainable development. The Trust Fund finances on-the-ground technical support, knowledge sharing and learning activities. To date KGGTF has approved 132 programs in urban, transport, information and communication technology, energy, environment, water, and climate sectors, with 141 grants supporting these 132 programs.



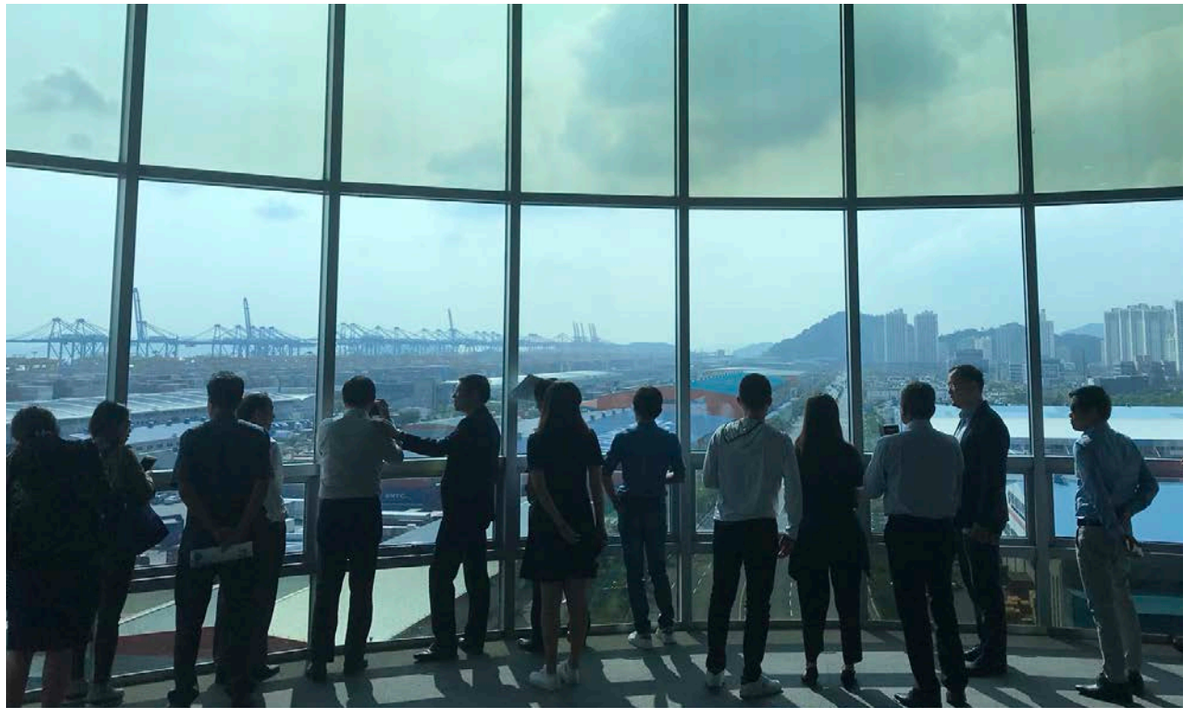


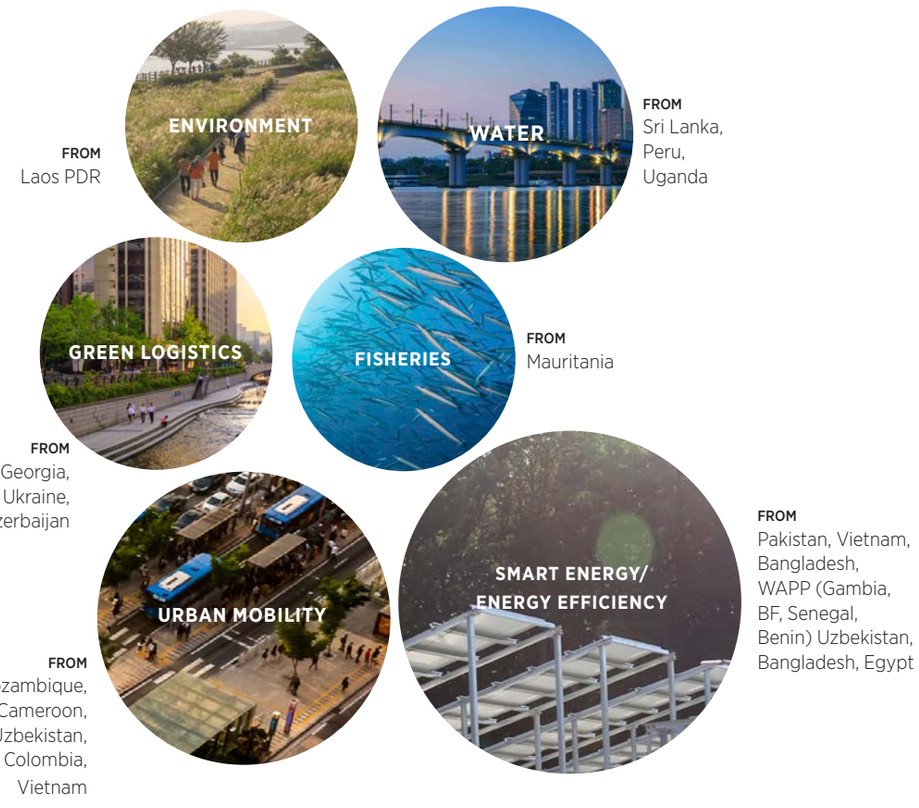
PHOTO: WORLD BANK GROUP

KNOWLEDGE EXCHANGE

Knowledge Exchange Programs bring client countries to Korea to learn first-hand how Korea has implemented Green Growth. Policy makers and sector leaders attend site visits and technical presentations, and meet with operational experts to see how they might learn from and work with Korean partners.

By connecting delegations from client countries with experts in key government ministries, institutes, multilateral organizations and companies, Knowledge Exchange Programs are changing the way the world understands green growth and sustainable development.

A SAMPLE OF MULTI-SECTOR KNOWLEDGE EXCHANGE PROGRAMS FACILITATED IN 2018



13 SITE VISITS

Seoul station/Seoul-ro, LH Sejong Exhibition Hall, Express Bus Terminal, KEPCO Local Office Smart Grid Test Bed (ESS), Gamcheon Port International Wholesale Market Cluster, Busan Port Authority, KECO Lab, Nanji-do, E-tech Hive facility Tour, LSIS R&D center facility tour, Uiwang ICD, Namdaemum Market, Bus riding experience

35 KOREAN COUNTERPARTS

SMG/SI, KSCC, MOLIT, KOTI, LH, LG CNS, ITS Korea, SMG TOPIS, Korea Energy Agency, KEPCO, KEPRI, KPX, LSIS, Samsung C&T, KMI, BPA, MOSF, KDB, KECO, NSO, SBC, Korea National Clean Production Center, KEITI, KORAIL, KRRI, KR, MOEL, MOE, GSIL, Hyundai E&S, Exmobile, CAK & CERIK, KICT, K-Water, NDMI

KNOWLEDGE EXCHANGE

"It was enriching to know other experiences, as well as different solutions proposed in certain circumstances, in order to take positive experiences and translate them into actions that improve mobility in our cities."

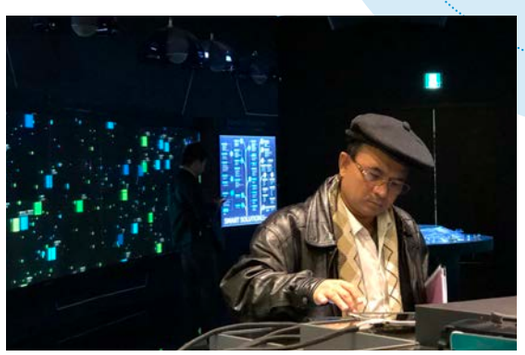
"Activity was well planned and very well implemented."

START
ARRIVE IN SEOUL

DAY 1

Site Visits

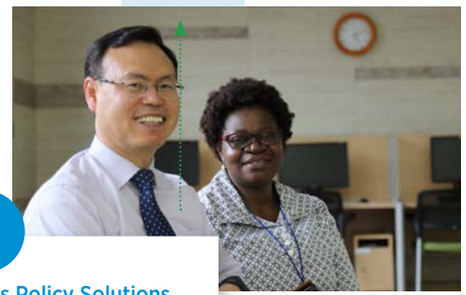
Experience in-depth learning with site tours led by technical specialists.

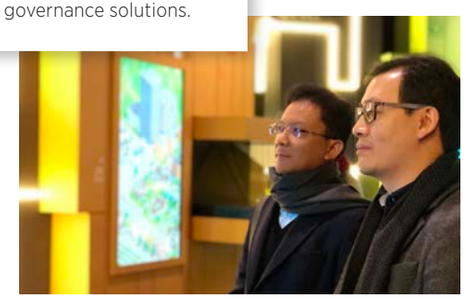


DAY 2

Discuss Policy Solutions

Meet with government ministries, institutions, and multi-lateral organizations to explore innovative financing and governance solutions.





DAY 3

Consider Private Sector Partnerships

Learn how companies are working with local and national governments to bring transparency and produce efficiencies.

DAY 4

Find Technical Solutions

Discuss technical issues being tackled in specific projects and work with technical experts to identify potential solutions.

DAY 5

Join Our Global Community

Build a network of like-minded action-takers working to improve the world and meet sustainable development goals.

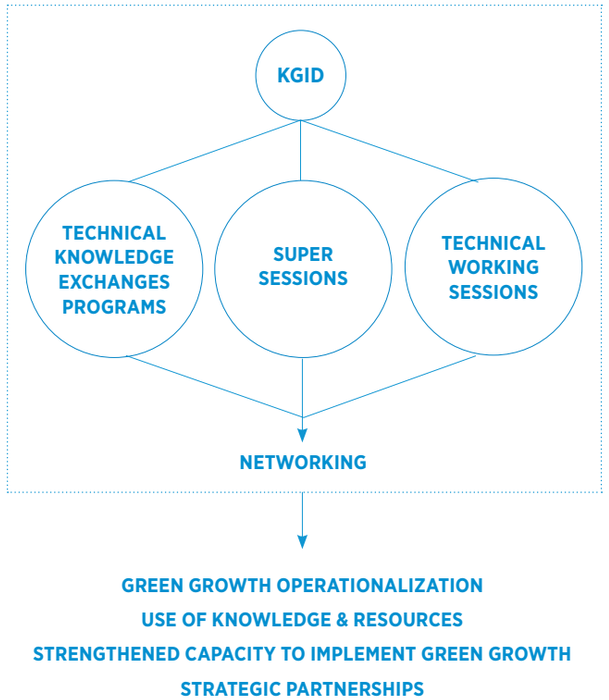
FINISH
RETURN HOME

PHOTOS: ©WORLD BANK GROUP

Korea Green Innovation Days (KGID)

KEY OBJECTIVES OF KGID:

- Demonstrate results and impact from KGGTF funded programs worldwide.
- Share lessons and exchange technical and operational knowledge across multiple layers of green growth investment.
- Provide a platform for networking and community building between World Bank staff, clients and green growth technical experts.



MAY 2018 SEOUL, KOREA

THE GREEN GROWTH EFFECT
IMPLEMENTING IDEAS THAT CHANGE THE WORLD

Korea Green Innovation Days (KGID) is the World Bank's annual green growth knowledge sharing event. **Korea Green Innovation Days 2018: The Green Growth Effect** brought together global partners to share practical examples and holistic innovative approaches to achieving sustainable development. Leading experts in climate change and economic development, as well as officials and green growth practitioners from the Republic of Korea, representatives from key government ministries, institutes, and private companies came together to share ideas, best practices and actionable steps to implement green growth.

TOPICS INCLUDED

- Smart Water Management for a Sustainable Future: Managing Floods and Droughts
- Transportation and Logistics: Hidden Resources to Achieving Green Growth
- Energy Technology is Easier than You Think
- Tech and Policy Solutions for Effective Resource Management
- The Fourth Industrial Revolution
- Start-ups and the Private Sector in a Green Growth Economy
- Decision Making Under Deep Uncertainty
- Urban Design: Data Analytics and Green Growth Policies for Smart Cities
- SMEs Clean Tech and New Processes

"I really want to thank the entire KGGTF team for their effort and patience with us, to help identify suitable partners, line up so many meetings, and make the visit a huge success."

"Thanks a lot for a great and very enriching experience. The translation support and customization of the agenda from beginning to end was truly appreciated and it made a real difference."

"We truly appreciate the WB KGGTF for giving us this opportunity to experience the advancement of new technologies which are leading green growth in different countries. This will certainly help us to implement such practices in our country."

PHOTOS: ©WORLD BANK GROUP

Technical and Operational Support

Knowledge Note Series

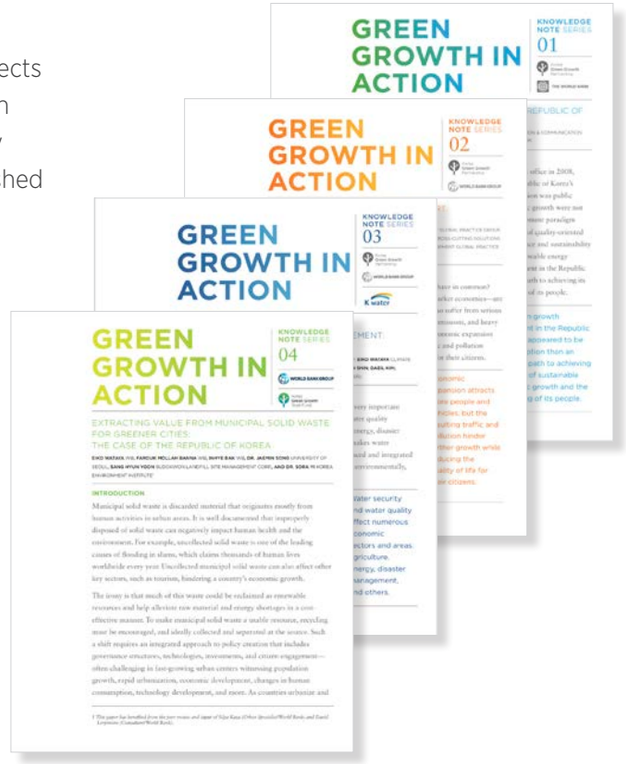
A series of publications featuring in-depth case studies and lessons learned from aspects of the Korean experience of inclusive green growth, Knowledge Notes are authored by internal and external sector experts, published and disseminated widely to the KGGTF community and available for download at www.wbgkggtf.org.

KN 01: Governance and Finance

KN 02: Transport

KN 03: Water

KN 04: Solid Waste Management



Green Growth Implementation Series

A series of practical guides that examine sector-specific green growth challenges and apply operational best practices from Korea's experience.

GGI 01: Urban Growth Planning and Implementation: developing a Green Growth Economy in Jordan

GGI 02: Extracting Value from Municipal Solid Waste for Green Cities

Knowledge Exchange Books

Delegations participating in Knowledge Exchanges receive comprehensive reference guides and materials to support their learning. This material provides background and context about Korea and valuable information about site visits, partner organizations and institutional roles and functions in the Korean Government.

Virtual Reality Learning Series

To make the benefits of on-site learning more widely available, KGGTF has developed a series of Virtual Reality experiences that allow government leaders, urban planners, policy makers and technicians anywhere in the world to experience a simulated site visit to help inform greener planning and investment.

360 VR Video: Life in a Green Smart City

360 VR Video: Solid Waste Management

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PHOTO: ©WORLD BANK GROUP

EVIDENCE FROM THE FIELD

Colombia's National Green Growth Plan

Achieving Sustainable Development Goals through the Green Growth Framework

Colombia is highly vulnerable to climate change. Damages in 2010-2011 caused by the La Niña weather pattern cost the country over 2% of GDP. The financial implications of climate change inspired the government to develop the Colombia National Development Plan 2014-2018. Recognizing its economic growth was less resource-efficient than other countries, Colombia aimed to tackle multiple challenges simultaneously in a manner that would strengthen its economy while protecting its natural resources. In order to achieve its Sustainable Development Goals, the Government of Colombia recognized that a green growth framework could offer a flexible and comprehensive approach that would support its multiple objectives for growth and sustainability. Working with the World Bank and the Korea Green Growth Trust Fund, Colombia's leadership developed a cross-cutting green growth strategy highly tailored to the country's unique situation, a framework also useful for other countries working toward sustainable development goals against a backdrop of climate change.

Goal: Boost the productivity and competitiveness of Colombia while ensuring sustainable use of natural capital and resilience to climate change.

1 PLANNING

Green Growth as a means to achieving Sustainable Development Goals

1.
Promotes Sustainable and Low Carbon Economic Growth

2.
Preserves Natural Capital and Improves Environmental Quality

3.
Strengthens Territories and Sectors to Be Resilient to Climate Change

2 TASKFORCE
Establish Dialogue with Public and Private Sectors, Academia, Media and Civil Society

TASKFORCE OBJECTIVES

PHASE 1
Diagnosis 2016

OUTCOMES
- Macroeconomic Appraisal
- Green Growth Potential Assessment

PHASE 2
Technical Studies 2017

OUTCOMES
Policy and Economic:
- Instruments
- Institutions
- Regional Agenda
- Indicators and Goals

PHASE 3
Policy Design 2018

OUTCOMES
- 2030 Policy Adopted

GREEN GROWTH GOVERNANCE FRAMEWORK

Strategically leverage natural capital to generate new economic opportunities

Sustainable use of natural capital and energy in the productive sectors

Intelligent investments in business and human capital for green growth

Expand capacities in science, technology and innovation for green growth

PROGRESS ACHIEVED WITH GREEN GROWTH STRATEGY 2014-2018

During 2014-2018, important progress was achieved through the cross-cutting green growth strategy

1.
Sustainable and Low Carbon Economic Growth

- Renewable Energy Law
- The National Policy for the Integral Management of Solid Waste
- Tax on Plastic Bags
- Carbon Tax
- Increase in Wastewater Coverage

2.
Natural Capital Conservation

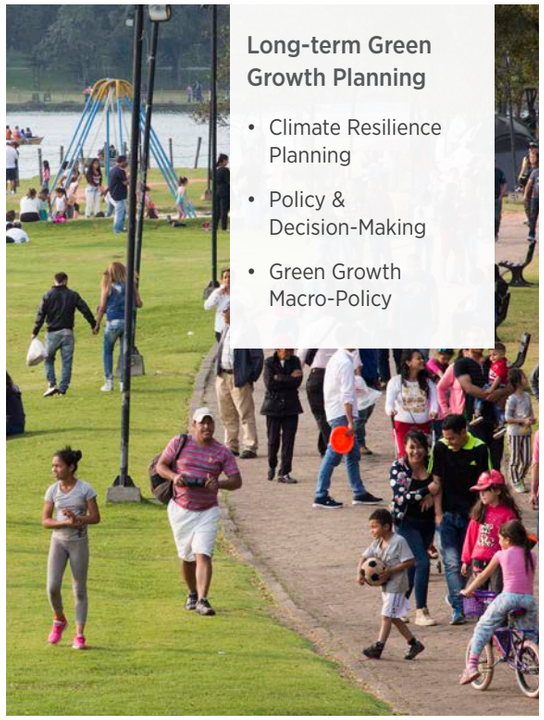
- 30 Million Hectares Protected
- 35 Marine-Coastal Protected Areas
- 37 Delimited High Mountain Wetland
- 7 Ramsar Wetlands
- 12 Colombia-Bio Expeditions—93 New Species

3.
Sectors and Territories Resilient to Climate Change

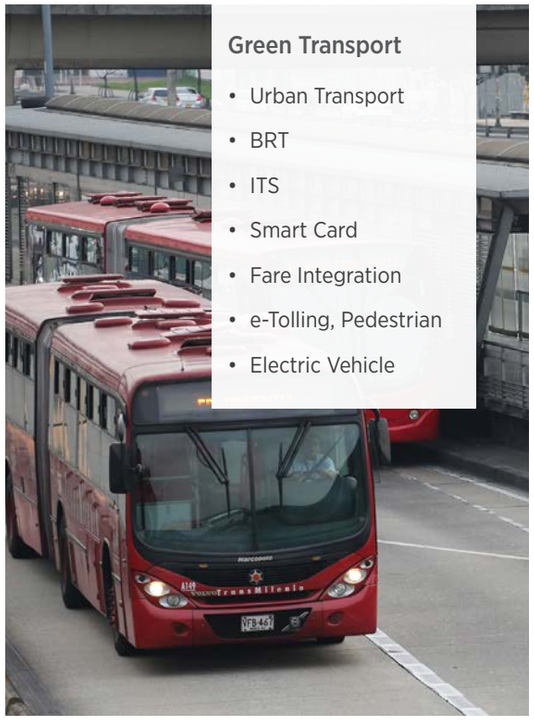
- Paris Agreement
- National Climate Change Policy
- Climate Change National System
- National Disaster Risk Management System
- $6.9 Billion Invested In La Niña Reconstruction

3 LONG-TERM POLICY
Implemented by 2030

IMPLEMENTATION BLUEPRINT

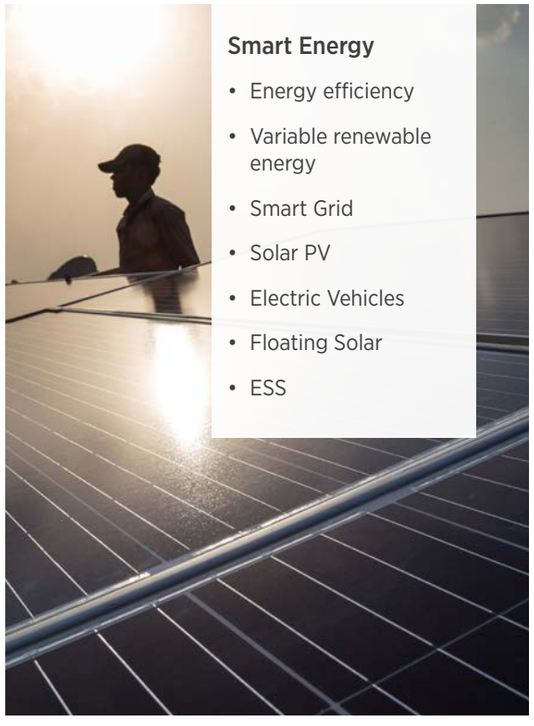


Long-term Green Growth Planning
- Climate Resilience Planning
- Policy & Decision-Making
- Green Growth Macro-Policy



Green Transport
- Urban Transport
- BRT
- ITS
- Smart Card
- Fare Integration
- e-Tolling, Pedestrian
- Electric Vehicle

Solid Waste Management
- Waste Recovery
- Food Waste
- Hazardous Waste
- e-Waste
- Marine litter



Smart Energy
- Energy efficiency
- Variable renewable energy
- Smart Grid
- Solar PV
- Electric Vehicles
- Floating Solar
- ESS

PHOTO: ©WORLD BANK GROUP

Above images condensed from DNP Departamento Nacional de Planeacion dnp.gov.co
https://www.dnp.gov.co/DNPN/Paginas/default.aspx

PHOTO: ©WORLD BANK GROUP

Q How does a road agency choose between investing in larger culverts, elevating roads, or increasing maintenance? Perhaps none of these options will provide a good solution, and constructing secondary roads is a more cost-effective option that will ensure alternative access in the event that a main link is destroyed.

A Flexibility
In many cases, building flexibility into design – while requiring greater up-front investment – can reduce future costs and ensure investment success.

EVIDENCE FROM THE FIELD

Vision for Leadership

Decision Making Under Deep Uncertainty: A New Methodology for Sound Investment and Climate Resilience

Can we make sound decisions in a world constantly in flux? When making long-term investment decisions, how can shifting variables such as climate change, politics, and changes in consumer preferences be factored in to the investment equation?

Infrastructure investments have a long lifetime and therefore, when conditions change and predictions are wrong the results can be costly and even dangerous. Historically, decision analysis has relied on point and probabilistic forecasting, where investors and engineers used historical data to predict future wind speed, water levels, and temperature fluctuations when planning and designing infrastructure. Today, the climate no longer follows predictable patterns. The result? Projections are unreliable. The infrastructure designed for the conditions of the past is now under threat from more extreme weather events.

The past is not a predictable guide for the risks of tomorrow.

A wide range of fluctuating variables are taken into account:

- Investment costs
- Extreme weather events
- Demand for services (traffic, water demand, energy demand)
- Political instability
- Vulnerability of infrastructure assets
- Rising sea levels
- Population growth and migrations

DECISION MAKING UNDER DEEP UNCERTAINTY (DMDU) TOOLKIT AND STRESS-TEST

This KGGTF-funded initiative is a multi-year program that simulates the consequences of unexpected events. Fluctuating variables such as investment costs, rising sea levels, increased rainfall intensity, consumer preferences, impact of population growth and many others expose previously unknown threats and tradeoffs, but also new benefits from investing in more sustainable infrastructure. Analyzing the economic performance of an investment across a range of potential conditions exposes the benefits of investing in resilient green growth.

Stress-testing future investments for a wide range of future conditions has many benefits:

- It helps identify low-cost options that can reduce the vulnerability of infrastructure systems to extreme events, even if those events are considered extremely unlikely.
- It helps foster an understanding of the consequences of an unexpected failure to prepare for the required response—both in terms of management of the infrastructure system (such as how to recover from a major failure) and support for users.
- It shows the value of investing in more resilient green growth by exposing the avoided economic losses and avoided social consequences of failure.

SMART INVESTMENT DECISIONS

Energy—Hydropower

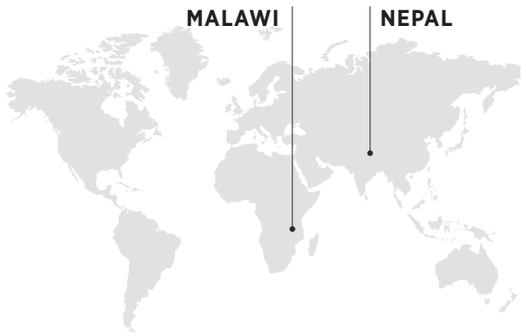
For many countries, hydropower is a smart choice for meeting energy needs. However, as an energy source it is susceptible to climate change because of its dependency on precipitation, runoff, and its exposure and vulnerability to natural disasters. The World Bank in consultation with the International Hydropower Association recognized a need to develop guidelines that ensure hydropower projects can absorb the stresses imposed by climate change.

Critical to design and implementation of the Guidelines is a climate stress test based on the World Bank's methodology of Decision Making Under Deep Uncertainty (DMDU).

THE HYDROPOWER SECTOR CLIMATE RESILIENCE GUIDELINES apply a systematic approach to incorporating resilience to climate change and natural disasters in hydropower projects. The Guidelines will help hydropower companies to incorporate considerations of climate-related risks into project design and operations, and address the needs of the wider financial community, policy-makers and local communities.

ENGAGED KEY STAKEHOLDERS

- International Hydropower Association
- International Commission on Large Dams
- European Bank for Reconstruction and Development
- World Bank Group
- Hydropower owners and operators
- Intergovernmental organizations
- Not-for profit organizations
- International consultancies
- Independent experts



PILOT PROJECTS

Stakeholders agreed to test the Guidelines on pilot projects during 2018-2019. The objective was to apply the Guidelines to real projects worldwide to gather useful feedback and ensure their applicability and viability. Hydropower adaptability and resilience to climate change will be essential to the development of greenfield projects and the evaluation of existing plants. Achieving a major consensus around climate resilience Guidelines will be valuable for the hydropower sector worldwide.

Beta versions of the Guidelines have recently concluded testing in World Bank projects in Nepal and Malawi. Recommendations from the testing phase have been integrated into the Guidelines and the final version was launched at the World Hydropower Congress in Paris in May 2019.

$2 BILLION IN THREE YEARS

The Climate Resilience Guidelines will influence the preparation of a number of World Bank lending programs in the hydropower sector (totaling approx. USD $2 billion) over the next 3 years. They aim to ensure the long-term resilience of these investments and help the World Bank meet its Climate Action Plan.

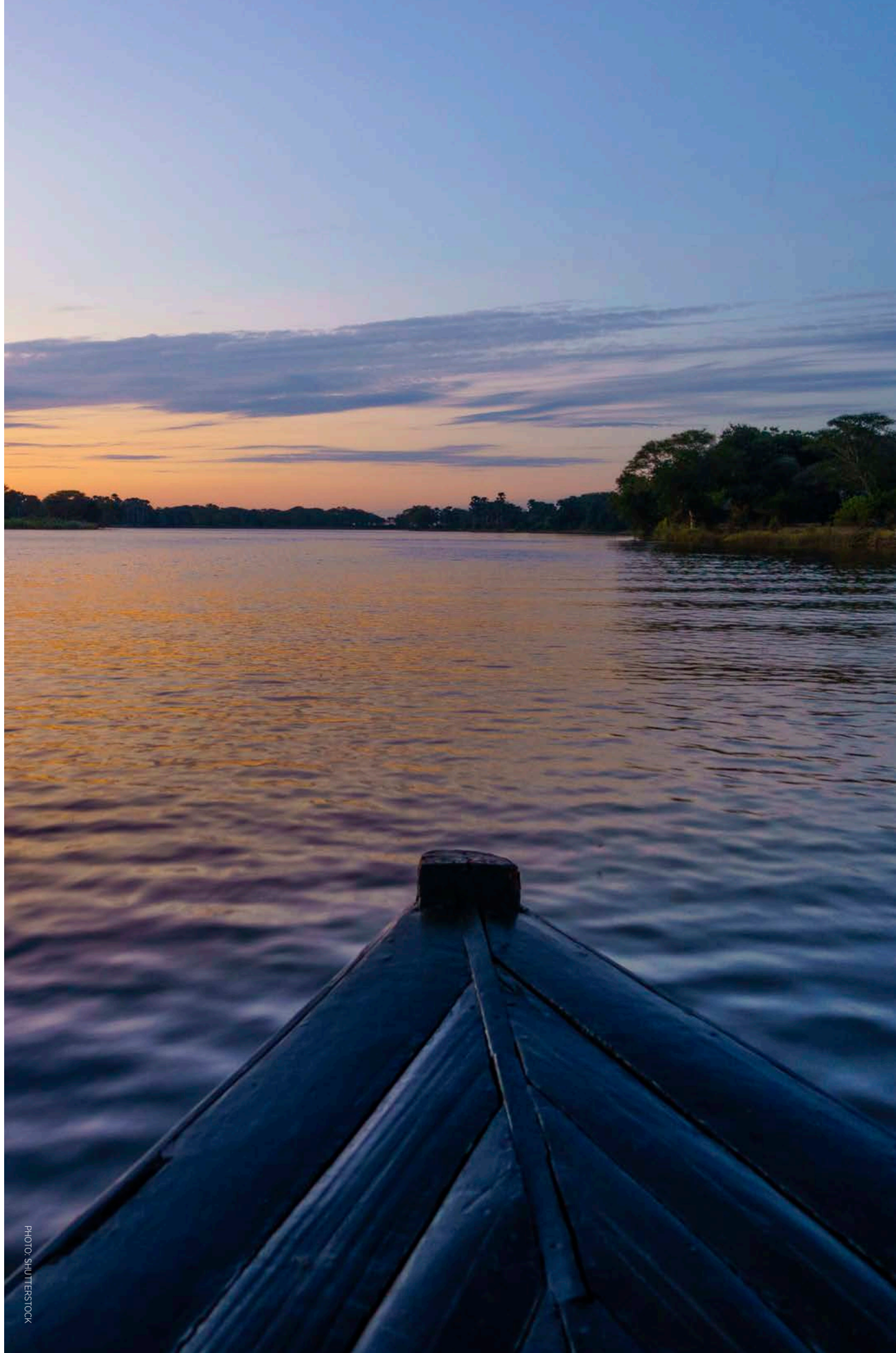


PHOTO: SHUTTERSTOCK

City Planning Labs

Building Capacity for Integrated, Evidence-Based Spatial Planning and Investment Decision-Making, to Help Cities Achieve Sustainable and Inclusive Economic Growth

INDONESIA

Indonesia is urbanizing faster than most other Asian countries. By 2025 over 68% of the region's 264 million inhabitants will live in cities. These statistics tell a powerful story of a region undergoing massive structural transition from a rural, agricultural economic base to an urban economy based on manufacturing and services. However, Indonesia has yet to achieve the economic returns of urbanization that other countries have achieved. For every additional 1% of urbanization in Indonesia, just 2% of additional GDP growth is attained. This is in contrast to other countries in the region that achieve 6-10% GDP growth per 1% of urbanization.

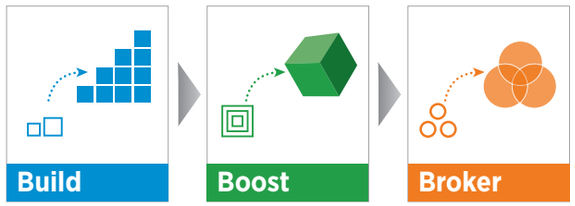
The cities that emerge from Indonesia's rapid urbanization will be key to the region's overall economic development and competitiveness. Without strategically planned investments, policy interventions, and institutional capacity, mismanaged urbanization could become an obstacle to sustainable growth.

The World Bank is working with cities and metropolitan areas with populations over 500,000 to support investments in transformative infrastructure. The program known as the **Indonesia National Urban Development Program** (NUDP) is a technical assistance loan which aims to increase cities carrying out integrated planning and prioritizing their capital investments in Indonesia. The City Planning Labs is integral to this program and forms its foundations, especially from the perspective of strengthening quality of data and institutional capacity for data governance.

The size and diversity of Indonesia calls for customized strategies for sustainable and inclusive economic growth. Examples of notable success (and failure) of international cities can provide guidance on what can be done to enhance city competitiveness and make best use of comparative advantages. Locally appropriate policies are needed to provide the simple, transparent, and supportive operating environment that businesses need to succeed and grow. The City Planning Lab initiative provides the power and technical capacity for each city to analyze and determine its own best strategies.

CITY PLANNING LABS

CPL's approach is an example of the World Bank's Build, Boost and Broker Framework as it builds and institutionalizes critical municipal spatial data foundations, boosts the capacity of governments to utilize data for evidence-led planning, and brokers the relationships between governments and the private sector to leverage innovation in technology.



EVIDENCE-BASED DECISION MAKING

The City Planning Lab Initiative provides city leaders with the tools to think about urban management in an integrated, holistic way, allowing them to meet a range of needs through select but strategic interventions. The centralized information center and geospatial databases allow for analytical work that will support city leaders across a range of issues including:

- Spatial growth
- Land use, cadastre maps
- Land markets and settlements
- Economic competitiveness
- Transportation
- Disaster preparedness and relief
- City services
- Sanitation

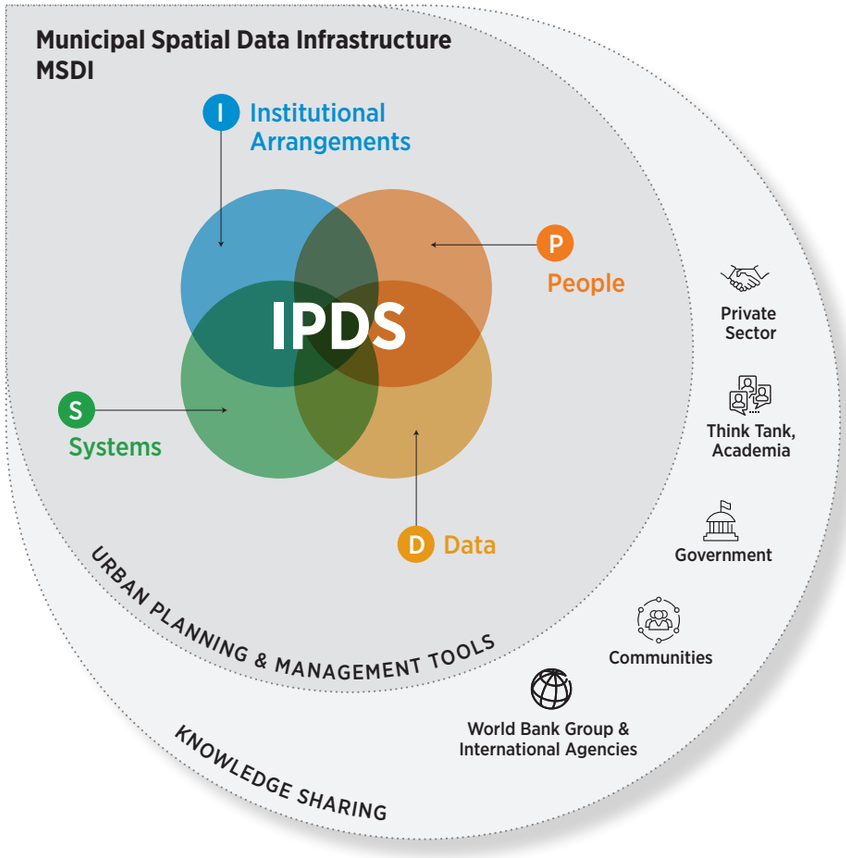
MUNICIPAL SPATIAL DATA INFRASTRUCTURE

City Planning Labs developed a city base map called the Municipal Spatial Data Infrastructure (MSDI) which functions as a platform by which geospatial information can be organized, shared and leveraged to tackle the many challenges of sustainable urban development.

In order to operationalize this project, City Planning Labs created an **ecosystem approach with interventions across a four-pillared IPDS framework.**

I = Institutional Arrangements
P = People
D = Data
S = Systems

In all facets, CPL adopts a scalable and modular approach whereby interventions can be sustainably adopted by partner cities of varying capacities.



FOUR PILLARS OF MSDI

Each pillar has scalable and replicable toolkits that can be utilized in any city around the world.

Institutional Arrangements refers to the capacity of a city to develop and sustain formal policy, regulatory and governing structures that support geospatial-related activities, and to the role of the city government in fostering growth of the broader geospatial ecosystem.

People refers to the need to create awareness of capacity needs and identifying gaps in human resources with respect to geospatial skills, so any gaps that will impact the production, maintenance, and utilization can be addressed.

Data refers to the current state of affairs on data availability, quality and related policies regarding formats, analysis and sharing of geospatial information. In this pillar, the business case for investment in data and the extent to which geospatial information can add value to the existing Key Performance Indicators is considered.

Systems refer to software, hardware and physical IT-related infrastructure required to support MSDI with an emphasis on the adequacy, functionality and user interface of the city-level Geoportals that combine GIS and spatially referenced tabular data.

PROJECT LAUNCH

The initial project was deployed in the cities of Semarang, Denpasar and Balikpapan. The MSDI works to assemble data into one location and supports the **seamless integration of key geospatial applications** into the cities' planning processes. Toward this end, the City Planning Lab has developed two customized Urban Planning Tools – the Suitability Tool (ST) and the Urban Performance Tool (UP) – to inform and simplify urban planning and management processes for the partner cities of Semarang and Denpasar.

Within this framework, **Institutional Arrangements** support development of regulatory frameworks and organizational structures to promote intersectoral coordination. They also encourage the establishment of protocols for data sharing across government, industry, and society, thereby increasing access to geospatial information. Sectoral coordination is only successful if **People** across departments and within communities share a vision and develop their ability to utilize data for planning. An increase in geospatial skills further augments the ability of a city to collect, process, produce, manage and analyze **Data** to perform evidence-based urban planning. The last component of this framework aims to establish ICT **Systems** that integrate special and tabular data within a single platform.

BUILDING ON SUCCESS

Recognizing the value of these tools, the Ministry of Agrarian and Spatial Planning has proposed the integration of MSDI into their Spatial Plan Builder platform. This will **enable the use of CPL tools in 100+ cities** to **expedite review** of plans and potentially decrease the usual 18-month approval process by approximately 8 months.

CPL's approach has met with significant success as demonstrated by the enactment of a Mayoral Decree on Data Sharing in Semarang through a directive issued to BAPPEDA by the Mayor of Balikpapan to integrate priority activities from the MSDI Roadmap as KPI's in the City's Mid-Term Development Plan (RPJMD) and Sectoral Strategic Plan (RENSTRA).

Partnerships and Collaboration

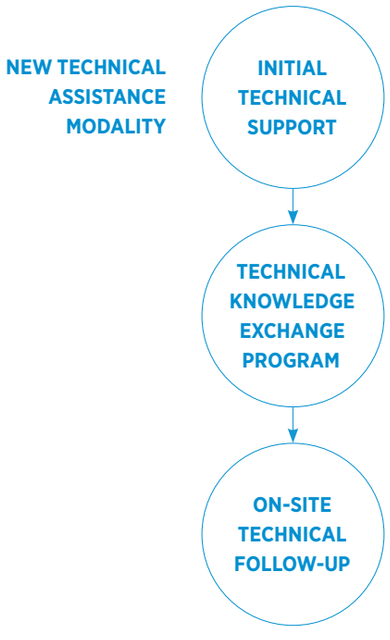
FORMAL PARTNERSHIPS AND MOU'S

The KGGTF has played matchmaker to many public and private organizations, client countries and investors over the past year. Recent highlights include:

- MOU between Ministry of Environment and World Bank
- SOI between Korea Environment Industry & Technology Institute and World Bank
- MOU between Korea Institute for Advancement of Technology and World Bank
- MOU between Korea Land & Housing Institute and World Bank

New Technical Assistance Modality

To meet increased demand from World Bank staff to access Korean institutions and technical experts, KGGTF is piloting a new Technical Assistance modality. Building on the on-site learning facilitated by KGGTF's Technical Knowledge Exchange programs, client countries will have access to on-site learning in their home countries.



CAMBODIA CASE STUDY

Supporting Cambodia to develop a National Green Growth Strategy

PART 1
KGGTF learns about Cambodia's specific issues and challenges and designs a technical Knowledge Exchange agenda of site visits and meetings with Korean Ministries and Government agencies. Preparation before the delegation from Cambodia arrives in Korea ensures that the client gets maximum value from meetings with relevant Korean institutions.

PART 2
Technical Knowledge Exchange Program consists of a week-long agenda of site visits and meetings with Korean Institutions.

KGGTF Songdo Staff to play a pivotal role in providing continued support to the client

PART 3
Sector integration and comprehensive solutions: 6 – 12 month follow-up period with KGGTF and Korean experts.

KGGTF Songdo Staff to play pivotal role in extended support of client

PART 4
As needed, KGGTF and relevant experts from Korea provide on-site follow-up support in Cambodia.

Expanding Scope of Technical and Operational Support

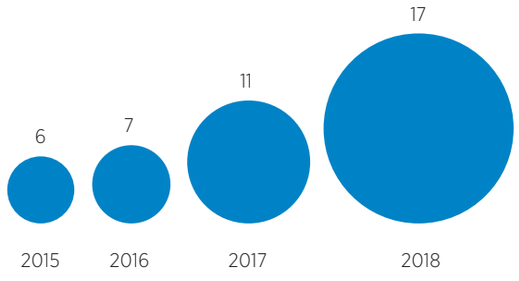
TECHNICAL AND JUST IN TIME ASSISTANCE

Owing to the success and positive impact of KGGTF technical and operational support in recent years, the Trust Fund has seen an increased number of direct requests for Technical Assistance and Just In Time interventions. These requests include facilitating workshops, joining conference panels and participating in client meetings to support planning and decision-making in relation to green growth investment. Going forward the team aims to respond to this notable increase in demand for technical support, both in terms of scope and volume.

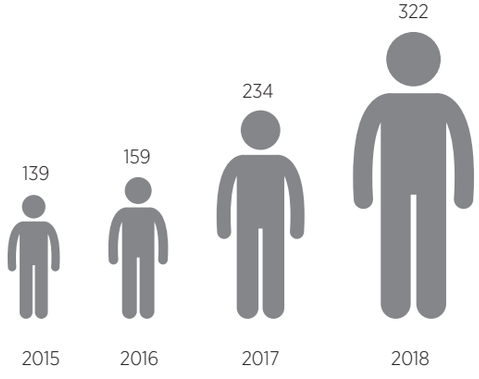
KGGTF prioritizes results-driven programs that leverage real-world technical experts and policy makers. World Bank client countries and KGGTF grantees benefit from on-site technical and operational support. Recognized technical experts are deployed to build capacity and help find solutions to specific challenges in-country.

TECHNICAL KNOWLEDGE EXCHANGE PROGRAMS

Based on positive feedback from clients and WBG staff participants, demand for sector-specific Knowledge Exchange programs has increased year-over-year. KGGTF has responded by providing almost 3 times as many bespoke programs in 2018 as in 2015.



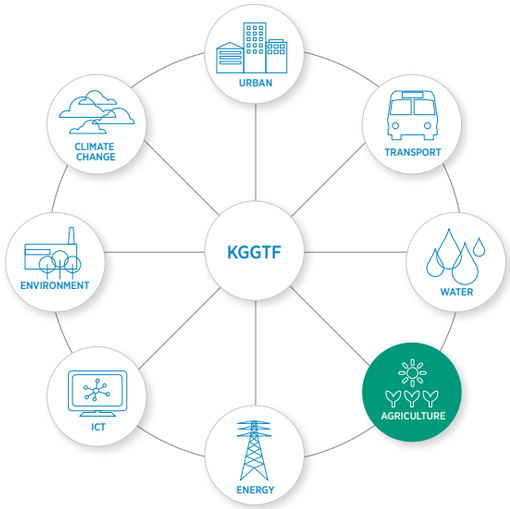
Sector-specific KE programs hosted and facilitated by KGGTF



Policy makers from client countries and WBG technical experts taking part in KE programs

PHOTO: ©WORLD BANK GROUP

Agriculture Global Practice joins the KGGTF Portfolio



Agricultural development is one of the most powerful tools to end extreme poverty and boost shared prosperity. Growth in the agriculture sector is 2 to 4 times more effective in raising incomes in the poorest areas compared to other sectors. Analysis in 2016 found that 65% of poor working adults made a living through agriculture and in 2014 agriculture accounted for one-third of global gross domestic product (GDP). But agriculture-driven growth, poverty reduction, and food security are at risk as climate change could cut crop yields, especially in the world's most food-insecure regions. Agriculture, forestry and land use change are responsible for 25% of greenhouse gas emissions.

The global food system also faces enormous challenges. Compared to 2010, it will need to produce 56% more food to feed 9.8 billion people by 2050. The current food system threatens the health of people and the planet: agriculture accounts for 70% of water use and generates unsustainable levels of pollution and waste. Billions of people are either not eating enough or eating the wrong types of food, resulting in a double burden of malnutrition that can lead to illnesses and health crises.

Green growth naturally links to key economic and development sectors for client countries such as logistics, ICT and agriculture. In order to promote inclusive multi-sector solutions to development challenges, the World Bank Agriculture Global Practice has joined the KGGTF annual call for proposals. This expansion of the KGGTF portfolio aims at:

- Developing an economic framework to assess how digital technologies can impact the efficiency, equity, and environmental sustainability of agriculture transformation.
- Identifying the relevant public policies and instruments to facilitate the diffusion, maximize the positive impacts, and mitigate the downside risks of digital technologies in the agricultural transformation.

IN 2016, **65%** OF POOR WORKING ADULTS MADE A LIVING THROUGH AGRICULTURE.

COMPARED TO 2010, THE GLOBAL FOOD SYSTEM WILL NEED TO PRODUCE **56% MORE FOOD** TO **FEED 9.8 BILLION PEOPLE BY 2050.**

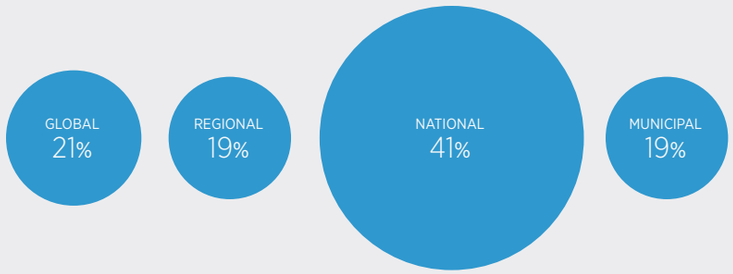
AGRICULTURE ACCOUNTS FOR **70% OF WATER USE GLOBALLY.**

PHOTO: ©WORLD BANK GROUP

FINANCIAL REVIEW

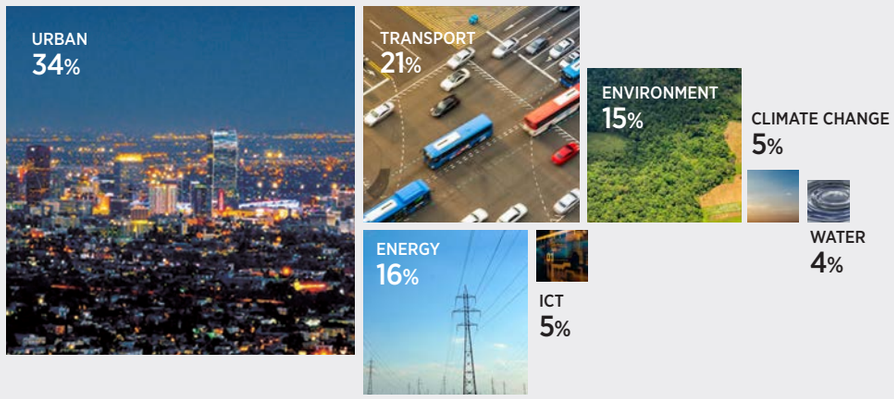
KGGTF Programs

DISTRIBUTION BY SCALE

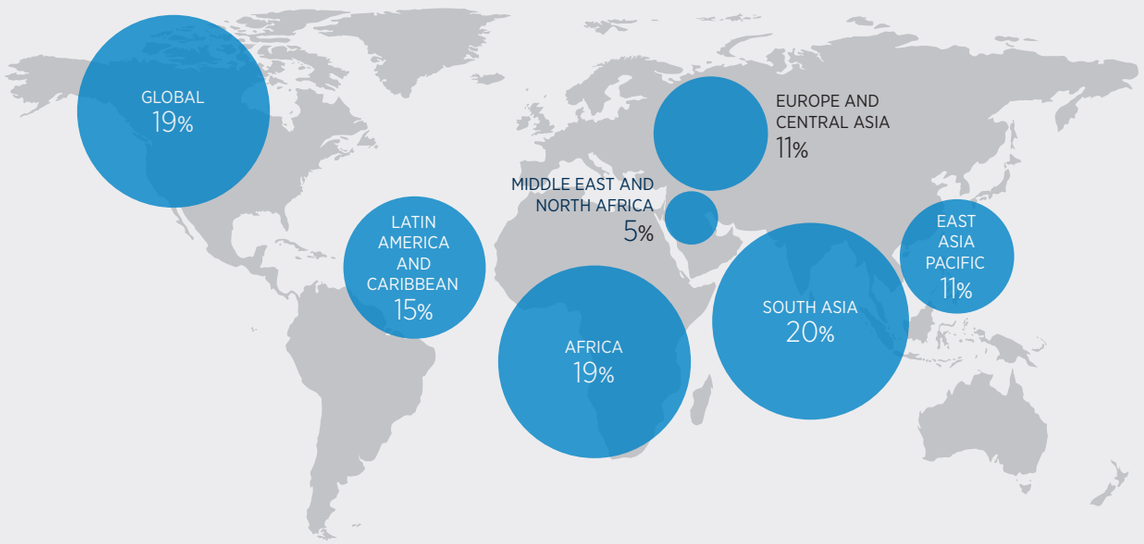


* Based on cumulative disbursements

DISTRIBUTION BY SECTOR



DISTRIBUTION BY REGIONS



GLOBAL

COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US$)
Egypt	Energy	3	MENA Cleaner Production for Companies	✔	Single	304,000
Global	Climate Change	1	Infrastructure Resilience and Robust Decision Making	✔	4 Years	1,150,000
Global	Climate Change	4	Long-term Resiliency: Investing in Green Growth under Uncertainty	↗	3 Years	2,475,000
Global	Energy	6	Long-term Resilience: Investing in Hydropower Green Growth under Uncertainty	↗	2 Years	300,000
Global	Environment	5	Green Growth via Green Infrastructure Construction	↗	2 Years	650,000
Global	Environment	5	Learning from Korea's Green Growth Experience to Tackle Environmental Health Challenges	↗	2 Years	875,000
Global	ICT	3	Unlocking Data Innovations for Smarter Urban Transport and Greener Growth	✔	2 Years	300,000
Global	Transport	1	Capacity Building for Leaders in Energy Efficient Urban Transport Planning	✔	3 Years	495,000
Global	Transport	2	Training Hub "Transportation for Green Growth"	✔	3 Years	300,000
Global	Transport	2	GL—Training Hub "Transportation for Green Growth"	↗	Single	200,000
Global	Transport	4	Mainstreaming GHG Mitigation in Rail Freight and Developing Strategies for Sustainable Transport Infrastructure	↗	2 Years	500,000
Global	Urban	1	Low Carbon Green City Planning	✔	3 Years	500,000
Global	Urban	1	Capacity Building for Green Urban Growth	✔	3 Years	500,000
Global	Urban	2	City Credit Worthiness Academy and City Climate Planner Certification Program	✔	3 Years	1,370,000
Global	Urban	3	An Integrated Approach to Urban Sustainability Planning into World Bank Lending Program	✔	3 Years	1,500,000
Honduras, Nicaragua, Grenada, Saint Lucia, Pakistan	Urban	5	Land Records and Geo-Spatial Information Systems Linked to Green Growth (LRGIGG)	↗	2 Years	600,000
India, Tunisia	Urban	2	Green Smart City Development with Citizen Participation	✔	2 Years	800,000
Myanmar, Sierra Leone, Kosovo	Urban	6	Geospatial Approaches for Fostering Green Growth in Fragile States	↗	2 Years	800,000
World	Urban	1	Pilot Urban Transport Database KGGTF	✔	3 Years	5,000

AFRICA

COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US$)
African Cities	Urban	3	Improving Solid Waste Service Delivery in African Cities.	✔	2 Years	600,000
Benin	Energy	5	Strengthening Utility Capabilities by Capacity-building, Education and South-South Knowledge Exchange (SUCCESS-KE)	↗	2 Years	600,000
China, Indonesia, Benin	Urban	2	Solid Waste Management Policies and Technologies (P156403)	✔	2 Years	225,000
Ecowas[1]	Energy	4	Energy Storage Application Studies and Knowledge Exchange Framework for Sustainable Green Growth in WAPP	↗	3 Years	700,000
Ethiopia	Energy	5	Ethiopia Green Industrialization Support Program	↗	2 Years	550,000
Ethiopia	Transport	1	TA to promote Integrated Urban Planning in Addis Ababa to Foster Green Growth	✔	4 Years	1,100,000
Ethiopia	Transport	4	Resilience of Ethiopian Road Network	↗	3 Years	700,000

[1] Benin, Cote d'Ivoire, Burkina Faso, Ghana, Gambia, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo

Ethiopia	Urban	3	Technical Assistance to Make the Landfill Operational through Consultancy, Training, Equipment Purchase and Experience Sharing	✔	4 Years	400,000
Kenya	Water	5	Turning Kenya's Water Utilities Green	↗	3 Years	400,000
Mali	Urban	3	Real Time Urban Flood Risk Management and Decision Support Tool for Bamako Greater Area Based upon Analysis of Attenuation of Cellular Phone Network Signals	↗	4 Years	495,000
Regional	Urban	5	Improving Solid Waste Management in African Cities	↗	2 Years	500,000
Rwanda	Urban	2	Rwanda Secondary Cities Program	✔	3 Years	650,000
Southern Africa	ICT	2	SSA—Green Cities and Low Carbon Industries Initiative	↗	Single	250,000
Sub-Saharan Africa	Environment	3	Greener Cement Industries in Africa	✔	Single	350,000
Sub-Saharan Africa	Environment	3	Greener Cement Industries in Africa Phase 2	✔	Single	350,000
Sub-Saharan Africa	ICT	2	Green Cities and Low Carbon Industries Initiative	✔	3 Years	345,000
Sub-Saharan Africa	ICT	2	The Negawatt Challenge for Energy Efficiency	✔	2 Years	500,000
Sub-Saharan Africa	Transport	2	Streets as Drivers of Green Growth and Urban Prosperity in Africa	↗	4 Years	600,000
Sub-Saharan Africa	Transport	2	Support and Follow-on Activities to the Africa Sustainable Transport Forum	↗	4 Years	500,000
Tanzania	Transport	4	Smart Tanzania	↗	3 Years	600,000
Uganda	Transport	4	Green Logistics Policy and Strategy for Uganda	✔	2 Years	500,000
Uganda	Water	5	Development of Capacity In Climate Resilience in Water/Environmental/Civil Infrastructure	↗	2 Years	600,000
Uganda +	Transport	2	Developing Skills to Support Transport and Logistics in Sub-Saharan Africa	✔	2 Years	400,000
Uganda, Tanzania, SA	Urban	1	Enhancing Green Urban Development in Africa	✔	4 Years	1,000,000
West Africa	Environment	3	West Africa Fishery Partnership for Competitiveness and Sustainability	✔	3 Years	670,000

EAST ASIA AND PACIFIC

COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US$)
Cambodia	Environment	6	KH-Solid Waste and Plastic Management	↗	Single	230,000
Indonesia	Urban	1	Inclusive Green Growth for EAP Cities	✔	2 Years	150,000
Indonesia	Urban	1	Sustainable Urban Growth Analytics and Planning Systems: Technical Advisory Services to Three Large Indonesian Cities	✔	3 Years	375,000
Indonesia	Urban	5	City Planning Labs (CPL)	↗	2 Years	200,000
Indonesia, Philippines	Transport	3	Improving Urban Mobility Using Big Data Analytics	✔	2 Years	500,000
Lao PDR	Environment	4	Green Growth Platform for Lao PDR	↗	3 Years	900,000
Mongolia	ICT	2	Civic Innovations: Solving old problems in new ways (Green Growth Hack-a-thon)	✔	2 Years	430,000
Myanmar	Environment	6	MM Solid Waste and Pollution Management	↗	Single	230,000
Philippines	Environment	6	Sustainable Solid Waste Management in Cambodia, Myanmar and The Philippines	In Process		240,000
Philippines	Transport	1	Achieving Green Growth Through Green Transport ICT	✔	3 Years	400,000
Philippines	Urban	2	Metro Manila Citywide Slum Upgrading Project	✔	2 Years	350,000
Vanuatu	Urban	3	Vanuatu Affordable and Resilient Housing	✔	2 Years	250,000
Vanuatu	Urban	3	Affordable and Resilient Housing and Urban Land Use Planning in Vanuatu	↗	2 Years	425,000
Vietnam	Energy	4	Scaling up solar PV in Vietnam	↗	3 Years	350,000
Vietnam	Energy	4	Scaling-Up Rooftop Solar in Vietnam II	✔	Single	91,379
Vietnam	Energy	6	Improving Readiness for Energy Efficiency Investment in Vietnam's Industries	↗	2 Years	350,000
Vietnam	Environment	3	Scaling up Implementation of Vietnam's Green Growth Priorities	✔	3 Years	780,100
Vietnam	Transport	5	Public Transport Development Strategy for Sustainable Urban Mobility in Hanoi	↗	Single	550,000
Vietnam	Urban	2	Promoting Green Growth in Industrial Zones in Vietnam	✔	4 Years	750,000
Vietnam, Indonesia	Energy	3	Energizing Green Cities: Planning, Enabling and Managing the Transition to a Low-Carbon Future in Vietnam and Indonesia	✔	Single	150,000

EUROPE AND CENTRAL ASIA

COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US$)
Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine	Transport	5	Greener Connectivity for 6 Countries in Southern Caucasus and Eastern Europe (Eastern Partnership)	↗	2 Years	960,000
Azerbaijan	Environment	5	Towards Green Growth of Baku: Enhancing People's Quality of Life through Sustainable Cleanup of Polluted Lakes	↗	3 Years	600,000
Georgia	Transport	1	Greening Freight Transport and Logistics in Georgia	✔	2 Years	250,000
Kazakhstan	Environment	3	Developing Integrated and Green Solutions for Municipal Solid Waste Management in Kazakhstan	✔	2 Years	200,000
Kazakhstan	Transport	4	Green Truck Initiatives through E-tolling and ITS	↗	3 Years	700,000
Kosovo	ICT	2	Innovative and Green Growth for Rural Kosovo: Investing & Scoping	✔	2 Years	485,000
Kyrgyzstan	Urban	3	Moving Towards Green Urban Development of Kyrgyz Cities	✔	3 Years	300,000
Moldova	Energy	3	Energy Efficiency Transformation of Urban Heating in Chisinau, Moldova	✔	2 Years	530,000
Poland	Transport	1	Piloting Green Transport Solutions for Sub National Governments	✔	3 Years	625,000
Regional	Water	3	Central Asia Water Resources Management (CA-WARM) Phase-I Project	✔	Single	370,000
Turkey	Energy	5	Greener Manufacturing: Turkey Project	↗	2 Years	450,000
Turkey	Energy	6	Scaling Up Rooftop Solar PV in Turkey	↗	Single	300,000
Turkey	Urban	2	Developing Green Growth Strategies for Emerging Metropolitan Municipalities	✔	3 Years	500,000
Ukraine	Transport	1	Sustainable Urban Transport for the City of Kyiv	✔	2 Years	350,000
Ukraine	Transport	4	Towards Greener and More Efficient Logistics in the Ukraine: An Integrative Approach	✔	2 Years	700,000
Uzbekistan	Energy	3	Support the Development of A National Industrial Energy Management Program in Uzbekistan	✔	2 Years	400,000
Uzbekistan	Urban	5	Leveraging Green Growth for Balanced Spatial Development in Uzbekistan	↗	2 Years	300,000

LATIN AMERICA AND CARIBBEAN

COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US$)
Argentina	Urban	2	Implementing Green Solution for Waste Management in LAC Region	✔	2 Years	400,000
Argentina	Urban	5	Greening urban growth in Metropolitan Buenos Aires	↗	2 Years	300,000
Argentina[2]	Water	6	Non-Revenue Water (NRW) Project for Santa Fe Province—Argentina	↗	2 Years	400,000
Bolivia, Mexico	Environment	4	Promoting equitable access to sustainable development in Bolivia and Mexico	↗	3 Years	700,000
Brazil	Urban	1	Green vision for the Rio de Janeiro Metropolitan Region	✔	2 Years	320,000

[2] Province of Santa Fe [3] Guatemala, Honduras, Nicaragua, El Salvador, Costa Rica and Panama

Brazil	Urban	1	Rio Low-Carbon City Development Program (Rio LCCDP)	✔	2 Years	625,000
Central America	Energy	4	Sustainable Green Growth through Innovative Energy Solutions in Central America	↗	2 Years	700,000
Colombia	Environment	4	Support to the Colombia Green Growth Policy	↗	3 Years	500,000
Colombia	Transport	5	Improving Public Transit and Sustainable Territorial Development in the Cundinamarca-Bogotá Region	↗	2 Years	650,000
Colombia	Transport	6	Piloting Electromobility in the Integrated Transport System of the Aburra Valley	↗	3 Years	870,000
Colombia	Water	3	Greening Cities through a Water-Centric Urban Planning Approach	✔	Single	200,000
Colombia	Water	4	Smart Water Initiatives to Support Green Growth and Sustainable Cities in Colombia	↗	2 Years	300,000
Guatemala	ICT	2	Using ICT to Increase Green Competitiveness in Guatemala	✔	3 Years	605,000
Haiti	Energy	3	Variable Renewable Energy (VRE) Integration to Support Green Growth in Haiti	✔	2 Years	250,000
Honduras	Energy	3	Tackling Power Sector Barriers for Green Growth in Honduras	✔	Single	450,000
Mexico	Energy	6	Mexico Resilient and Eco-Industrial Parks	↗	2 Years	510,000
Mexico	Urban	1	Instruments for Urban Redevelopment under the DUIS Program	✔	2 Years	150,000
Mexico	Urban	1	Mexico Urban and Housing PA	✔	4 Years	250,000
Mexico	Urban	3	Strengthening Mexico's Capacity for Integrated Solid Waste Management	✔	2 Years	400,000
Mexico	Urban	3	Inner City Affordable Housing Program	✔	3 Years	250,000
Mexico	Urban	3	Strengthening Urban Management in Mexican Cities	↗	2 Years	150,000
Panama	Urban	1	6C Central America Urbanization Review	✔	3 Years	300,000
Peru	Energy	4	Greening Peru's Energy System: Promoting Clean Energy for a Resilient Power System	↗	2 Years	600,000
Peru	Environment	3	Peru: Investments in Environmental Management and Green Growth	✔	2 Years	430,000
Regional	Urban	1	Regional Resource Recovery and Recycling	✔	Single	150,000
Uruguay	Urban	3	Accessible Tourism in Uruguay	✔	Single	60,000

MIDDLE EAST AND NORTH AFRICA

COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US$)
Egypt	Energy	3	Smart Technology and Energy Efficient Production (STEP)	✔	3 Years	400,000
Egypt	Energy	3	Smart Technology and Energy Efficient Production (STEP)—Phase 2	↗	2 Years	300,000
Egypt	Environment	3	Egypt Air and Water Pollution Management Program	✔	3 Years	450,000
Egypt	Urban	3	Enhancing Green Growth in Cairo	✔	2 Years	143,750
Egypt	Urban	3	Cairo Smart Service Delivery Project	✔	Single	431,250
Jordan	Urban	4	Greening Growth for the Displaced in Jordan	↗	2 Years	600,000
Lebanon	Transport	1	Greater Beirut Urban Transport Project	✔	2 Years	200,000
Morocco	Transport	1	Promoting Climate Resilience for MENA Roads – Piloting in Morocco	✔	Single	200,000
Morocco	Water	1	Quantifying Tradeoffs of the Water-Energy Nexus	✔	3 Years	300,000
Tunisia	Environment	6	Blue Economy in Tunisia	↗	2 Years	300,000

[2] Province of Santa Fe [3] Guatemala, Honduras, Nicaragua, El Salvador, Costa Rica and Panama

SOUTH ASIA

COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US$)
Bangladesh	Energy	3	An Efficient, Resilient and Green Grid for the Bangladesh Power System	✔	2 Years	500,000
Bangladesh	Energy	3	An efficient, resilient and green grid for the Bangladesh power system	↗	2 Years	500,000
Bhutan	Transport	2	Bhutan Green Transport Initiative	✔	2 Years	300,000
Bhutan, Nepal, Pakistan	Environment	4	Integrated Catchment Management for Sustainable Hydropower in Bhutan, Nepal and Pakistan	↗	3 Years	750,000
India	Energy	2	Towards Green Growth in Damodar Valley Corporation (DVC) through Use of ICT and Investment in Clean Energy Generation	✔	4 Years	600,000
India	ICT	2	ICT Applications to Achieve Green Growth in an Indian City	✔	3 Years	700,000
India	Transport	2	Promoting the Use of Green Construction Technology in Road Sector	✔	3 Years	500,000
India	Transport	3	Intelligent Transport Systems and PPP in City Bus Systems for Indian Cities	✔	3 Years	175,000
India	Transport	3	Kolkata Metropolitan Transport Efficiency Improvement	✔	2 Years	400,000
India	Transport	3	Intelligent Transport Systems and PPP in City Bus Systems for Indian Cities—Phase II	↗	Single	175,000
India	Urban	1	Green Urban Development Along India's Eastern Dedicated Freight Corridor	✔	Single	400,000
India	Urban	2	TA for Design and Preparation of Tamil Nadu Sustainable Urban Development	✔	4 Years	600,000
India	Urban	2	Regional Economic and Infrastructure Investment Strategy	✔	3 Years	400,000
India	Urban	2	India E-Waste Advisory Project	↗	4 Years	250,000
India	Urban	2	India—E-Waste Advisory Project KGGTF Funds	↗	Single	590,000
India	Urban	3	Green Regional Development Plan for Growth Centers in India	✔	2 Years	350,000
India	Urban	4	ICT Enabled Integration for Green Growth—Phase II	✔	2 Years	700,000
India, Bangladesh,	Transport	3	Technical Assistance for Smartcard Integration for Better Connected Public Transport System	↗	3 Years	400,000
India, Nepal, Pakistan	Environment	5	Sustainable Solid Waste Management in Mountainous Regions of India, Nepal and Pakistan	↗	2 Years	500,000
Nepal	Urban	5	Supporting Green Growth Urban Development and Planning Processes in Nepal	↗	2 Years	400,000
Pakistan	Energy	5	Renewable Energy Integration to Support Green Growth in Pakistan	↗	2 Years	750,000
Pakistan	Environment	6	Catalyzing Green Investments in Pakistan	↗	2 Years	400,000
Pakistan	Urban	1	Mainstreaming Green Growth into Karachi's Business Plan	✔	3 Years	400,000
Pakistan	Urban	4	Towards a Green and Inclusive Karachi	↗	2 Years	500,000
Pakistan, India, Bangladesh	Environment	4	Resource Efficient Cleaner Production (RECP) in South Asia Region	↗	3 Years	600,000
Sri Lanka	Energy	4	Sri Lanka Renewable Energy Integration	↗	2 Years	300,000
Sri Lanka	Energy	4	Sri Lanka KGGTF Year 4—Second Year Allocation	↗	Single	100,000
Sri Lanka	Energy	5	Scaling Up NCRE in Sri Lanka	↗	2 Years	400,000
Sri Lanka	Urban	2	Spatial Transformation Strategy For Sri Lanka	✔	3 Years	250,000
Sri Lanka	Urban	2	KGGTF - Sri Lanka Strategic Cities	✔	Single	250,000
Sri Lanka, Bangladesh, India	Urban	3	Urban Public Spaces as a Transformative Instrument for Inclusive Green Growth in South Asian Cities	↗	4 Years	600,000

KOREAN INSTITUTIONS AND PARTNERS

AEA (Korea Automobile Environmental Association)

APSL, IU (Asia Pacific School of Logistics, Inha University)

ASEIC (ASEM Eco-Innovation Center)

BPA (Busan Port Authority)

ETRI (Electronics and Telecommunications Research Institute)

EX (Korean Expressway Corporation)

FMC (Fisheries Monitoring Center)

FSC (Financial Services Commission)

GKEDC (Global Knowledge Exchange & Development Center)

Gyeonggi Research Institute – GRI

GTC-K (Green Technology Center – Korea)

Land & Housing Institute

IIAC (Incheon International Airport Corporation)

IPA (Incheon Port Authority)

ITS Korea

KAIA (Korea Agency for Infrastructure Technology Advancement)

KAIST (Korea Advanced Insitute of Science and Technology)

KAIST Graduate School of Green Growth

KDB (Korea Development Bank)

KEA (Korea Energy Agency)

KECC (Korea Engineering Consultants Corporation)

KECO (Korea Environment Corporation)

KEI (Korea Environment Institute)

KEEI (Korea Energy Economics Institute)

KEITI (Korea Environmental Industry & Technology Institute)

KEPCO (Korea Electric Power Corporation)

KEPRI (Korea Electric Power Institute)

KEXIM (Korea Export-Import Bank)

KFS (Korea Forest Service)

KHNP (Korea Hydro & Nuclear Power Corporation)

KIAT (Korea Institute for Advancement of Technology)

KIBO (Korea Technology Finance Corporation)

KICOX (Korea Industrial Complex Corp.)

KICT (Korea Institute of Civil Engineering and Building Technology)

Korea Institute of Industrial Technology – KITECH

KILA (Korea Integrated Logistics Association)

KIND (Korea Overseas Infrastructure & Urban Development Corporation)

KISA (Korea Internet & Security Agency)

KLID (Korea Local Information Research & Development Institute)

KMI (Korea Maritime Insitute)

KOEM (Korea Marine Environment Management Corporation)

KOEN (Korea South-East Power Co)

KOGAS (Korea Gas Corporation)

Konkuk University

KoRail

Korea Environment Institute (KEI)

KOREC (Electricity Regulatory Commission)

KOTI (Korea Transport Institute)

KOTSA (Korea Transportation Safety Authority)

Korea National Clean Production Center – KNCPC

KPX (Korea Power Exchange)

KR (Korea Rail Network Authority)

KRC (Korea Rural Community Corporation)

KREI (Korea Rural Economic Institute)

KRIHS (Korea Research Institute for Human Settlements)

KRIVET (Korea Research Insitute for Vocational Education and Training)

KRRI (Korea Railroad Research Institute)

KSCC (Korea Smart Card Corporation)

KTA (Korea Trucking Association)

K-Water

K-Water Academy

LG CNS

LH (Korea Land and Housing Corporation)

LSIS (LS Industrial Solutions)

LX (Korea Land and Geospatial Informatix Corporation)

MAFRA (Ministry of Agriculture, Food and Rural Affairs)

MOE (Ministry of Environment)

MOF (Ministry of Oceans and Fisheries)

MOIS (Monistry of the Interior and Safety)

MOLIT (Ministry of Land, Infrastructure and Transport)

MOSF (Ministry of Strategy and Finance)

MOTIE (Ministry of Trade, Industry and Energy)

MSIT (Ministry of Science and ICT)

MSS (Ministry of SMEs and Startups)

NDMI (National Disaster Management Institute)

NDTI (National Civil Defense and Disaster Management Training Institute)

NIA (National Information Society Agency)

NIER (National Institute of Environmental Research)

NIPA (National IT Industry Promotion Agency)

PMO (Prime Minister's Office)

POSCO

RDA (Rural Development Administration)

S-Energy

SEOC (Seoul Emergency Operations Center)

SH (Seoul Housing & Communities Corporation)

Shinsung Solar Energy

SI (Seoul Institute)

SLC (Sudokwon Landfill Site Management Corp.)

SMG (Seoul Metropolitan Government)

SUSA (Seoul Urban Solutions Agency)

UOS (University of Seoul)

World Smart Sustainable City Organization (WeGO)

SH (Seoul Housing & Communities Corporation)

Shinsung Solar Energy

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SMG (Seoul Metropolitan Government)

SUSA (Seoul Urban Solutions Agency)

UOS (University of Seoul)

World Smart Sustainable City Organization (WeGO)

AFR	Africa
BBL	Brown bag lunch
CO2	Carbon dioxide
COP	Communities of Practice
CPS	Citizen participation system
DPL	Development policy loan
DRM	Development policy loan
EAP	East Asia and Pacific
ECA	Europe and Central Asia
EIP	Eco-Industrial Park
EMS	Energy management systems
ESW	Economic and sector work
GDP	Gross domestic product
GG	Green growth
GHG	Greenhouse gas
ICT	Information and communication technology
ICF	International Finance Corporation
IWRM	Integrated water resources management
ITS	Information technology systems
KE	Knowledge exchange
KL	Knowledge and Learning
KGGP	Korea Green Growth Partnership
KGGTF	Korea Green Growth Trust Fund
KGID	Korea Green Innovation Days
LAC	Latin America and Caribbean
LCC	Low-carbon cities
LEDS	Low emission development strategies
MNA	Middle East and North Africa
MW	Megawatt
NREC	New and Renewable Energy Center
ODA	Official Development Assitance
RR	Rapid response
RDM	Robust decision-making
Rio+20	United Nations Conference on Sustainable Development
RoK	Republic of Korea
SAR	South Asia
SDN	Sustainable development network
SME	Small and medium sized enterprises
SV	Study visit
SWM	Solid waste management
TAL	Technical assistance loan
TTL	Task team leader
UNDP	United Nations Development Programme
UNEP	United Nations Enviornment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WBG	World Bank Group

PHOTOS: ALL PHOTOS, THINKSTOCK, UNLESS NOTED

WORLD BANK GROUP

Korea
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