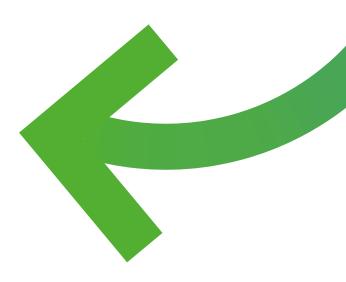
**ANNUAL REPORT 2019** 

# REBUILD BETTER, STRONGER, GREENER



**GREEN GROWTH TRANSFORMING THE WORLD** 

"Green growth and the various global green deals strive for transformation of the economy to tackle the twin crises of poverty and climate change."

#### Eun Joo Allison Yi

Korea Green Growth Trust Fund (KGGTF)



## World Bank Group Korea Green **Growth Trust Fund (KGGTF)**

The Korea Green Growth Trust Fund (KGGTF) is a partnership between the World Bank Group (WBG) and the Republic of Korea (RoK), established in 2011 to support the World Bank and its client countries to operationalize inclusive green growth initiatives, strategies, and investments.

The Republic of Korea has made one of the most dramatic economic transformations of the past 75 years. In just a few decades the country transitioned from a resource-poor, low-income nation to one of the most technologically advanced countries in the world. Korea's visionary leadership in green growth policies and the integration of ground-breaking technologies coupled with long-term sustainable thinking is an inspiring story for governments around the world.

Funds committed by the RoK's Ministry of Economy and Finance (MOEF) total \$88 million USD through 2021 with a longer-term replenishment planned. KGGTF provides funding, capacity building, and technical assistance to World Bank teams around the world supporting client countries adopt green growth pathways and plan for the future.

To date 144 KGGTF grants support new initiatives across the agriculture, climate, energy, environment, ICT, urban, transport, and water sectors. Many programs integrate two or more sectors at both the planning and implementation stages. This multi-sector approach provides opportunities for cost savings, data collection, citizen engagement and new forms of transparency and governance that promote green economic growth.

#### How The World Bank defines green growth

Green growth is a framework for situating different policies and investments across multiple sectors and industries. It is a strategic approach that simultaneously prioritizes economic development, protecting the environment, and increasing shared economic prosperity for all citizens. Green growth is a powerful approach, relevant to every country around the world.



Seven years of an enduring partnership formed by the Government of the Republic of Korea and the World Bank has demonstrated time and again the exceptional contribution of the Korea Green Growth Trust Fund.

It is perhaps unique in its resolute focus in delivering solutions that simultaneously promote sustainability and economic growth.

It has been immensely satisfying to partner with the Government of Korea since 2013. KGGTF's mission, based on Korea's strong experience and visionary leadership in green growth policies, as well as the World Bank's potential for leveraging knowledge and technical assistance on a global scale, is much more than a platform for innovative projects - it is also a sophisticated instrument and source of inspiration for undertaking efforts aimed at securing a better future for our Planet.

The KGGTF's holistic and innovative approach to sustainable development allows for low and middle-income countries to find the solutions necessary to address climate change and maintain resilience while building a strong economy and securing the well-being of citizens. The growing network of leaders, officials, and practitioners, created under the umbrella of the KGGTF, significantly contributes to the global efforts of solving today's most pressing problems, while keeping in mind the health and prosperity of future generations.

On behalf of the World Bank, I would like to thank the Government of Korea for its support and partnership. We look forward to building on the KGGTF's accomplishments and continuing with this very successful partnership in the coming years.

Sincerely,

#### **Richard Damania**

Chief Economist Sustainable Development Practice Group The World Bank







## The Republic of Korea has been at the forefront of green growth initiatives.

Recently, Korea launched the new Five-Year Plan 2019-2023 that provides a comprehensive policy framework for green growth while representing a new vision for an "Inclusive Green Country". This plan includes three strategies, five policy directions and twenty policy commitments - one of which highlights pursuing Green ODA and the partnership with MDBs.

Years of dynamic growth strengthened Korea's economic potential, provided invaluable experience, and created a successful model for others to follow. Extensive knowledge and understanding of sustainable development mechanisms, as well as a sense of shared responsibility for the future of the planet inspired the foundation of the Korea Green Growth Trust Fund (KGGTF) that is now in its eighth year of operations.

From the beginning the KGGTF mission focused on mainstreaming inclusive green growth throughout the World Bank's lending operations and creating a platform for supporting multisectoral cooperation, leveraging knowledge from Korea's experience of green growth, and building a community of practice committed to promoting sustainable economic growth while protecting the environment. KGGTF activities are strongly motivated by the awareness of

risks created by climate change and a need for responsible management of natural resources that is critical for the well-being of the planet and its global community.

The Republic of Korea is honored to collaborate with the World Bank and to offer leadership and guidance to countries shifting to a green growth pathway aimed at achieving longterm sustainable development. We hope our continuing contribution and the growing impact of KGGTF will further strengthen cooperation between Korea and the World Bank and progress towards our mutual goals to reduce poverty and promote shared prosperity.

#### Director Dae Joong Lee

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

# **Korea's Leadership and Global Green Deals**

#### Green Growth IS the World's Green Deal

Countries around the world are developing variants of a Green Deal aimed at strategically tackling multiple environmental issues through smart investments while simultaneously building a strong and financially stable population and thus establishing shared economic prosperity.

Green Growth and the various global green deals strive for transformation of the economy to tackle the twin crises of inequality and climate change. Both present a clear roadmap and framework for situating different policies across multiple sectors and industries. A comprehensive industrial plan in which governments clearly establish new targets and guidelines that shape long-term investment decisions.

When governments establish a clear vision and provide leadership with investment in key sectors, the private sector has a sense of stability that animates private sector investment. The result is economic mobilization that spans all sectors of society working towards a shared vision. Aggressive targets, such as 50% renewables by 2030, for example, may initially sound unachievable. Yet clear leadership from governments, such as investment in a smart grid, encourages large established companies and small start-ups to get involved in the new business opportunities.

The result? In addition to government investment in key sectors, private capital is deployed at a much higher rate creating a multiplier effect across countries and their economies.

The other powerful component of Green Growth and the Green Deals is **shared economic growth**. The explicit commitment to shared economic growth emphasizes the imperative that the large investments being made by the government and private capital are expanding and strengthening strong middle-income populations. This frequently takes the form of increased hiring, expanded training programs, increased wages to ensure workers make a living wage, and improved investment in education, childcare and healthcare. A strong middle-income population is able to actively participate in a thriving market economy.

Korea implemented Green Growth as a national law over a decade ago, therefore its visionary leadership in green growth policies, and extensive experience implementing multi-sector Green Growth initiatives and investments offer enormous insight and value to government leaders around the world now looking to implement a Green Deals.



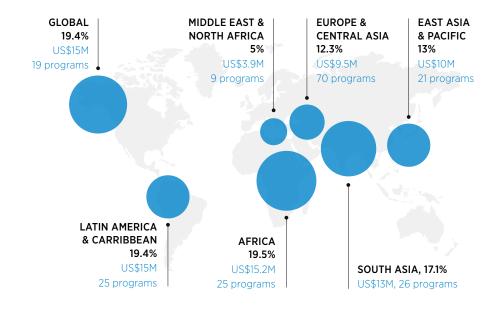
# **KGGTF At A Glance**

The Trust Fund finances on-the-ground programs as well as knowledge exchange activities, and to date has approved 144 programs in the urban, transport, information and communication technology, energy, environment, water, agriculture and climate sectors. Based on strong performance, as well as increasing demand for collaborative programs, the fund has grown from providing USD\$40 million in 2013 to USD\$88 million for World Bank Group programs through 2021.

# Examples of WBG lending projects supported by KGGTF:

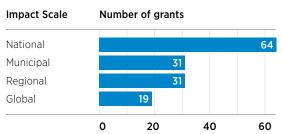
- Inner City Affordable Housing Program (Mexico)
- Urban Public Spaces as a Transformative Instrument for Inclusive Green Growth in South Asia (Sri Lanka, Bangladesh and India)
- Energy Storage Application Studies and Knowledge Exchange Framework for Sustainable Green Growth in West Africa Power Pool (WAPP) countries
- A Green Growth Platform for Lao PDR
- Improving Solid Waste Management in African Cities

#### **FUND ALLOCATION BY REGION**



#### **KGGTF IMPACT SCALE**





#### **FUND ALLOCATION BY GLOBAL PRACTICE**

Approval Year	Global Practice	Donor Approved Amount (USD\$Million)	No. of Grants
	Urban	10.24	14
/···1	Transport	7.25	8
'ear 1	Global Initiatives	2.30	1
	Water	0.60	1
	Urban	11.59	10
	Transport	6.60	6
ear 2	Digital Development	5.44	5
	IFC	4.38	3
	Energy	1.2	1
	Urban		<b>13.01</b> 12
	Environment	5.06	5
	Energy	4.44	6
ear 3	IFC	3.41	3
	Transport	3.30	4
	Water	1.14	2
	Digital Development	0.60	1
	Environment	6.90	5
	Transport	6.20	5
	Energy	5.63	5
ear 4	Global Initiatives	4.95	1
	Digital Development	2.60	2
	Urban	2.20	2
	Water	0.60	1
	Environment	5.25	4
	Urban	4.60	6
_	Transport	4.32	3
ear 5	Energy	3.50	3
	Water	2.00	2
	IFC	2.00	2
	Environment	2.80	3
	Energy	1.90	3
ear 6	Transport	1.74	1
	Urban	1.60	1
	IFC	0.08	1
	Digital Development	2.80	2
	Urban	2.40	2
	Transport	2.40	2
ear 7	Environment	2.40	2
	Energy	2.00	2
	Agriculture	2.00	2
	Water	1.00	1

# **2019 Work Program Highlights**

#### Just-in-Time Workshop

National workshop on Integrated Urban & Regional Development for Uzbekistan, attended by Uzbek government officials, intvernational technical experts. representatives from the private sector and World bank staff



#### Knowledge **Product Launch**

Knowledge Note 04 and a Virtual Reality video Extracting Value from Municipal Solid Waste Management were launched.

#### JIT Knowledge Exchange Program (part 1)

A delegation from Cambodia visited Seoul for a practical deep dive into Korea's Solid Waste Management.





#### **Connecting Green Growth Experts**

Mission to connect WB Transport GP with Korea's Ministry of Land, Infrastructure & Transport (MOLIT) in Seoul for dialogue and partnership discussions on drone technology ahead of the Africa Drone Forum (Feb 2020).



#### **Connecting Green Growth Experts**

Mission to facilitate connections for the Chief Economist for Infrastructure VP, Vivien Foster, with transport and green growth institutions in Seoul, to demonstrate technological disruption and innovation in the infrastructure sectors in green growth directions.



#### JIT Dissemination Workshop (part 2)

KGGTF and experts from Korea provided onsite follow up support in Cambodia by facilitating a workshop in Phnom Penh organized by the Cambodian delegation to share learnings from the Korean approach to SWM with government stakeholders.



#### **Technical Assistance**

Two-day workshop to assess Energy Storage System (ESS) applications in the West African Power Pool (WAPP) Utilities and Countries, hosted in Benin with partners KEPCO (Korea Electric Power Corporation), KPX (Korea Power Exchange) and KIND (Korea Overseas Infrastructure & Urban Development Corporation) participating.



A delegation from the Ethiopian Road Authority (ERA) and World Bank staff from Ethiopia visited Seoul for a practical deep dive into the Korean road management system and use of ICT for operations and maintenance of highways.



### **Knowledge Promotion**

Platform Launch

Website re-launched after a major update and refresh added new navigation, publications library, features and content. wbgkggtf.org



#### 10 Knowledge **Exchange Programs**

121 delegates from 15 countries: Ethiopia, Pakistan, Nepal, India, Morocco, Tunisia, Vietnam, Myanmar, Kosovo, Turkey, Sri Lanka. Indonesia. Colombia, Ecuador and Panama visited Korea for practical learning experiences across five sectors: Energy, Environment, Urban, Transport, Water.



# **New Grant Awarding**

& Onboarding:

13 new grants were awarded by the KGGTF Donor (MOEF) and began the onboarding process.

#### **Annual Green Growth Knowledge Sharing Event:**

Korea Green Innovation Days 2019, held in Seoul. 300 delegates including government representatives from 14 countries: Morocco. Tunisia. Myanmar, Cambodia, Pakistan, Turkey, Sri Lanka, Vietnam, Ecuador, Colombia, Panama, Kosovo, Indonesia and Ethiopia gathered to share practical knowledge and best practices.





#### Knowledge **Exchange Program**

A delegation of World Bank staff from the Water Global Practice visited Korea to learn about innovation and successful transformation in the water sector.



#### **Dissemination Event:**

World Bank Energy Forum at BIXPO 2019 (Bitgaram International Expo of Electric Power) in Gwangju, Korea. KGGTF and senior staff from the World Bank Energy Global Practice ran a session on Disruptive Energy Technology Applications



in Developing Countries.



#### Dissemination Event:

Launch of the KGGTFfunded report on Watershed Management for Resilient Infrastructure in Kathmandu, Nepal with participants including senior representatives from the Korean Government (MOEF), Government of Nepal, and senior staff from the World Bank's Environment and Agriculture Global Practices.



#### Knowledge **Exchange Program:**

A delegation of government representatives from Nepal, Pakistan and India together with senior environmental specialist from the World Bank visited Seoul for a practical deep dive into Korea's Solid Waste Management experience.



# **KGGTF In The News**

During 2019, KGGTF was featured in over 25 articles in both the Korean and International media. Publications included the World Economic Forum, Korea Herald and The Korea Times, among many other business and trade titles.



World Bank team touring Himachal for developing waste management strategies

Devdiscourse News

World Bank explores waste management strategies in Himachal Pradesh



Korea Forest Service Takes First Step towards Global Forest Cooperation with World Bank

Korea, WB expertise for solid waste mgmt

IHA release new guide to help hydropower build resilience How drones can help rural Africa take flight to climate change

# **KGGTF Website**

To support the sharing of green growth knowledge and solutions KGGTF continues to develop its dynamic and comprehensive website that provides a platform for sharing technical knowledge and impact stories from KGGTF funded activities around the world.

A rich source of green growth information delivered through videos, images, feature

stories and publications, the site is continuously developed and updated, now with new, easier navigation and additional content.

Visit www.wbgkggtf.org to explore new features and content from 7 years of KGGTF funded programs worldwide, publications, videos and more.



#### **Publications**

View and download Newsletters, Knowledge Products and Annual Reports from the publications library online.



Access the knowledge and experiences of green growth experts and practitioners from around the world.



#### **Portfolio**

7 years of KGGTF funded programs worldwide.

# **Active Grant Portfolio Progress**

Sample of active grant programs at various stages of implementation:

# Land Records and Geo-Spatial Information Systems Linked to Green Growth (LRGIGG)

Year: 5
Sector: Land (Urban)
Region: Global



#### **PROGRAM GOAL**

Support governments to develop accurate geospatial land mapping and data infrastructure that will provide accurate and timely information to guide smart and environmentally sound decision making around land and natural resource usage.

#### **PROGRESS TO DATE**

Help was provided to develop Action Plans that will strengthen institutional capacity, support the design and implementation of monitoring and evaluation systems, and increase stakeholder participation in Honduras, El Salvador, Paraguay, Uganda and Pakistan. The indicators are completed in the case of Pakistan. The plan to foster institutional capacity was discussed, the monitoring and evaluation completed, and the participatory strategy was updated using the lessons learned in Korea. In the case of Honduras, political issues after the elections disrupted the continuity.

#### **KNOWLEDGE LEVERAGED**

General and specific thematic trainings, and an internship program sponsored by the Korea Land and Housing Institute (LH) were provided. An Internship Program organized in the LH's headquarters was dedicated to the World Bank professionals engaged in the project.

# Energy Storage Application Studies and Knowledge Exchange Framework for Sustainable Green Growth in West Africa Power Pool (WAPP)

Year: 4
Sector: Energy
Region: Africa

#### **PROGRAM GOAL**

Support WAPP countries to increase renewable energy sources, and critically, battery-operated energy storage systems (ESS). Increasing energy sources will stabilize prices and support long-term integrated energy infrastructure across West Africa, while simultaneously helping ECOWAS meet renewable energy goals and GHG targets.

# Core components of the WAPP program focus on:

- 1. Assessment of energy storage applications:
- Feasibility study of power system
- Assessment of energy storage application
- Financial assessment of energy storage
- 2. Training and Knowledge Exchange

#### **PROGRESS TO DATE**

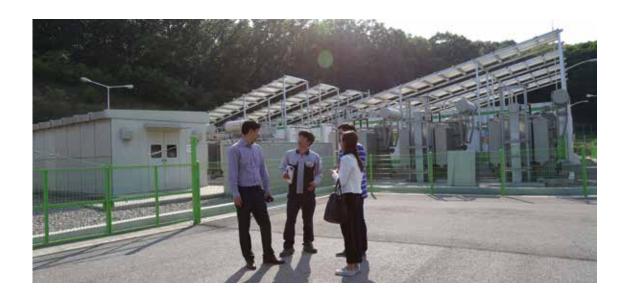
This program aims to support the WAPP countries increase their use of renewable

energy sources and battery-operated energy storage systems. A report on Energy Storage in WAPP Power System was prepared. Completed outputs include an analytical report in Energy Storage Application in WAPP countries, a financial assessment report on Energy Storage Technology Application in WAPP countries and an assessment report for mini-grids.

Pilot projects were undertaken with the Korea Institute for Advanced Technology (KIAT) and the World Bank in Senegal, Nigeria and Vietnam.

#### **KNOWLEDGE LEVERAGED**

A framework for interactive training sessions for the WAPP utilities was created. A Knowledge Exchange program was organized and a Training Program on Energy Storage Systems for West African clients was provided. Participating countries included: Benin, Burkina Faso, Cote d'Ivoire, Gambia, Guinea, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo.



# Sustainable Solid Waste Management in Mountainous Regions of India, Nepal and Pakistan

Year: 5
Sector: Environment
Region: South Asia

#### PROGRAM GOAL

Advise policymakers across energy, water, and forestry sectors about the multiple benefits of smart hydropower planning and infrastructure.

A comprehensive assessment of current practices in the Himalayan mountainous regions and international experiences (including South Korea) in municipal solid waste management. Analyze options for integrated management of solid waste in mountainous regions of India, Nepal and Pakistan. Develop customized models and implementation program for each region and city. Design and roll out hands-on training and capacity building programs.



#### **PROGRESS TO DATE**

A report on current waste management practices in the Himalayan region has been prepared and circulated to stakeholders. Local laws and regulations as well as international case studies for waste management were completed. Progress was made thanks to the development of a sustainable solid waste management model for each of the three regions in India, Nepal, Pakistan with stakeholders' participation in the process of analysis of available options. Actions were initiated for the implementation of a crafted solution to local requirements for cities, based on green growth initiatives undertaken in Korea. The implementation plan proposed by Korea Environmental Corporation (KECO) has been rolled out during the analytical work in each of the client countries.



#### **KNOWLEDGE LEVERAGED**

During the Knowledge Exchange in Seoul, KECO shared different models on solid waste management with the participants. The KGGTF grant supported clients and World Bank staff to develop multiple partnerships, with entities in Pakistan, India and Nepal:

#### Pakistan:

- KP Department of Tourism (DOT)
- KP Communication and Works Department (DC&W)
- KP Department of Environment (DOE)
- KP Local Government Dept.
- Kaghan Development Authority
- Chitral Development Authority
- Galliyat Development Authority

#### India:

Department of Environment, Science & Technology, Government of Himachal Pradesh

#### Nepal:

National Trust for Nature Conservation and Management of the Annapurna Conservation Area

Additional partners include the University of Seoul (UOS) which is advising the World Bank on technical options for regionally tailored and sustainable waste management models and strategies, and Korea Student Alpine Federation (KSAF) which is conducting a geological and statistical study. Solid waste management strategies and polices from South Korea and other countries will be referenced as best practice cases.



**ACTIVE GRANT PORTFOLIO PROGRESS** 

# **Scaling-up Rooftop Solar PV** in Turkey

Year: 6 **Sector:** Energy Region: ECA

#### **PROGRAM GOAL**

To support the development of Turkey's rooftop solar PV market. The financial instruments and models developed will inform a new World Bank lending operation.

#### **PROGRESS TO DATE**

The final report on financial instruments and business models for RSPV scale-up has been delivered to the Bank on January 13, 2020. The workshop organized to disseminate key findings and recommendations was held in Ankara on October 25, 2019. The World Bank team is working with the Turkish government and local banks to identify the most effective way of mobilizing private financing.

#### **KNOWLEDGE LEVERAGED**

A Turkish delegation from the Ministry of Energy and Natural Resources (MENR), Development and Investment Bank of Turkey (TKYB), and Turkish Industrial Development Bank (TSKB) traveled to Korea for a Knowledge Exchange program in September 2019 to develop partnerships with Korean counterparts in the energy sector.

Korean entities that participated in knowledge sharing included:

- Seoul Energy Corporation (SEC)
- Korea Overseas Infrastructure and Urban Development Corporation (KIND)
- Korea Photovoltaic Industry Association (KOPIA)
- Korea Smart Grid Institute (KSGI)
- · LG Chem.
- Korea Energy Agency (KEA)
- Sihwa Tidal Power
- Korea Battery Industry Association (K-BIA)
- Korea Telecom Micro-Energy Grid (KT MEG)
- Korea Electric Power Corporation (KEPCO)

# **Knowledge Operations**

#### **KNOWLEDGE OPERATIONS ARE ORGANIZED AROUND THREE KNOWLEDGE ACTIVITY PILLARS:**



#### Technical and **Operational Support**

- Knowledge Exchange
- Just-in-Time Engagement
- Technical Workshop
- Monitoring Mission



#### Knowledge **Promotion Platforms**

Korea Green Innovation Days, learning and partner platform wbgkggtf.org



#### Knowledge **Products**

- Knowledge Notes
- Green Growth Implementation Series
- Knowledge Exchange Books & Videos
- · Multi-Media Tools & Materials

KGGTF Knowledge Operations respond to the need for diffusion of technical knowledge across World Bank staff and client countries. Helping client countries and World Bank staff deepen their understanding of green growth strategies encourages the mainstreaming of green growth investments.

Knowledge Products and Promotion Platforms respond directly to the urgent need for specific knowledge through the use of practical case studies and world class expertise. Working across all sectors, technical and policy solutions are made accessible to countries around the world looking to implement green growth solutions.

#### **KNOWLEDGE EXCHANGE**

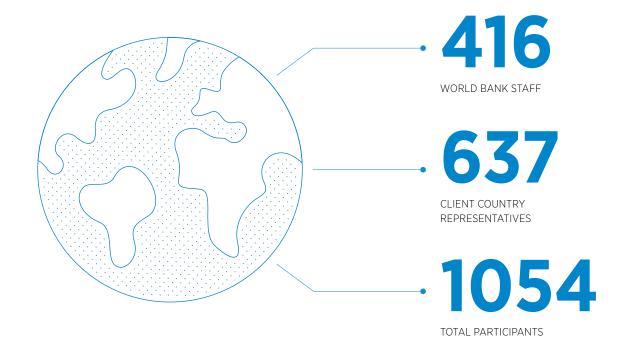
**Knowledge Exchange (KE)** programs are innovative knowledge sharing experiences scheduled on-demand to deepen understanding of specific technical issues and foster collaborations and partnerships.

The main goal of Knowledge Exchange programs is to connect representatives of client countries with Korean professionals and officials and provide first-hand knowledge

about the process of Green Growth policy setting and implementation. Site visits, technical presentations, and meetings with policy and operational experts create opportunities to learn from and work with Korean partners. Knowledge Exchange programs are also invaluable for World Bank staff and client countries as an introduction to, or immersion into, green growth strategy as a vehicle for sustainable development.

#### **KNOWLEDGE EXCHANGE BY NUMBERS**

To date KGGTF has facilitated and delivered 53 Knowledge Exchange programs for a total of 1054 participants including World Bank staff and client country representatives, in partnership with 150 **Korean organizations** across multiple sectors.



#### **SECTORS**



Urban

Digital Development

X;



Water

Transport





Environment

Agriculture

20 KGGTF ANNUAL REPORT 2019 KGGTF ANNUAL REPORT 2019 21

#### **JUST IN TIME (JIT) ENGAGEMENT**

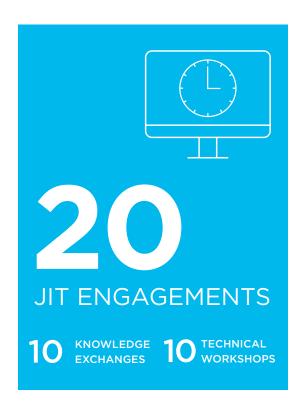
Just-In-Time (JIT) Engagements are technical interventions that have operational urgency and potential for lending. The KGGTF receives countless requests from the World Bank for ad hoc assistance in addition to that provided through Knowledge Exchange programs.

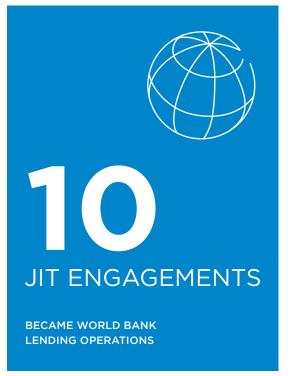
Requests include leading workshops, capacity

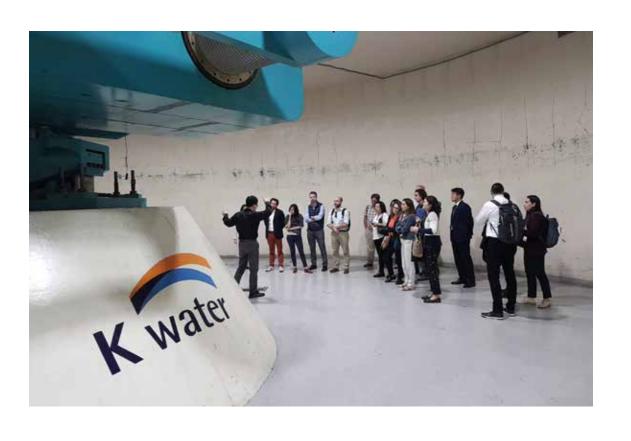
building programs and participating in client meetings to provide Green Growth expertise in planning and decision-making.

KGGTF is instrumental in helping operational teams and clients achieve higher quality, better informed technical solutions. Many result in WBG operations and lending.

#### **JUST-IN-TIME BY NUMBERS**







#### **JUST-IN-TIME ENGAGEMENTS IN 2019:**

FY20	Oct 19	World Bank Water Global Practice Knowledge Exchange	Facilitated a technical KE for 11 WB staff
FY20	Sep 19	World Bank Water Global Pracrice LAC Unit Knowledge Exchange	16 WB staff from Water Global Practice LAC unit participated in a tecnical KE on smart technologies & innovative water management
FY20	Sep 19	Joint Fisheries Knowledge Exchange for Myanmar (KGGTF & Korea Maritime Institute)	Partnering with Korea Maritime Institute, an extensive Knowledge Exchange (KE) was conducted focusing on Fishery and Coastal Management. This partnership was established in 2018 during Vietnam Fisheries KE.
FY19 FY20	Sep 18 - Jun 19	Cambodia Solid Waste Management (SWM)	approaches in the waste sector. Found solutions to solid waste management challenges through:  1. Workshop 2. Knowledge Exchange 3. Dissemination Event

**KNOWLEDGE OPERATIONS** 

# Korea Green Innovation Days (KGID)



10 super sessions and 8 working sessions



Exhibition space for 3 Ministry partners (including 7 Korean institutions)



Green Talks Interview Booth

# THE WORLD BANK GROUP'S ANNUAL GREEN GROWTH FORUM

Organized and funded by KGGTF, once a year, leaders in climate change and economic development convene with client country delegations and green growth practitioners from the Republic of Korea to share innovative approaches and current projects.

KGID showcases the progress and impact of KGGTF's programs and operations around the globe. The forum highlights new business and financing models, long-term investment methodologies, innovative technologies and demonstrates the power of collaborative partnerships.

#### **KGID Objectives:**

- Learn about climate-smart, green technologies, policies, and methods.
- Learn how the World Bank, Korea, and other countries are sharing green growth technical knowledge.
- Broaden a network of professionals to implement green growth and climatesmart actions.
- Build a global community of experts engaging in dialogue on green innovation and implementation.

140

Decision-markers/ leaders from Korea's public & private sector

**72** 

WBG Technical specialists

87

Officials from 14 developing countries.



## Korea Green Innovation Days: Green Growth Transforming the World

September 26-67 2019 Seoul, Republic of Korea

#### **KGID HIGHLIGHTS**



# 1. National Green Growth policy transformations

Director General Jinnam Kim from the Prime Minister's Office for Supporting Green Growth and Dr Yujin Lee from the Committee on Green Growth presented key achievements from the past decade along with Korea's recently renewed green growth goals. WB Practice Manager Christophe Crepin shared details of the National Green Growth policy underway in Vietnam and Lao PDR.



# 2. Innovation Driving Transformational Business Models

Two case studies in Transport and Urban were compelling examples of how datadriven solutions and decision-making process can be improved to deliver climate-friendly policies and services. Dr JaeHak Oh, President of the Korea Transport Institute (KOTI) gave a special presentation on the significance of shared mobility.



# 3. World Bank Partnerships for Leveraging Knowledge

Led by Hoon Sahib Soh, Special Representative at the World Bank Korea Office, this session demonstrated the effectiveness of partnerships for leveraging Korean knowledge, technology and investment to support green growth plans.

#### **KGID HIGHLIGHTS**



# **4. Global Community and Bilateral Meetings**KGID provided the opportunity to exchange knowledge with a global community of experts. Discussions and bilateral meetings were conducted to make introductions and facilitate the implementation of projects around the world.



# MULTI-SECTOR KNOWLEDGE EXCHANGE PROGRAMS

In September 2019 KGGTF facilitated 10 parallel Knowledge Exchange programs for World Bank staff and client countries. 42 WBG staff and 85 officials from 14 developing nations met with 68 Korean institutions and took part in site visits

KGGTF partnered with Korea's Global Knowledge Exchange & Development Center to provide guided tours to help international leaders have a better understanding of Korea's economic and industrial development history.



A mobile app dedicated to facilitating collaboration between practitioners was launched. Created to enrich participants' experience and facilitate interactive involvement in group discussions before, during and after the event.

#### **EVENT APP USE**

**83%** of app users found the app to be very useful

**343** total downloads

**1584** total profile views

**2649** total session views



#### **Number of Participants**

Sector	Theme	Country	Total	WBG	Delgate
	Coastal Management	Morocco, Tunisia	14	4	10
Environment	Fisheries	Myanmar	16	2	14
	Eco-Industrial Park	Pakistan	6	1	5
Water	Smart Water	LAC Region	15	15	
	Renewable Energy & Rooftop Solar PV	Turkey, Sri Lanka, Vietnam	15	4	11
Energy	EIP Manufacturing	Ethiopia	8	3	5
	Energy Efficiency KE	Vietnam	17	3	14
Halana O Land	Land Administration & Cadastre	Pakistan, Myanmar, Kosovo	16	4	12
Urban & Land	Urban Development & Geo-spatial Data	Indonesia	11	3	8
Transport	Urban Mobility	Columbia, Ecuador, Panama	9	3	6

KGGTF designed technical agendas to meet the specific needs of participating countries, including consultations with Korean government ministries and institutions, presentations delivered by private companies in relevant fields, and site visits led by technical specialists. Delegates learnt about Korea's Green Growth journey first-hand, asked country-specific questions, and connected with a network of experts sharing ideas and exploring potential partnerships and collaborations.

## Ethiopia Road Asset Management & Safety

July 2019



KGGTF delivered a Knowledge Exchange program for the Ethiopian Road Authority and WBG staff. Participants from the WBG, Ethiopian Road Administration and KGGTF met with representatives from Korean institutions including:

- Ministry of Land, Infrastructure and Transportation (MOLIT),
- Korea Expressway Corporation (KEC),
- Korea Transport Institute (KOTI),
- Korea Land and Housing Corporation (LH),
- Intelligent Transport Society of Korea (ITS Korea).
- Korea Overseas Infrastructure & Urban Development Corporation (KIND)
- The Export-Import Bank of Korea (KEXIM)

The delegation visited seven sites to learn how Korean road management systems and ICT support the operation and maintenance of highways. Mechanisms for coping with social and environmental issues, along with road safety and asset management were discussed in addition to key elements of road planning.

**SOUTH KOREA** 

Participants learned how the Government successfully established community consensus during the construction of Seoul-Sejong Expressway. And a visit to the ICT Center in Dongtan and the National Highway Monitoring Room at MOLIT demonstrated how adoption of Intelligent Transport System (ITS) technologies was instrumental in solving traffic management and road congestion.

Korea Expressway Corporation explained how to effectively manage road assets and LH Sejong Exhibition Hall presented new urban agglomerations and the importance of providing reliable transportation systems.

## World Bank Water Global Practice

In October 2019, a delegation of 11 World
Bank staff from the Water Global Practice
visited Korea to learn about the innovative and
successful transformation in the water sector.

#### **KEY LESSONS:**

- Transformative development, was achieved through:
- Strong cooperation between the government, citizens and the private sector,
- Timely and appropriate use of bottom-up and top-down approaches.
- Local governments, such as Seoul Metropolitan Government and K-water are the major players in the Korean water sector.
- Innovation in the Korean water sector is ongoing. A highly relevant example is the eco-delta smart city Busan.
- Public Private Partnerships for wastewater facilities (LG Hitachi Paju Wastewater Reuse Facility) and urban planning that puts environmental facilities at the core (Hanam Union Park) provided a new paradigm for what is possible.

Participants planned to produce a knowledge note based on their learnings and to promote the development of a long-term cooperation between Korea and the WB Water GP.



# Cambodia Solid Waste Management (SWM)

March 2019



Linked to the KGGTF grant activity 'Sustainable Solid Waste and Plastic Management in Cambodia' this JIT included multiple stages of Solid Waste Management technical support took place in both Seoul, South Korea and Phnom Penh, Cambodia.

In March 2019, KGGTF facilitated a Technical Knowledge Exchange program of site visits and meetings with Korea Institutions in Seoul, South Korea. The delegation included representatives from the WB Environment, Natural Resources and Blue Economy (ENB) GP, high-level government officials from Cambodia's Finance, Public Works and Environment sectors, as well as two municipal city governments.





#### **KNOWLEDGE EXCHANGE FOCUSED ON:**

- Understanding the policy and regulatory framework around SWM in Korea.
- Learning about business models for publicprivate partnership
- Seeing how new technologies are being deployed for SWM.
- Learning how to develop different revenue streams, minimize landfill operations and administrative costs, and encourage new project investments (based on Korea's Sudokwon Landfill Corporation)
- Roles and responsibilities of:

#### The public sector:

- Capital investments
- Provision of equity
- Enforcement of regulations.

#### The private sector:

- Waste collection
- Landfill operation
- Incinerator operation
- Energy generation services.

June 2019, KGGTF and experts from Korea provided on-site support in Cambodia to share learnings from the Korea approach to SWM.

Knowledge learned was critical in informing the Cambodian government's next steps in tackling solid waste management challenges.



#### Results include:

- Request for World Bank-financed project on solid waste management
- Request for Sudokwon Landfill Corporation's support to develop measures to manage the Phnom Penh landfill
- Canceling the longstanding contract with Phnom Penh's underperforming waste collector
- Commitment to major improvements to the waste collection system.

Korea's management of solid waste demonstrated how waste can be transformed into a resource that contributes to economic growth. This JIT engagement proves the value of inspirational knowledge sharing and on-site technical support for identifying new solutions.

# Myanmar Department of Fisheries



In September 2019, the World Bank Team and a delegation from the Department of Fisheries of Myanmar participated in a Knowledge Exchange devoted to fisheries and coastal management. In partnership with Korea Maritime Institute (KMI) a knowledge exchange took place in Seoul and a follow up JIT in Busan.







#### **KNOWLEDGE EXCHANGE FOCUSED ON:**

- Many technical areas were covered through site visits and meetings with Korean institutions:
- Fisheries Policy: Korea Maritime Institute (KMI), Ministry of Fisheries (MoF)
- IUU fishing policy and monitoring technology: KMI, Fisheries Monitoring Center (FMC)
- Fishing Port and Village Development: Korea Fisheries Infrastructure Public Agency (FIPA)
- Fisheries Co-management: Best practice for co-management in fishing village (site visit) National Fishery Products Quality Management Service (NFQS)
- Credit system for coastal fishers & Korea's fisheries co-op model: National Federation of Fisheries Cooperation (Suhyup)
- Coastal management and stock enhancement: FIPA, KMI, Korea Hydrographic and Oceanographic Agency (KHOA)
- Aquaculture and Fish farming: National Inland Fisheries Research Center, Seaweed Culture Center
- Post-Harvest: Marine Product Export & Manufacturing Complex

Nearly one billion people, many from low-income countries, depend on fish as their primary source of protein. The near depletion of the ocean's most valuable fish stocks has caused an annual net loss of roughly USD\$50 billion and jeopardizes food security



#### **KEY LESSONS:**

- Korea's sectoral policy development and legal frameworks
- Research activities on freshwater and marine fisheries
- Korean government's Official Development Assistance activities for developing countries.

The World Bank deepened its engagement with Myanmar and learned about the challenges facing Myanmar's fishery sector.

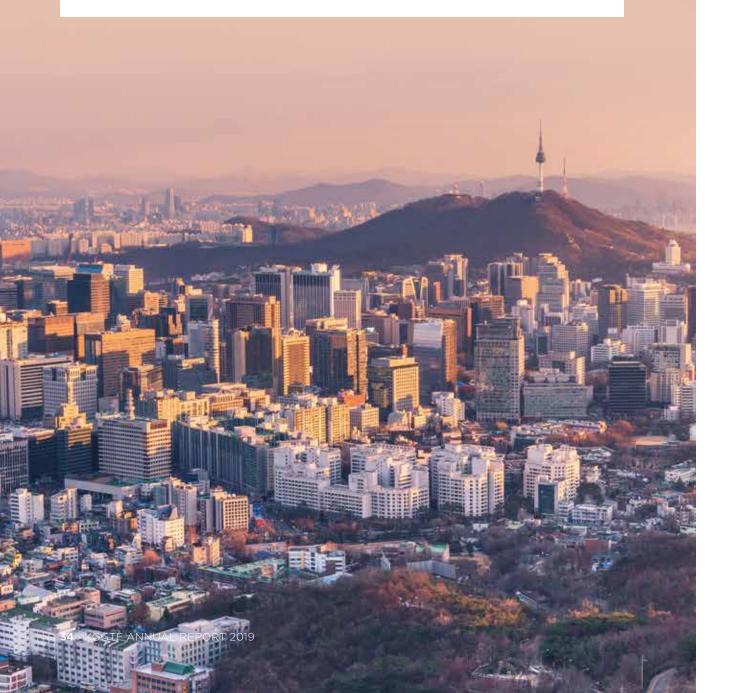
#### **ELEMENTS OF FISHERIES CO-MANAGEMENT**



# **Partnership with** the World Bank **Korea Office**

KGGTF and the World Bank Korea Office collaborate, partner and cost share projects that deliver and respond to requests for technical assistance under a joint Green Growth Innovation program that covers renewable energy and energy efficiency, environment and natural resource management, and land administration and geospatial technology.

This program strengthens partnerships with Korean institutions and agencies, leverages KGGTF's value as connector and facilitator, and increases opportunities for World Bank lending operations and bilateral cooperation with Korea.



# **Monitoring And Evaluating Impact**

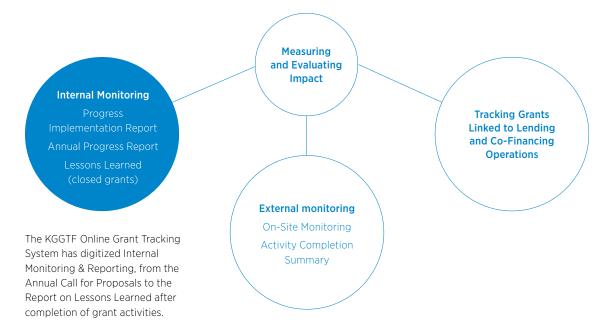
KGGTF conducts Monitoring & Evaluation activities to...

- Evaluate the effectiveness of its programs and the extent to which they are supporting WBG clients to achieve Green Growth.
- Draw lessons from its portfolio of global activities to improve planning, design, and investment in Green Growth programs across the World Bank and in client countries.
- Help client countries measure Green Growth initiatives, integrate Green Growth principles at policy and project levels, and seek financing and technical assistance for Green Growth operations.
- Contribute to new Green Growth metrics that will help World Bank staff and clients design and implement Green Growth programs.
- Play a leading role in defining Green Growth in an operational context through the establishment of a formula or set of global standards for measuring Green Growth projects and impacts.

In line with the innovative spirit of the Trust Fund, and as part of its commitment to develop and refine a robust grant monitoring and evaluation system, KGGTF has modernized its internal portfolio management system and migrated to a customized **Online Grant Tracking System** for its annual Call for Proposals, grant reporting and monitoring.

This digital system:

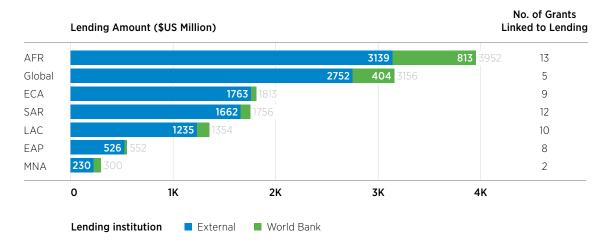
- Enables more accurate and effective assessment of the performance of the Trust Fund, at both grant and fund level.
- Increases the convenience and efficiency of reporting for grant teams and closes the feedback loop with GPs and KGGTF.
- Improves the design, implementation, quality and impact of Green Growth investments across the World Bank.



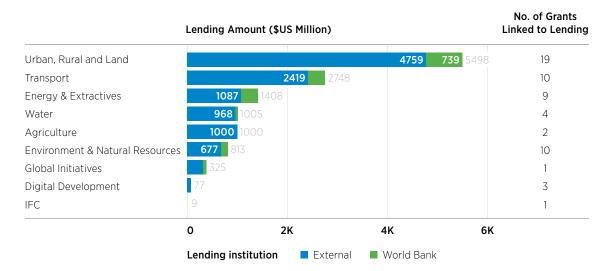
# World Bank Lending and External Co-Financing

At the end of 2019, 59 out of 144 KGGTF grants were linked to and leveraging World Bank lending and external co-financing totaling USD roughly \$12.9 billion (figure subject to lending fluctuations).

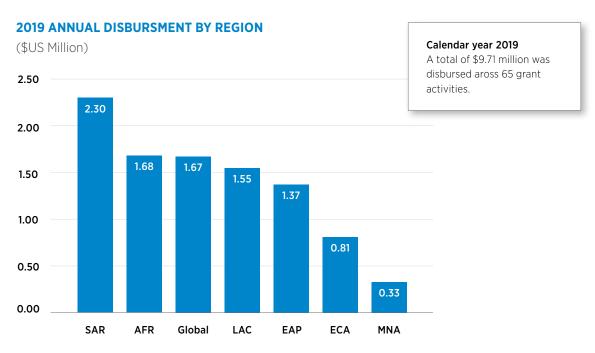
#### **WORLD BANK LENDING AND EXTERNAL CO-FINANCING BY REGION**



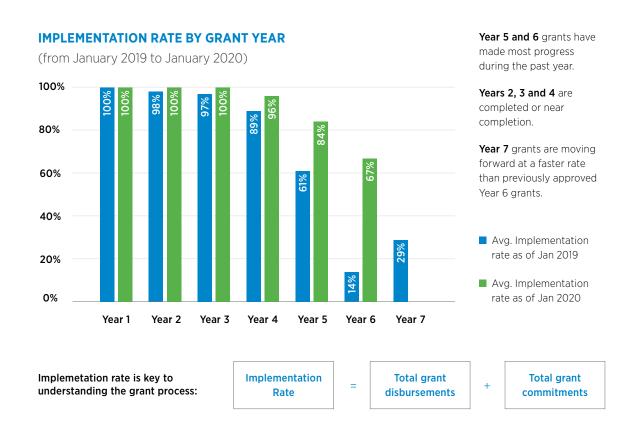
#### **WORLD BANK LENDING AND EXTERNAL CO-FINANCING BY SECTOR**



# **Financial Review**



Funds were distributed globally. South Asia and Africa account for the highest portions.





COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US\$)
Global	Climate Change	1	Decision Making Under Uncertainty	~	4 Years	1,150,000
Global	Climate Change	4	Investing in green growth under uncertainty	7	3 Years	2,475,000
Global	Energy	6	Hydropower climate change resilience guidelines development	7	2 Years	300,000
Global	Energy	7	Capacity building and technical Learning workshops on Energy storage to Accelerate energy Transition (CLEAN)	7	2 Years	700,000
Global	Environment	5	Learning from Korea's Green Growth Experience to Tackle Environmental Health Challenges	7	2 Years	875,000
Global	Environment	5	Green Growth via Green Infrastructure Construction	7	2 Years	650,000
Global	ICT	3	Unlocking Data Innovations for Smarter Urban Transport	~	2 Years	300,000
Global	Transport	1	Capacity Building for Leaders in Energy Efficient Urban Transport Planning	~	3 Years	500,000
Global	Transport	2	Training Hub "Transportation for Green Growth"	~	4 Years	500,000
Global	Transport	4	Mainstreaming GHG Mitigation in Rail Freight and Developing Strategies for Sustainable Transport Infrastructure	~	2 Years	500,000
Global	Urban	1	Capacity Building for Green Urban Growth	~	3 Years	500,000
Global	Urban	1	City Creditworthiness Program	~	3 Years	500,000
Global	Urban	2	Low Carbon City Development	~	3 Years	1,370,000
Global	Urban	3	An Integrated Approach to Urban Sustainability Planning	~	3 Years	1,560,000
Egypt	Energy	3	MENA Cleaner production for Companies	~	Single	304,000
Honduras, Nicaragua, Grenada, Saint Lucia and Pakistan	Urban	5	Land Records and Geo-Spatial Information Systems Linked to Green Growth (LRGIGG)	7	2 Years	600,000
India, Tunisia	Urban	2	Green Smart City Development with Citizen Participation	~	2 Years	800,000
Lao PDR, Colombia, Mongolia, Cote d'Ivoire	Land	7	Geospatial Information Management for Green Growth Operationalization (GIMGGO)	71	2 Years	700,000
Myanmar, Pakistan, Kosov	Land o	6	Fostering Green Growth in Fragile States	71	2 Years	800,000

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
Angola	Water	7	Building Drought Resilience in the South of Angola through the use of geospatial information and nature-based infrastructure	7	2 Years	500,000
Benin	Energy	5	Strengthening Utility Capabilities by Capacity Building and South-South KE (SUCCESS-KE)	7	2 Years	600,000
Ethiopia	Energy	5	Ethiopia Green Industrialization support program	7	2 Years	550,000

Ethiopia	Transport	1	TA to promote integrated urban planning in Addis Ababa to foster green growth	<b>V</b>	4 Years	1,100,000
Ethiopia	Transport	4	Resilience of the Ethiopian Roads Network	71	3 Years	700,000
Ethiopia	Urban	3	TA to promote sold waste management and urban greenery in selected Ethiopian secondary cities	V	4 Years	400,000
Ecowas <sup>1</sup>	Energy	4	Energy Storage application studies and knowledge exchange framework for Sustainable Green Growth in WAPP	7	3 Years	765,000
Indonesia, Benin	Urban	2	Leveraging Korea's Experience in the Solid Waste	~	2 Years	225,000
Kenya	Water	5	Turning Kenya's Water Utilities Green	7	3 Years	400,000
Mali	Urban	3	Real Time Urban Flood Risk Management and Decision Support Tool for Bamako Greater Area	~	4 Years	495,000
Mali	Urban	7	Greening Urban Development in Bamako (Mali)	71	2 Years	500,000
Regional	Urban	5	Improving Solid Waste Management in African Cities	71	2 Years	500,000
Rwanda	Urban	2	Secondary Cities program	V	3 Years	650,000
Sub-Saharan Africa	Environment	3	Greener Cement Industries in Africa	V	3 Years	700,000
Sub-Saharan Africa	ICT	2	Green Cities and Low Carbon Industries Initiative	V	4 Years	600,000
Sub-Saharan Africa	ICT	2	Negawatt Challenge for Energy Efficiency	~	2 Years	500,000
Sub-Saharan Africa	Transport	2	Africa Sustainable Transport Forum	~	4 Years	500,000
Sub-Saharan Africa	Transport	2	Streets as Drivers of Green Growth and Urban Prosperity in Africa	~	4 Years	600,000
Tanzania	Transport	4	Smart Tanzania - Strengthening Data Services and Planning	~	3 Years	600,000
Uganda	Transport	2	Developing skills to support transport and logistics	~	2 Years	400,000
Uganda	Transport	4	Green Logistics Policy and Strategy for Uganda	~	2 Years	500,000
Uganda	Water	5	Strengthening capacity in climate resilience for water infrastructure development in Uganda	7	2 Years	600,000
Uganda, Tanzania, South Africa	Urban	1	Enhancing Green Urban Development in Sub-Saharan Africa	V	4 Years	1,000,000
West Africa	Environment	3	West Africa Fishery Partnership for Competitiveness and Sustainability	V	3 Years	670,000

# EAST ASIA AND PACIFIC

COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US\$)
Indonesia, Philippines	Transport	1	Improving Urban Mobility Using Big Data Analytics	✓	2 Years	500,00
Indonesia	Urban	1	Sustainable Urban Growth Analytics and Planning Systems	~	3 Years	375,000
Indonesia	Urban	1	Inclusive Green Growth for East Asia Pacific Cities	V	2 Years	150,000
Indonesia	Urban	5	City Planning Labs and Spatial Planning	7	2 Years	200,000
Lao PDR	Environment	4	Green Growth Platform for Lao PDR	7	3 years	900,000
Lao PDR	Environment	7	Pollution Solutions for Lao PDR's Green Growth Policy and Investment Agenda	7	2 years	700,000
Lao PDR, Cambodia	Transport	7	Green Mobility for Luang Prabang and Seam Reap	7	2 years	600,000
Mongolia	ICT	2	SMART Gov - Civic Innov. Solving Old Problems in New Ways	~	2 Years	430,000

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

Myanmar, Cambodia, Philippines	Environment	6	Myanmar, Cambodia, Sustainable Solid Waste & Plastic Management	7	2 Years	700,000
Pacific Island Countries and Territories	Energy	7	Regional E-mobility and Battery Storage Programmatic Technical Assistance (TA) for Pacific Island Countries and Territories	71	2 years	300,000
Philippines	Transport	1	East Asia & Pacific 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	~	3 Years	675,000
Vietnam	Competitiveness	7	Enhancing agricultural green growth in Vietnam by applying disruptive technology to facilitate export of quality, safety and climate resilient agricultural products from Vietnam to Korea	7	2 Years	800,000
Vietnam	Energy	3	Scaling-Up Rooftop Solar in Vietnam II	~	Single	91,379
Vietnam	Energy	3	Scaling up Implementation of Vietnam's Green Growth Priorities	~	3 Years	780,100
Vietnam	Energy	4	Scaling-Up Rooftop Solar in Vietnam	~	3 Years	350,000
Vietnam	Energy	6	KGGTF - Improving readiness for energy efficiency investment in Vietnam's industries	7	2 Years	350,000
Vietnam	Transport	5	Public Transport Development Strategy for Sustainable Urban Mobility in Hanoi	<b>V</b>	Single	550,000
Vietnam	Urban	2	Promoting Green Growth in Industrial Zones	~	4 years	750,000
Vietnam, Indonesia	Energy	3	Inclusive Green Growth for EAP Cities	V	Single	150,000

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EUROPE AND CENTRAL ASIA	

COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US\$)
Armenia, Azerbaijan, Belarus, Georg Moldova and Ukraine	Transport iia,	5	Greener Transport Connectivity for the Six Eastern Partnership Countries	7	2 Years	960,000
Azerbaijan	Environment	5	Towards green growth of Baku: enhancing people's quality of life through sustainable cleanup of polluted lakes	<b>~</b>	3 Years	600,000
Georgia	Transport	1	Georgia Green Freight Transport and Logistics	V	2 Years	250,000
Kazakhstan	Agriculture	7	Support to the preparation of the Sustainable Livestock Development Project in Kazakhstan	7	2 Years	500,000
Kazakhstan	Environment	3	Developing Integrated and Green Solutions for Municipal Solid Waste Management in Kazakhstan	~	2 Years	200,000
Kazakhstan	Transport	4	Kazakhstan Green Growth In Road Sector Through E-tolling	<b>v</b>	3 Years	700,000
Kosovo	ICT	2	Innovative and Green Growth for Rural Areas: Investing & Scoping	<b>v</b>	2 Years	485,000
Kyrgyzstan	Urban	3	Moving Towards Green Urban Development of Kyrgyz Cities	<b>v</b>	3 years	300,000
Moldova	Energy	3	Energy Efficiency Transformation in DH	<b>v</b>	2 years	530,000
Poland	Transport	1	Piloting Sustainable and Green Urban 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 in Turkey	7	2 years	450,000
Turkey	Energy	6	Scaling Up Rooftop Solar PV	<b>v</b>	Single	300,000
Turkey	Urban	2	Developing Green Growth Strategies for 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	<b>V</b>	2 Years	700,000
Uzbekistan	Agriculture	7	Leveraging technology for Uzbekistan's agricultural modernization	7	2 years	500,000
Uzbekistan	Energy	3	Support the Development of A National Industrial Energy Management Program in Uzbekistan	<b>V</b>	2 years	400,000
Uzbekistan	Urban	5	Leveraging green growth for balanced spatial development in Uzbekistan	<b>V</b>	2 years	300,000
Uzbekistan and Kazakhstan	Environment	7	Action on Circular Economy for Green Growth in Uzbekistan and Kazakhstan	7	2 years	500,000

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LATIN AMERICA AND CARIBBEAN	Car.

COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US\$)
Argentina	Urban	2	Implementing Green Solution for Waste Management	~	2 Years	400,000
Argentina	Urban	5	Greening Urban Growth in Metropolitan Buenos Aires	<b>v</b>	2 Years	300,000
Argentina (Province of Santa Fe)	Water	6	Non-Revenue Water (NRW) project for Santa Fe Province - Argentina	7	2 Years	400,000
Bolivia, Mexico	Environment	4	Promoting equitable access to sustainable development in Bolivia and Mexico	7	3 Years	700,000
Brazil	Urban	1	Rio de Janeiro Low Carbon City Development Program	~	2 Years	625,000
Brazil	Urban	1	A Sustainable Vision for the Rio de Janeiro Metropolitan Region	~	2 Years	320,000
Colombia	Environment	4	Support to the Colombia Green Growth Policy	~	3 Years	500,000
Colombia	Transport	5	Improving Public Transit & Sustainable Territorial Dev in Bogota	7	2 Years	650,000
Colombia	Transport	6	Piloting Electromobility in the Integrated Transport System of the Aburra Valley (Medellin, Colombia)	7	3 Years	870,000
Colombia	Water	3	Greening Cities through a Water-Centric Urban Planning Approach	V	Single	200,000
Colombia	Water	4	Water Initiatives to Support Green Growth and Sustainable Cities in Colombia	<b>V</b>	2 Years	300,000
Ecuador, Colombia	Transport	7	Smart-city digital approaches for sustainable urban mobility in Latin-American cities	<b>V</b>	2 Years	600,000
Guatemala	ICT	2	Using ICT to Increase Green Competitiveness in Guatemala	~	3 Years	605,000
Guatemala, Honduras, Nicaragua, El Salvador, Costa Rica and Panama	Energy	4	Sustainable Green Growth in Central America	V	2 Years	700,000
Haiti	Energy	3	Haiti Green Growth Through Renewable Energy Integration	V	2 Years	250,000
Honduras	Energy	3	Tackling Power Sector Barriers for Green Growth in Honduras	V	Single	450,000
Mexico	Urban	1	Mexico Instruments for Urban Redevelopment	~	2 Years	150,000
Mexico	Urban	1	Green Growth Strategies for Mexican Cities	~	4 Years	250,000
Mexico	Urban	3	Strengthening Mexico's Capacity for Integrated Solid Waste Management	~	2 Years	400,000
Mexico	Urban	3	Strengthening urban management in Mexican cities	7	5 Years	400,000
Regional	Urban	1	Regional Resource Recovery and Recycling	~	Single	150,000

Panama	Urban	1	Supporting Green Growth Urban Dev. Strategy in Ecuador	~	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	Investments in Environmental Management and Green Growth	V	2 Years	430,000



COUNTRY	SECTOR	YEAR	PROGRAM TITLE	*	NUMBER OF YEARS	KGGTF TOTAL (US\$)
Egypt	Energy	3	Smart Technology and Energy Efficient Production (STEP Phases 1 & 2)	<b>~</b>	4 Years	700,000
Egypt	Environment	3	Air and Water Pollution Management Program	<b>v</b>	3 Years	450,000
Egypt	Transport	7	Egypt Green Transport Master Plan and Data Management System to Support Digital Transformation of the Transport Sector and Intelligent Transport Systems	7	2 Years	600,000
Egypt	Urban	3	Cairo Smart Service Delivery Project	<b>v</b>	3 Years	575,000
Jordan	Urban	4	Greening growth for the displaced in Jordan	<b>v</b>	2 Years	600,000
Lebanon	Transport	1	Implementing congestion reduction measures in Beirut	<b>v</b>	2 Years	200,000
Morocco	Transport	1	Climate Change Adaptation in the Road Sector	<b>v</b>	Single	200,000
Morocco	Water	1	Quantifying Tradeoffs of the Water- Energy Nexus	<b>v</b>	3 Years	300,000
Tunisia	Environment	6	Blue Economy	7	2 Years	300,000



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	~	4 Years	500,000
Bhutan	Transport	2	Green Transport Initiative	V	2 Years	300,000
Bhutan, Nepal, Pakistan	Environment	4	Integrated Catchment Management for Sustainable Hydropower in Bhutan, Nepal and Pakistan	<b>~</b>	3 Years	750,000
India	Urban	1	Options Study for Development Along the Eastern Dedicated Freight Corridor	~	Single	400,000
India	Energy	2	Towards Green Growth in 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	<b>V</b>	3 Years	700,000
India	Transport	2	Promoting the use of Green Construction Technology in Road Sector	V	3 Years	500,000
India	Transport	3	Intelligent Transport Systems and PPP in City Bus Systems for Indian Cities	~	3 Years	350,000
India	Urban	2	E-Waste Advisory Project KGGTF funds	V	4 Years	840,000
India	Urban	2	Design and Preparation of Tamil Nadu Sustainable Urban Development	V	4 Years	600,000
India	Urban	2	Regional Economic and Infrastructure Investment Strategy	~	3 Years	400,000
India	Urban	3	Green Regional Development Plan for Growth Centers in India	V	2 Years	350,000

India	Urban	4	ICT Applications to achieve Green Growth in Indian Cities (Phase II)	~	2 Years	700,000
India, Bangladesh	Transport	3	Smartcard Integration for Better Connected Public Transport System	~	3 Years	400,000
India, Nepal, Pakistan	Environment	5	Solid Waste in Mountainous Regions of India, Pakistan and Nepal	7	2 Years	500,000
Nepal	Urban	5	Supporting Green Growth Urban Development and Planning Processes in Nepal	7	2 Years	400,000
Pakistan	Energy	5	Renewable Energy Scale-Up to Support Green Growth in Pakistan	7	2 Years	750,000
Pakistan	Environment	6	Catalyzing Green Investments in Pakistan	7	2 Years	400,000
Pakistan	Urban	1	Initial Assessment of Karachi Economy and Role as a Growth Center	~	3 Years	400,000
Pakistan	Urban	4	Green Karachi through improved service delivery system	<b>V</b>	2 Years	500,000
Pakistan, India and Bangladesh	Environment	4	Resource Efficient Cleaner Production in South Asia	~	3 Years	600,000
Sri Lanka	Energy	4	Sri Lanka Renewable Energy Integration	<b>V</b>	2 Years	400,000
Sri Lanka	Energy	5	KGGTF Sri Lanka Energy	7	3 Years	400,000
Sri Lanka	Urban	2	Sri Lanka Strategic Cities	<b>v</b>	4 Years	500,000
Sri Lanka, Bangladesh, and India	Urban	3	Transforming Cities through Public Space	V	4 Years	600,000

#### **INSTITUTIONS** AND PARTNERS

Agricultural Policy Insurance & Finance Service (APFS)

Ansan Urban Development Corporation

ASEM Eco-Innovation Center (ASEIC)

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

Busan Port Authority (BPA)

Dohwa Engineering

Electricity Regulatory Commission (KOREC)

Electronics and Telecommunications Research Institute (ETRI)

Financial Services Commission (FSC)

Fisheries Monitoring Center (FMC)

FOODPOLIS (Korean National Food Cluster)

Global Knowledge Exchange and Development Center (GKEDC)

Green Technology Center - Korea (GTC-K)

Gyeonggi Research Institute (GRI)

Hanwha Q Cells

Incheon International Airport Corporation (IIAC)

Incheon Port Authority (IPA)

Intelligent Transport Society of Korea (ITS Korea)

J-Microm (PCB Plating Company)

K-Water

K-Water Academy

KEC Research Institute (KECRI)

Konkuk University

KoRail

Korea Advanced Institute of Science and Technology (KAIST)

KAIST Graduate School of Green Growth

Korea Agency of Education, Promotion and Information Service in Food. Agriculture, Forestry and Fisheries (EPIS)

Korea Agro-Fisheries & Food Trade Corporation (AT)

Korea Appraisal board (KAB)

Korea Automobile Environmental

Association (AEA)

Korea Automobile Environmental

Association (KAEA)

Korea Development Bank (KDB)

Korea Development Institute (KDI)

Korea Electric Power Corporation (KEPCO)

Korea Flectric Power Research Institute (KEPRI)

Korea Energy Agency (KEA)

Korea Energy Economics Institute (KEEI)

Korea Engineering Consultants Corporation (KECC)

Korea Environment Corporation (KECO)

Korea Environment Institute (KEI)

Korea Environmental Industry & Technology Institute (KEITI)

KEITI eTechhive

Korea Export-Import Bank (KEXIM)

Korea Forest Service (KFS)

Korea Gas Corporation (KOGAS)

Korea Hydro & Nuclear Power Corporation (KHNP)

Korea Hydrographic and Oceanographic Agency (KHOA)

Korea Industrial Complex Corporation (KICOX)

Korea Information Society Development Institute (KISDI)

Korea Institute for Advancement

of Technology (KIAT)

Korea Institute of Civil Engineering and Building Technology (KICT)

Korea Institute of Industrial Technology (KITECH)

Korea Institute of Ocean Science and Technology (KIOST)

Korea Institute of Planning and Evaluation for Technology in Food, Agriculture, and Forestry (IPET)

Korea Institute of Startup and Entrepreneurship Development (KISED)

Korea Integrated Logistics Association (KILA)

Korea International Cooperation Agency (KOICA)

Korea Internet & Security Agency (KISA)

Korea Land and Geospatial Informatix Corporation (LX)

Korea Land and Housing Corporation (LH)

Korea Local Information Research & Development Institute (KLID)

Korea Marine Environment Management Corporation (KOEM)

Korea Maritime Institute (KMI) Korea National Clean Production

Center (KNCPC)

Korea Overseas Infrastructure and Urban Development Corporation (KIND)

Korea Power Exchange (KPX) Korea Rail Network Authority (KR)

Korea Railroad Research Institute (KRRI)

Korea Research Institute for Human Settlements (KRHIS)

Korea Research Institute for Vocational Education and Training (KRIVET)

Korea Rural Community Corporation (KRC)

Korea Rural Economic Institute (KREI) Korea Seed & Variety Service (KSVS)

Korea Small Business Institute (KOSBI)

Korea Smart Card Corporation (KSCC)

Korea South-East Power Co (KOEN)

Korea Technology and Information Promotion Agency for SMEs (TIPA)

Korea Technology Finance Corporation (KIBO)

Korea Transport Institute (KOTI)

Korea Transportation Safety Authority (KOTSA)

Korea Trucking Association (KTA)

Korean Expressway Corporation (KEC)

Land & Housing Institute (LHI)

LG CNS

LS Industrial Solutions (LSIS)

Ministry of Agriculture, Food and Rural Affairs (MAFRA)

Ministry of Economy and Finance (MOEF)

Ministry of Environment (MOE) Ministry of Land, Infrastructure

and Transport (MOLIT)

Ministry of Oceans and Fisheries (MOF) Ministry of Science and ICT (MSIT)

Ministry of SMEs and Startups (MSS)

Ministry of the Interior and Safety (MOIS)

Ministry of Trade, Industry and Energy (MOTIE)

National Civil Defense and Disaster Management Training Institute (NDTI)

National Disaster Management

Institute (NDMI)

National Federation of Fisheries Cooperation (Suhyup)

National Geographic Information Institute (NGII)

National Information Society Agency (NIA)

National Institute of Environmental Human Resources Development (NIEHRD)

National Institute of Environmental

Research (NIER)

National IT Industry Promotion

Agency (NIPA)

NH Bank

OPC Office for Government Policy Coordination

POSCO

Rural Development Administration (RDA)

S-Energy

Seoul Housing & Communities Corporation (SH)

Seoul Institute (SI)

Seoul Metropolitan Government (SMG)

Seoul Urban Solutions Agency (SUSA)

Seoul Water Institute (SWI) Shinsung Solar Energy

Sudokwon Landfill Site Management

Corporation (SLC) Transport Operations & Information Service (TOPIS)

University of Seoul (UOS) World Smart Sustainable City Organization (WeGO)





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