# FY20 ANNUAL REPORT

WORLD BANK GROUP
KOREA OFFICE



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#### **Abbreviations**

ADDC	Asia Pasifia Pasianal Committee		
APRC	Asia-Pacific Regional Committee		
ASEAN	Association of Southeast Asian Nations		
BBL	brown-bag lunch		
BIXPO	Bitgaram International Expo of Electric Power Technology		
BNM	Bank Negara Malaysia		
вок	Bank of Korea		
DEC	Development Economics		
EAP	East Asia and Pacific		
EEX	Energy and Extractives		
ENB	Environment, Natural Resources, and Blue Economy		
EPIS	Korea Agency of Education, Promotion, and Information Service in Food, Agriculture, Forestry, and Fisheries		
ESCO	energy service company		
ESS	energy storage systems		
FAM	Famine Action Mechanism		
FCI	Finance, Competitiveness, and Innovation		
FCV	Fragility, Conflict, and Violence		
FI	financial institution		
FMIS	Financial Management Information Systems		
FSS	Financial Supervisory Service		
FY	fiscal year		
FY20	fiscal year 2020		
GCF	Green Climate Fund		
GCRP	Global Crisis Risk Platform		
GDI	Global Delivery Initiative		
GIGF	Global Innovative Growth Forum		
GIM	geospatial information management		
GKEDC	Global Knowledge Exchange and Development Center		

GP	global practice		
GTFS1	FCV Support Unit 1		
HEC	Hyundai Engineering Co., Ltd.		
HNP	Health, Nutrition and Population		
HRD	Human Resources Development		
IADI	International Association of Deposit Insurers		
ICT	information and communication technology		
IDA	International Development Association		
IFC	International Finance Corporation		
IFMIS	Integrated Financial Management Information Systems		
IGIF	Integrated Geospatial Information Framework		
IPAF	International Public Asset Management Company Forum		
K-Water	Korea Water Resources Corporation		
KAB	Korean Appraisal Board		
KAMCO	Korea Asset Management Company		
KDI	Korea Development Institute		
KDIC	Korea Deposit Insurance Corporation		
KEA	Korea Energy Agency		
KEPCO	Korea Electric Power Corporation		
KETEP	Korea Institute of Energy Technology Evaluation and Planning		
KEXIM	Korea Export-Import Bank		
K-FCV	Korea Trust Fund for Economic and Peace-Building Transitions		
KGGTF	Korea Green Growth Trust Fund		
KHNP	Korea Hydro Nuclear Power		
KIAT	Korea Institute for the Advancement of Technology		
KIEP	Korea Institute for International Economic Policy		
KIND	Korea Overseas Infrastructure and Urban Development Corporation		
KIST	Korea Institute of Science and Technology		

#### Abbreviations

KMI	Korea Maritime Institute		
KOEM	Korea Marine Environment Management Corporation		
KOEN	Korea South East Power Co.		
KOICA	Korea International Cooperation Agency		
КОТІ	Korea Transport Institute		
KOTRA	Korea Trade-Investment Promotion Agency		
KPOK	Korea Program for Operational Knowledge		
KPX	Korea Power Exchange		
KSD	Korea Securities Depository		
KSP	Knowledge Sharing Program		
KT	Korea Telecom		
KTF	Korea Trust Fund		
LUTP	Leaders in Urban Transport Program		
MAS	manufacturing, agriculture, and services		
MDB	multilateral development bank		
MIGA	Multilateral Investment Guarantee Agency		
MOEF	Ministry of Economy and Finance		
MOLIT	Ministry of Land, Infrastructure, and Transport		
MOU	memorandum of understanding		
MW	megawatt		
NPL	nonperforming loan		
NTFP	nontimber forest products		
NWEDC	Nepal Water and Energy Development Company		
OLC	Open Learning Campus		
PASET	Partnership for Skills in Applied Sciences, Engineering, and Technology		
PICs	Pacific Island countries and territories		
PPA	Pacific Power Association		
PPP	public-private partnership		

PSW	private sector window		
RDA	Rural Development Administration		
RSIF	Regional Scholarship and Innovation Fund		
SABER-WfD	Systems Approach for Better Education Results-Workforce Development		
SDG	Sustainable Development Goal		
SMEs	small and medium enterprises		
SMG	Seoul Metropolitan Government		
SNU	Seoul National University		
SOI	statement of intent		
SWM	solid waste management		
TVET	technical and vocational education and training		
UN-GGIM	United Nations Committee of Experts on Geospatial Information Management		
URL	Urban, Disaster Risk Management, Resilience, and Land		
WBG	World Bank Group		
WDR	World Development Report		

#### **Executive Summary**

This annual report for the World Bank Group (WBG) Korea office covers the period July 2019 to June 2020, the World Bank's 2020 fiscal year (FY20). In FY20, the WBG Korea office started the process of becoming a global innovation and technology center for sustainable development. The office consulted extensively in FY20 both internally in the World Bank and with external partners, particularly Korea's Ministry of Economy and Finance (MOEF), on the need for a greater focus for the WBG Korea office. A consensus was reached to adopt a strategic focus on innovation and technology for the Korea office. The process of building the necessary capacity and programs for this new focus has already begun in FY20, including the recruiting of new staff along two main pillars: (a) cross-cutting innovation and technology, and (b) green growth innovation. This work will continue into FY21 and phase three of the office (FY22 to FY24).

In FY20 the Korea office began carrying out new innovation and technology-related activities. It expanded the webinar series on innovation and technology which started in 2018. In FY20, 9 new seminars were on topics such as data platforms for smart cities; skills development for the future workplace; digital agriculture technology; leveraging information and communication technology (ICT) in fragility, conflict, and violence (FCV) countries; and response to the COVID-19 global pandemic. A new working paper series on innovation and technology was also launched, featuring topics such as energy storage systems (ESS), internet banking, and COVID-19 preparedness and response.

In November 2019, the Korea office co-organized the inaugural Global Innovative Growth Forum (GIGF) in Korea with MOEF. The forum drew more than 400 public and private sector participants, including Vice Minister of Economy and Finance Yun Cheol Koo and World Bank Vice President for the East Asia and Pacific (EAP) region Victoria Kwakwa. Korea Innovation Week, a major conference held at the World Bank headquarters February 18–20, 2020, highlighted the importance of leveraging innovation and technology for development. More than 40 Korean partner institutions, including 7 ministries and over 125 Korean representatives, attended the event, including the Vice Minister Yongbeom Kim from MOEF.

Korea has received much international recognition for its response and management of the COVID-19 pandemic. The Korea office has published several blogs on lessons learned from Korea's response to the pandemic, and an in-depth case study on Korea's COVID-19 preparedness and response will be added to the Korea office innovation and technology knowledge note series in FY21. Building on the case study, the Korea office has launched a partnership on COVID-19 preparedness and response, over FY21 to FY22, with the World Bank's Health Global Practice (GP) and Korean partner institutions. This partnership will develop case studies of Korea's and other East Asian countries' management of COVID-19 and create a platform for global coordination and knowledge exchange to help developing countries adopt international best practices for preparing for future pandemics.

In FY20, the GP staff of the Korea office continued to make progress in implementing their work program and delivering results, despite the COVID-19 related challenges. Many of these activities have strong innovation and technology elements and incorporate Korean institutional partnerships. Currently, the WBG Korea office GP staff can be organized into four programs: (a) green growth innovation, consisting of staff of the Energy, Environment, and Urban/Land GPs; (b) Seoul Center for Finance and Innovation, managed by the Finance, Competitiveness and Innovation (FCI) GP; (c) Korea Program for Operational Knowledge (KPOK), managed by the Development Economics (DEC) Open Learning Campus (OLC) unit; and (c) the Fragility, Conflict, and Violence (FCV) team. Green growth innovation in the Korea office is a joint program with the Korea Green Growth Trust Fund (KGGTF). KGGTF cross-finances staff costs of relevant GP staff members, who implement KGGTF-financed activities as well as the operational work programs of their respective GPs. In addition, the WBG Korea office has staff from the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA) that help mobilize Korean investments in developing countries.

The Energy and Extractives GP in the Korea office is helping EAP countries accelerate their transition to clean energy through renewable energy and energy efficiency projects in collaboration with a number of Korean partners, such as the Korea Electric Power Corporation (KEPCO) and the Korea Energy Agency (KEA). In FY20, the energy team collaborated with Korean partners to support energy efficiency in the Ulaanbaatar Clean Air Project in Mongolia; industrial energy efficiency technologies and business models in the Vietnam Energy Efficiency for Industrial Enterprises project; and industry guidelines and competency standards of power utilities in the Pacific Islands Sustainable Energy Industry Development Project. In addition, the Energy and Extractive team supported various knowledge exchange and capacity building activities, including by organizing a World Bank session in KEPCO's 2019 Bitgaram International Expo of Electric Power Technology (BIXPO) and producing the first Korea office innovation and technology knowledge note series on energy storage systems.

The Environment, Natural Resources, and Blue Economy (ENB) GP is helping to address environmental and climate change challenges by providing innovative and digital solutions building on Korea's experiences. It has supported community forestry partnerships and solid waste management (SWM); and integrating geospatial and digital technologies, such as Internet of Things, in forest and landscape management. In FY20, the environment team helped promote sustainable landscape and ecotourism in Cambodia; organized the knowledge exchange for Myanmar and Vietnam to learn about Korea's expertise in fisheries; co-led the Philippines' climate resiliency efforts through a national risk resiliency program; supported Cambodia in developing a public awareness campaign for SWM; and conducted a knowledge exchange on Korean forest restoration and development. In addition, the ENB team signed a statement of intent to partner with the Korea Forest Service.

#### **Executive Summary**

The Urban, Disaster Risk Management, Resilience, and Land (URL) GP in the Korea office supports land administration and geospatial information management programs in the EAP region. The team supports developing countries' efforts to adopt geospatial information technologies and institutional framework, which has emerged as one of the major contributors to economic transformation. The URL team managed a new land administration project in the Philippines and Vietnam and coordinated land policy and legislative reform work. Responding to the COVID-19 pandemic, this team showcased the role of geospatial information in combating COVID-19 by organizing and speaking at the webinar "Responding to COVID-19: Early Lessons from Korea and Global Partnerships on Innovation and Technology."

The Seoul Center for Finance and Innovation (formerly Seoul Center for Financial Sector Development), a nine-year partnership between MOEF and the FCI GP, was extended in FY20 to 2023 with an additional US\$15 million funding commitment. In FY20, the Seoul Center supported nine knowledge activities, including Korea Fintech Week 2020, the "Experience of Internet-Only Banks in Korea" webinar, Korea Innovation Week (finance and innovation sessions), and the fifth annual conference of the International Public Asset Management Company Forum (IPAF). The Seoul Center team provided technical support for the implementation of financial sector projects in Cambodia, Laos, Mongolia, the Philippines, and Vietnam, by joining missions and discussions with clients, producing analytical reports, and connecting the teams with Korean knowledge partners. Other activities supported included enhanced monitoring of the financial and business sectors in EAP in light of COVID-19 disruption; publication of the book Analyzing Banking Risk (4th edition); and production of technical and knowledge notes on topics such as non-performing loans, big data in finance, and digital banks.

The DEC team in the Korea office that manages KPOK supports the Korea office's innovation and technology program by providing a capacity-building and just-in-time learning programs on relevant innovation and technology-focused solutions in World Bank projects. In FY20, KPOK delivered two massive open online courses (on the future of work and global value chains), 15 e-courses, four cases studies (on topics such as Korea's experience with geospatial digital information, Colombia's partnership with Korea to expand learning opportunities and Korea's early response to the COVID-19), and 9 delivery notes (on topics such as business support systems for the administrative agencies, innovative airport immigration process, e-Government system). It organized two knowledge exchanges, one on digital agriculture technology with the World Bank Agriculture GP and another on road safety with the Transport GP and the World Bank's Global Road Safety Facility. Both knowledge exchanges were carried out with key Korean institutional partners, such as the Korea Agency of Education, Promotion, and Information Service in Food, Agriculture, Forestry, and Fisheries (EPIS) and the Global Knowledge Exchange and Development Center (GKEDC) for digital agriculture technology; and the Korea Transport Institute (KOTI), the Seoul Metropolitan Government (SMG) and the GKEDC for road safety.

FCV staff at the World Bank Korea office contribute to the core deliverables of the global FCV group, including country support and analytical studies aimed at strengthening the Bank's FCV-sensitive strategies and operations in FCV settings, with a focus on EAP. In addition, the FCV staff in Korea facilitated engagement with Korean development partners and stakeholders on FCV issues through relationship building, partnership development, project support, and knowledge sharing. The team also provides a liaison to the Secretariat of the Korea Trust Fund for Economic and Peace-Building Transitions (K-FCV), housed in the FCV group in Washington, DC, and led by the State and Peacebuilding Fund (SPF)/K-FCV program manager, for communications with Korean development partners.

In FY20, the Education team in the Korea office organized the Association of Southeast Asian Nations (ASEAN)+3 Human Resources Development (HRD) Forum and supported the Partnership for Skills in Applied Sciences, Engineering, and Technology (PASET) program. Collaborating with HRD Korea, the Education team organized a series of webinars to discuss the policy challenges posed by the COVID-19 pandemic and best practices on education technology in technical and vocational education and training (TVET). The COVID-19 pandemic has affected educational systems worldwide, changing the roles and functions of traditional schools and education. The Education team published a case study on how the Korean Ministry of Education and local education institutions are preparing for schools to reopen in a resilient and sustainable manner using digital devices and online class guidelines.

The IFC Korea team is in discussions with multiple Korean sponsors regarding projects in countries such as Cambodia, India, Indonesia, Myanmar, Nepal, Pakistan, Uzbekistan, and Vietnam, some of which are in FCV-afflicted situations and are International Development Association (IDA) countries. The IFC Korea team has been actively looking into the financing needs of Korean corporations for their overseas businesses. The team has also organized virtual events on the topic of COVID-19 to showcase Korea's effective response and to discuss the opportunities and challenges in the post–COVID-19 era. In parallel, the IFC Korea team has been building a pipeline of investment opportunities across a variety of sectors, including power, manufacturing and services, and financial institutions.

The MIGA team in the Korea office promotes Korean investments in emerging markets by providing guarantees to reduce investments risks and enhance credit terms. The MIGA Korea office worked closely with the deal teams in Washington, DC, on pipeline projects involving Korean companies, including hydropower projects in Nepal and the Solomon Islands and an industrial park in Myanmar. The MIGA Korea office closed two transactions in FY20, the Nepal Upper Trishuli-1 Hydropower Project and the Solomon Islands Tina River Hydropower Development Project. Despite the COVID-19 pandemic, MIGA has continued developing pipeline projects with several investors by having virtual meetings for additional leads in the power, education, and infrastructure sectors in the regions of East Asia, South Asia, Latin America, Africa, and the Caribbean.

#### **Executive Summary**

Finally, in the second half of FY20 the COVID-19 global pandemic fundamentally changed the way we live and work. Fortunately, Korea has been relatively successful in responding to and managing the pandemic. As a result, the WBG Korea office has remained open and operational, but staff have worked from home for extended periods, meetings with counterparts have been significantly restricted, and travel to other countries has completely stopped. Those changes have hampered efforts to maintain existing WBG projects and implement new ones. Nonetheless, work in the WBG Korea office has continued, and operational support and local and international partnerships have been expanded, including on COVID-19. The Korea office will continue to implement the WBG's global guidelines on COVID-19–related workplace management, as well as local public health guidelines, to ensure a safe working environment for the staff. In June 2020, the WBG designated Korea as a medical evacuation destination for EAP staff, in light of Korea's relatively well-developed medical system, accessibility, safety and social infrastructure.

# Innovation and Technology Highlights

Major Highlights
Innovation and Technology for Development
Key Activities of the Country Management Unit

#### **Major Highlights**

In FY20¹, the Korea office engaged in extensive stakeholder consultations, both internally in the World Bank Group and externally with MOEF and other partners, on the strategic focus on the Korea office. The consensus of these consultations was to focus the Korea office on innovation and technology to support sustainable development in developing countries. The office would support the World Bank's disruptive technology agenda by taking advantage of Korea's expertise and experience in leveraging innovation and technology to achieve its remarkably rapid development. For FY21, plans were established to build along two pillars in the Korea office: (a) a new cross-cutting innovation and technology program, and (b) an existing green growth innovation program that would be expanded. The process of transforming the Korea office by building along those two pillars will take place in earnest in FY21 by recruiting new staff with relevant skills and expertise. However, in FY20 the Korea office has already been carrying out major activities related to innovation and technology. Those activities include organizing a series of webinars and major conferences and launching a knowledge note series.

Also in FY20, the Korea office has been expanding its support to World Bank operations and knowledge exchange and capacity-building activities. Many of these operations and activities have strong innovation and technology elements and incorporate Korean institutional partnerships. The Korea office will seek to integrate innovation and technology into all aspects of its activities, including green innovation growth; financial sector development; knowledge exchange and management; and engagements in fragility, conflict, and violence affected states, as well as tackling the new challenges we face collectively from global pandemics.

In the second half of FY20, the COVID-19 global pandemic has affected how the world conducts business as we enter the era of social distancing. Innovation and technology could become even more critical for sustainable development to manage the uncertainties of the COVID-19 era. The Korea office has been working with Korean counterparts to understand and adapt to the new normal caused by this pandemic. Efforts include posting blogs and hosting webinars related to early lessons from Korea's COVID-19 countermeasures. Additionally, a yearlong partnership between the Korean government and the Health, Nutrition and Population (HNP) GP was developed in FY20 and launched in FY21 that will analyze and document Korea's and other countries' response to COVID-19 and create a platform to disseminate and share knowledge and facilitate collaboration.

#### Innovation and Technology for Sustainable Development

Disruptive technologies are a major priority for the WBG. The Development Committee (Joint Ministerial Committee of the Board of Governors of the World Bank and IMF) endorsed two key policy papers, "Disruptive Technologies and the World Bank Group: Creating Opportunities—Mitigating Risks" (2018) and "Mainstreaming the Approach to Disruptive and Transformative Technologies at the World Bank Group" (2019), that highlighted

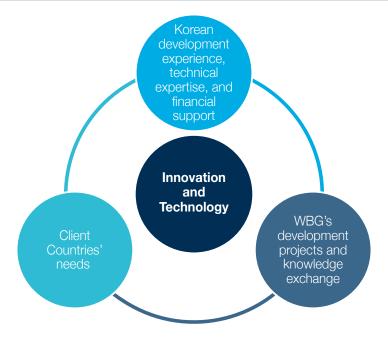
<sup>1</sup> The World Bank's fiscal year is from July 1 to June 30 of the following year.

and incorporated disruptive technologies in the WBG programs. The papers recognized that technology advancement is increasingly central to international development work, as technology advancement is impacting all aspects of the global economy and is fundamentally reshaping the nature of work.

To support this critical agenda, the WBG Korea office has started to carry out innovation and technology related activities. In November 2019, the Korea office co-organized the inaugural Global Innovative Growth Forum (GIGF) in Korea with MOEF. The forum drew more than 400 public and private sector participants, including Vice Minister of Economy and Finance Yun Cheol Koo and World Bank Vice President for the East Asia and Pacific (EAP) region Victoria Kwakwa. Korea Innovation Week, a major conference held at the World Bank headquarters February 18–20, 2020, highlighted the importance of leveraging innovation and technology for development. More than 40 Korean partner institutions, including 7 ministries and over 125 Korean representatives, attended the event, including the Vice Minister Yongbeom Kim from MOEF. The Korea office has also delivered a series of innovation and technology related seminars and knowledge notes, and regular newsletters that highlighted Korea's experiences in innovation and technology.

For all these activities, the office actively sought to partner with key local and global institutions. Korea is a critical partner of the WBG through its financial contributions and partnerships to share its development experience and technical expertise. It has a vast ecosystem of local and private institutions that possess capacity, expertise, experience, and interest in partnership with WBG teams to support developing countries. From promoting innovative approaches to complex challenges to sharing lessons learned and solutions with governments around the world, Korea continues to make valuable contributions that are essential to the goals of eradicating poverty and boosting shared prosperity.

**Figure 1.** Korea-WBG Partnership for Innovation and Technology—An Inclusive and Forward-Looking Development Partnership



#### Korea Office Innovation and Technology Seminar Series

In collaboration with the World Bank GP teams, the Korea office has been organizing seminars on innovation and technology for development. The seminars are livestreamed for both internal and external audiences, and the recorded sessions are uploaded to the World Bank's OLC website, where they are publicly accessible. From July 2018 to June 2020, a total of 12 seminars were conducted, of which nine were in FY20.

#### Data Analytics and Intelligence in Digital Agriculture Technology (August 28, 2019)

The Korea Office collaborated with the Agriculture GP during a Knowledge Exchange on Digital Agriculture Technology in Korea. The seminar discussed the cases for early warning systems that enhance decision-making for relevant stakeholders and identify pathways for building agricultural intelligence systems. This seminar explored the emerging opportunities and lessons from open access to scientific data generated by agricultural research agencies and examined models for public and privately financed agricultural data analytics.

## Bridging Skills Gaps by Lifelong Learning and Advanced Technology (September 10, 2019)

The Korea Office partnered with the Education GP to organize a seminar on the use of advanced technology in lifelong learning and skills development. This was part of the Education GP's webinar series on identifying skill gaps in the East Asia and Pacific region. The seminar examined how the technologies of the 4th Industrial Revolution create new pressures on labor markets, education reform and lifelong learning. It also introduced Korea's Lifelong Vocational Education Master Plan.

#### Innovations in Skills Development (October 30, 2019)

The Korea Office and the Education GP jointly organized this seminar as part of the 2019 ASEAN+3 Human Resources Development (HRD) Forum. The seminar discussed innovative programs and strategies to reform education systems, technical and vocational training, as well as prepare for the Fourth Industrial Revolution. Panel members introduced the Adaptive Learning Initiatives by Arizona State University, Gamification in Learning by The Play Company, new approaches to education by the Minerva Schools at Keck Graduate Institute, and educational initiatives and reforms by the government of Philippines.

## Leveraging Big Data and ICT-based Innovative Solutions for FCV Affected Situations (November 19, 2019)

The Korea Office collaborated with the World Bank's Fragile, Conflict and Violence (FCV) group, and Korea Telecom (KT) to present examples on leveraging ICT-based innovative solutions to tackle development challenges in low income and fragile countries. KT introduced its Global Epidemic Prevention Platform, a mobile application-based platform that uses big data on health social responsibility initiatives, and other examples of

applying machine learning tools to digital data from mobile phones, drones, and satellites. The World Bank Group's FCV experts presented the Geo-enabling Initiative for Monitoring and Supervision (GEMS), supported by the Korea Trust Fund for Economic Transition and Peacebuilding.

#### Safer Vehicles for Safer Roads (December 4, 2019)

With support from the Korea Program for Operational Knowledge (KPOK) under the World Bank's Open Learning Campus (OLC) initiative, the Korea Office collaborated with the Transport GP to organize this seminar as part the Knowledge exchange on road safety with the Global Road Safety Facility (GRSF) and the Korea Transport Institute (KTI). Participants learned from global and Korean experts on topics ranging from crash data risk analysis and safe infrastructure to application of technology for safer vehicles. This workshop benefited six transport lending projects with road safety components by hosting country clients and World Bank staff.

## Innovative Financial Services: Experience of Internet-Only Banks in Korea (January 22, 2020)

The Korea Office worked with the Seoul Center for Finance and Innovation of the World Bank Group's FCI GP and Seoul National University to discuss Korea's experience with its first two internet-only banks, K Bank and Kakao Bank. These banks operate without branches and provide all banking services online and through application platforms on mobile devices and tablets. Experts from Fintech Center Korea, Seoul National University, Sogang University, and the World Bank shared views on the successes and challenges of Korea's neobanks to derive lessons and implications for other countries looking to introduce similar banking services.

## Korean Public Finance Information Services Response to COVID-19: Learning from dBrain Resilience (June 16, 2020)

The Korea Office, Governance GP, and the Korea Public Finance Information Services hosted this webinar as part of the Integrated Financial Management Information Systems (IFMIS) Capacity Building Program funded by the Korea Development Institute (KDI) school trust fund. This trust fund was initiated in 2019 with the participation of Albania; Bhutan; Haiti; Hungary; Kazakhstan; the Lao People's Democratic Republic; North Macedonia; Vietnam; and Zimbabwe. The seminar provided an opportunity to learn more about the Korean government's experience responding to the pandemic with digital technologies and specific policy measures. It also focused on the effective use of the dBrain, the government's Financial Management Information Systems (FMIS) platform, to ensure the continuity of public financial management operations and delivery of public services during the COVID-19 crisis.

#### Geospatial Approaches to Green Growth and Land Administration (June 23, 2020)

The Korea Office partnered with the Urban, Resilience and Land GP to host this webinar on the results of a KGGTF funded case study on Korea's experience in geographic information systems conducted by Seoul National University, Seoul Urban Solutions Agency and Seoul Housing & Communities Corporation. The study

#### Innovation and Technology for Sustainable Development

is part of the Geospatial Approaches for Fostering Green Growth in FCV by Sharing the Innovative Experience of Korea project. Topics of this webinar included the Korean experience in addressing informal settlements (Gwangju Resettlement Town), implementing farmland reform, and using geospatial technology to promote green growth.

## Responding to COVID-19: Early Lessons from Korea and Global Partnerships on Innovation and Technology (June 26, 2020)

The Korea Office and the FCV group co-organized this webinar in collaboration with the Health, Nutrition, and Population GP; the Digital Development GP; the Urban, Disaster Risk Management, Resilience; and Land GP to bring together experts to discuss early lessons from Korea's experience with COVID-19. As the Korea office is working with multiple World Bank GP's to leverage Korea's successful experience in flattening the COVID-19 curve, the webinar also discussed the use of innovative and technology-enabled solutions and the potential for global partnerships to address the pandemic.

Speakers from Korean partner institutions, including Korea Centers for Disease Control and Prevention and the National Information Society Agency, shared early lessons from Korea's response to COVID-19. KT (Korea Telecom), which has a mobile infectious disease platform, is collaborating with the Bill & Melinda Gates Foundation on developing an infectious disease digital platform. Speakers from the Gates Foundation and KT affirmed the importance of global ICT partnerships to address COVID-19.

Table 1. The Korea Office Innovation and Technology BBL Series Topics

No.	Seminar title	Date	GP/Program	Korean components
1	Data Analytics and Intelligence in Digital Agriculture Technology	August 28, 2019	Agriculture, KPOK	EPIS, Environment and Plant Information Network
2	Bridging Skills Gaps by Lifelong Learning and Advanced Technology	September 10, 2019	Education	Korea Research Institute for Vocational Education and Training
3	Innovations in Skills Development	October 30, 2019	Education	Training program using a digital platform
4	Leveraging Big Data and ICT-Based Innovative Solutions for FCV-Affected Situations	November 19, 2019	Fragility, Conflict, and Violence	KT
5	Safer Vehicles for Safer Roads	December 4, 2019	Global Road Safety Facility, Transport, KPOK	Korea Transportation Safety Authority, Korea New Car Assessment Program

No.	Seminar title	Date	GP/Program	Korean components
6	Innovative Financial Services: Experience of Internet-Only Banks in Korea	January 22, 2020	Finance, Competitiveness, and Innovation	Fintech Center Korea, Seoul National University
7	Korean Public Finance Information Services Response to COVID-19: Learning from dBrain Resilience	June 16, 2020	Governance	Korea Public Finance Information Service
8	Geospatial Approaches to Green Growth and Land Administration	June 23, 2020	KGGTF, Urban Resilience, Disaster Risks Management and Land	Seoul National University, Seoul Urban Solutions Agency, Seoul Housing & Communities Corporation, Ministry of Land, Infrastructure and Transport, Korea Land and Geospatial Informatix Corporation
9	Responding to COVID-19: Early Lessons from Korea and Global Partnerships on Innovation and Technology	June 26, 2020	Health, Nutrition, and Population; Digital Development; Urban, Disaster Risk Management, Resilience, and Land; Fragility, Conflict, and Violence	Ministry of Economy and Finance, Korea Centers for Disease Control and Prevention, National Information Society Agency, Korea Telecom

Note: BBL = brown-bag lunch; EPIS = Korea Agency of Education, Promotion, and Information Service in Food, Agriculture, Forestry, and Fisheries; FCV = fragility, conflict, and violence; ICT = information and communication technology; KGGTF = Korea Green Growth Trust Fund; KPOK = Korea Program for Operational Knowledge; KT = Korea Telecom.

#### **Knowledge Products**

The Korea office is developing a series of knowledge notes, in collaboration with GPs, on case studies of Korea's development experience with innovation and technology. The notes are meant to be short case studies that summarize Korea's experience, showcasing the lessons learned for practitioners and policy makers. Each note is typically coauthored by a World Bank staff member and a Korean expert. The Korea office is also preparing a major flagship report on Korea's development from a middle-income economy to a high-income economy and the country's path to becoming a global leader in innovation and technology. Current notes published and are in development include:

## Korea's Energy storage system Development: The Synergy of Public Pull and Private Push (FY20)

This knowledge note assesses Korea's battery storage industry which has experienced remarkable growth for the past years. Korea's lithium-ion battery (LiB) Energy Story System (ESS) market size reached about 50 percent of the global market in 2018. Korea's LiB ESS development is a good example of the impact of both public pull and private push factors. The government accelerated the industrialization and commercialization of ESS through a series of long-term development plans and support of R&D and investment projects. Demand increased through a policy shift towards green growth in 2009. ESS deployment in developing countries is expected to increase with the rapid LiB ESS cost decline. The World Bank supports the expansion of ESS systems, through its global Battery Storage Investment Program.

#### Digital Banks: Lessons from Korea (FY21)

This knowledge note takes stock of Korea's experience with digital banks and share lessons that may be useful for financial policymakers and market players in banking and fintech. Under the Korean government's new policy framework for digital banks, K Bank and Kakao Bank successfully launched in 2017 with convenient and innovative products and services and brought a substantial impact on Korea's banking sector. After the first three years of operation, as of July 2020, the two banks show contrasting track records, mainly explained by differing challenges and successes in capital increase and marketing. With digital transformation accelerating and competition heightening, digital banks will need to become even more strategic and innovative to continue to be successful.

#### Republic of Korea's COVID-19 Preparedness and Response (FY21)

This knowledge note analyzes Korea's relatively successful COVID-19 preparedness and response. It highlights the country's data-driven and innovative approaches and strategic clarity (a focus on testing and contact tracing). Korea was relatively well prepared due to the capacity building and legislative and regulatory reforms undertaken in response to the previous MERS (Middle East respiratory syndrome) crisis. Investment in strengthening the Korea Centers for Disease Control and Prevention (KCDC) in policy, research and training as well as adequate financing of public health measures proved to be crucial. Massive testing, isolation of cases, and extensive contact tracing as well as public participation in social distancing enabled Korea to control COVID-19 without a painful lockdown. With close public-private partnership and an available approval process already in place, rapid decision making and swift action for the development of testing kits and guaranteeing their availability in both public and private laboratory facilities contributed to Korea's relatively successful COVID-19 response.

## The Power of Effective Geospatial Information Management in South Korea: Development and Application (FY21)

Geospatial information technology has emerged as a major contributor to economic transformation for many countries. Established along with the E-government drive, the National Spatial Data Infrastructure (NSDI) in South Korea is especially remarkable, given the fact that South Korea was recently ranked 10th (in 2019) for its geospatial data infrastructure at the global level. Since the formulation of the open government policy in 2013, data were used from a wide range of end users, including the private and public sectors, which facilitated a significant growth in the national market, recording around USD 7 Billion of sales revenue in 2018. This note first introduces geospatial information and its technical evolution in general, then describes the NSDI development plans and strategies, economic impacts on the national market and two geospatial information applications. Finally, the note concludes with the key factors that contributed to the successful development and application of the National Spatial Data Infrastructure, Information and Innovation.

#### **Key Activities of the Country Management Unit**

#### Partnership on COVID-19

The COVID-19 pandemic has had a significant effect on the health and well-being of countries around the world. Many countries, regardless of their level of socioeconomic development (especially those that have been caught unprepared), responded to the pandemic with severe lockdowns and other very restrictive measures. Those measures had a devastating effect on the economy and society, especially on the poor and the vulnerable.

Korea has received international recognition for its pandemic preparedness and response. In the aftermath of the Middle Easter Respiratory Syndrome (MERS) outbreak in 2015, Korea has been strengthening its infectious disease surveillance and response capacity. As a result, Korea was relatively well prepared for the COVID-19 pandemic. Korea is managing the COVID-19 crisis by emphasizing transparency and open communication; public-private partnerships; evidence-based deployment of public health measures; and innovative use of technology and data.

The Korea office is actively exploring opportunities to leverage Korea's experience and expertise on the pandemic. The office is working with the World Bank's Health, Nutrition, and Population GP and other GPs to partner with Korea against COVID-19. Several blogs on lessons learned from Korea's response to COVID-19 in the fields of education, business continuity, and global partnership on innovation and technology were posted on the official WBG Korea office website.

#### Key Activities of the Country Management Unit

A case study on Korea's COVID-19 preparedness and response through the collaboration of Korean experts and Bank staff from various GPs was developed in FY20 and will be published in FY21 as part of the Korea office's knowledge note series. Building on the case study, a yearlong partnership between the HNP GP, the WBG Korea office and key Korean institutional partners was developed in FY20 and launched in FY21. The partnership will analyze and document Korea's and other countries' response to COVID-19 and create a platform to disseminate and share knowledge and facilitate collaboration for other WBG clients. Such partnerships are critical because the global COVID-19 pandemic requires global solutions and strong global partnerships.

#### **Strengthening Korea-WBG Partnerships**

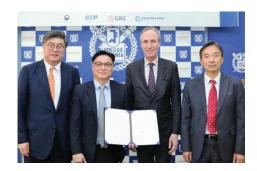
A major objective of the WBG Korea office is to support partnerships with Korean institutions in order to leverage the expertise and capacity of Korean partners. The Korea office actively engages with key Korean public institutions, the private sector, academics, and civil society. The office regularly issues newsletters, updates its external website, and engages with the media to keep the public aware of the World Bank's partnerships with Korea. The MOEF Development Finance team is the main counterpart in the government for the Korea office. The Korea office consults with the Development Finance on the overall strategy and key activities of the Korea office. In FY20, the discussions focused on the innovation and technology program.

The Korea office supports Korean partnerships of not only GP teams based in the Korea office but also GP teams that are based in other World Bank offices, including the World Bank's headquarters in Washington, DC. A wide range of GP teams in other offices are actively engaged in Korea to leverage the country's successful development experience. In FY20, the Korea office supported missions by four different World Bank Vice Presidents, an indication of the importance of the partnership.



## Korea Office Signs Memorandum of Understanding with Seoul National University (July 25, 2019)

The World Bank and Seoul National University (SNU), one of the premier universities in Korea, signed an MOU to enhance partnership between the two institutions. Martin Raiser, the World Bank's country director for China, Korea, and Mongolia, signed the MOU on behalf of the World Bank, and Professor Kookheon Char, dean of SNU's College of Engineering, signed on behalf of SNU. The MOU covers cooperation in the exchange of knowledge and expertise between Korea and the World Bank to promote innovation, technology, and entrepreneurship.



## Akihiko Nishio, Vice President of development finance, visited Korea (August 14–15, 2019)

Akihiko Nishio, World Bank Vice President of development finance, visited Korea on August 14–15, 2019, and met with MOEF and the Korea Development Institute (KDI) School of Public Policy and Management. They discussed the partnership with Korea to support developing countries and Korea's support to the 19th replenishment of the World Bank's IDA funds.

#### Makhtar Diop, Vice President for infrastructure, visited Korea (October 1–5, 2019)

Makhtar Diop, World Bank Vice President for infrastructure, visited Korea in October 2019 to discuss potential partnerships concerning disruptive technologies in areas such as the digital economy and the transportation sector. Vice President Diop highlighted the Korea office's importance in the Korea-WBG partnership and mentioned the World Bank's flagship report on 5G and next year's World Development Report (WDR) on data for development as possible opportunities for collaboration with Korea.

## Victoria Kwakwa, East Asia and Pacific region Vice President, visited Korea (November 6–8, 2019)



The World Bank Vice President for the EAP region, Victoria Kwakwa, visited Korea in November 2019 to provide the opening remarks at the inaugural GIGF and to meet with MOEF and a number of Korean institutions to further partnerships on innovation and technology. She met with MOEF Deputy Minister Hoe Jeong Kim to discuss the broader Korea-WBG partnership and the

importance of Korea's support to the World Bank. At the GIGF, Vice President Kwakwa highlighted Korea's importance as a development partner for the World Bank and its success and capabilities in a wide range of areas related to innovation and technology.

#### **Key Partnership Activities**

#### Global Innovative Growth Forum 2019 (November 7-8, 2019)



The GIGF is a new joint initiative by MOEF and the WBG Korea office to provide a forum to discuss how to seize the opportunities and manage the challenges of innovation and rapid transformation. Opening remarks at the forum were provided by MOEF Vice Minister Yun Cheol Koo and World Bank Vice President for EAP, Victoria Kwakwa. The forum attracted more than 400 public and private sector participants (domestic and international), including experts from various ministries and research institutes and companies

such as Airbnb Korea and Daumsoft. Keynote speeches were delivered by Jeong Dong Lee, Presidential Special Adviser on Economics and Sciences on Challenges of the Korean economy from 'New to the Korea' to 'New to the World'; Ben Nelson, Founder and Chancellor of Minerva School on College Education ito promote creativity and innovation; and Dennis Hong, Professor at University of California, Los Angeles on mechanical intelligence for robotics. During the two-day forum, global experts in various fields participated in in-depth discussions in on global industrial innovation trends; Korea's innovation challenges for sustainable growth; transformative shared platforms; data, Al and robots for our future; and open innovation. The WBG Korea office and MOEF plan to jointly organize GIGF annually as a flagship event, to expand collaboration in the areas of innovation and technology.

## Korea-WBG Partnership Week on Innovation and Technology (February 18–20, 2020)

The Korea-WBG Partnership Week on Innovation and Technology (Korea Innovation Week) was held at the World Bank headquarters on February 18–20, 2020. WBG staff and around 140 delegates from Korea participated in Korea Innovation Week in Washington, DC. The Korean delegation was led by Yongbeom Kim, first vice minister of economy and finance of the Republic of Korea, and included officials and experts from more than 50 Korean institutions. Cohosted by the World Bank's executive director for Korea, MOEF, and the World Bank's EAP Regional Vice Presidency, Korea Innovation Week showcased the longstanding collaboration between the World Bank Group and Korea, shared lessons from Korea's remarkable innovation- and technology-

driven growth and highlighted the importance of the WBG-Korea partnership in supporting innovative solutions in developing countries. IFC also actively participated in Korea Innovation Week, including Karin Finkelston, IFC's Vice President of Partnerships, Communication, and Outreach.

Five different blogs were written leading up to the Korea Innovation Week, including on smart cities, future of work and 5G. The plenary session featured opening remarks by Shaolin Yang, Managing Director and Chief Administrative Officer of the WBG, Vice Minister Yongbeom Kim, Kunil Hwang, WBG Executive Director of Korea. Keynote speeches were provided by Shahid Yusuf on Korea's innovation-led growthand Hoon Sahib Soh, Special Representative of the WBG Korea office on WBG-Korea Partnership on innovation and technology. Afterward a series of workshops and seminars were organized around five major topics: (a) innovation and entrepreneurship; (b) digital economy and 5G; (c) smart cities; (d) green innovation; and (e) future of education and skills. During Korea Innovation Week, four partnership agreements were signed between the World Bank's global practices and Korean partners—MOLIT, the Korea Forest Service, Korea Rural Community Corporation, and KT. Respective agreements focus on smart cities, forest restoration, agricultural productivity improvement, and ICT. New partnerships were discussed on smart cities, education and training (with SNU), and an e-government diagnostic tool kit for developing countries (with the National Information Society Agency). The Korea Innovation Week story ran on the front page of the WBG intranet.





#### 2019 Korea Smart City Study Tour (September 2-6, 2019)

The third Korea Smart City Study Tour brought together World Bank clients and staff to share insights and experiences with smart cities. The study tour was attended by 40 people and was organized in partnership with MOLIT, the World Bank's Smart Cities Knowledge Silo Breaker, and the Korea–World Bank Partnership Facility.

#### 2019 dBrain capacity-building program (October 28-30, 2019)

On October 28–30, 2019, the Korea Public Finance Information Service and the World Bank jointly organized workshops and a capacity-building program on public financial management information systems. The workshops were hosted by MOEF and supported by the KDI School. Five delegations of participants attended, from Assam state in India, Bhutan, Hungary, and Vietnam.

#### Global Policy Trends on the Fourth Industrial Revolution 2019 (October 25, 2019)



On October 25, 2019, Korea's Presidential Committee on the Fourth Industrial Revolution organized the 2019 Global Policy Trends on the Fourth Industrial Revolution conference in Seoul. A total of 21 international and domestic speakers participated. Martin Raiser, the World Bank's country director for China, Korea, and Mongolia, gave one of the keynote speeches, discussing the Fourth Industrial Revolution from the World Bank's

perspective. He emphasized the need to reduce gaps in access to digital technologies and to ensure data protection to reap the benefits and mitigate the distributional consequences of digital technologies.

#### WDR 2020 Launching Workshop (November 21–22, 2019)

The KDI School of Public Policy and Management and the World Bank cohosted the WDR 2020, Trading for Development in the Age of Global Value Chains Launching Workshop on November 21, 2019, in Seoul. Participants included international organizations, government officials, and academics. Aaditya Mattoo, the World Bank's EAP chief economist and the WDR 2020 codirector, presented the report.

#### Seventh Leaders in Urban Transport Program in Korea (November 17–23, 2019)

The KOTI and the World Bank's Transport GP and KGGTF jointly organized the Building LUTP workshop in Seoul, the seventh LUTP (Leaders in Urban Transport Program) workshop to take place in Korea. Participants included policy makers, planners, government officials, and World Bank directors Franz R. Drees-Gross and Guangzhe Chen of the Infrastructure Practice Group. In his opening remarks, Hoon Sahib Soh, Special Representative (country manager) of the WBG Korea office, reaffirmed the importance of the LUTP program and commended the updating of the program to incorporate smart mobility and other emerging technologies. The World Bank team also met with Vice Minister Kyung-Wook Kim and Director General Sangdo Kim of MOLIT to exchange information and explore partnerships.



#### **External Outreach**

## Hoon S. Soh, Special Representative of the World Bank Group Korea office, interviews with Arirang TV's The Chamber (July 16, 2019)

Hoon Sahib Soh, Special Representative (country manager) of the WBG Korea office, was interviewed in Arirang TV's The Chamber about the WBG Korea office and the World Bank. In the interview, he said that the goals of the World Bank are to eliminate extreme poverty and to promote shared prosperity. He also introduced the Korea office and explained that it works with Korean public and private partners to support projects in developing countries.



## Victoria Kwakwa, East Asia and Pacific Vice President, interviews with the Korea Times (November 18, 2019)

During her November 2019 visit to Korea, EAP Vice President Victoria Kwakwa had an exclusive interview with the Korea Times. Vice President Kwakwa emphasized the importance of the WBG Korea office in leveraging Korea's practical development experience and collaborating with Korean partners to support developing countries. She added that "we can leverage the Korea office even more by focusing further on innovation and technology as well as green growth innovation as the two focal points of our partnership."

## Hoon Sahib Soh interviews with Arirang TV on the COVID-19 pandemic (May 27, 2020)

Hoon Sahib Soh, Special Representative of the World Bank Korea office, was interviewed by Arirang TV about the World Bank's perspective on the impact of COVID-19 on global poverty and shared prosperity and on its distributional impact. In his interview, he shared the goal of the World Bank to eradicate poverty and assist the economic development of less developed countries as well as the measures the World Bank is taking to address the growing wealth gap triggered by COVID-19.

## Maeil Business op-ed, "Korea-World Bank Partnership for the Post-COVID-19 World" (June 9, 2020)

With the release of the June 2020 edition of Global Economic Prospects (a report on the global economy, published by the World Bank twice a year), Hoon Sahib Soh, Special Representative (country manager) of the World Bank Korea office, shared the World Bank's economic outlook and the Korea-World Bank partnership for the post–COVID-19 world. In his op-ed, he reaffirmed that Korea and the World Bank can build a global platform for cross-country knowledge exchange and for collaboration and coordination on COVID-19. The WBG Korea office is working with the government to share the country's expertise and experience, particularly

in the use of innovative and technology-enabled solutions to respond to COVID-19, in line with our focus on innovation and technology for sustainable development.

## Korea Herald op-ed, "South Korea Can Make COVID-19 Recovery Greener" (June 28, 2020)

Hoon Sahib Soh, Special Representative (country manager) of the World Bank Korea office spoke about Korea's Green New Deal, the government's plan to transition to a greener and more sustainable development. He shared the WBG-Korea partnerships on sustainable development, including the World Bank's KGGTF and the WBG Korea office's dedicated green growth innovation.

Table 2. List of Public Engagement and Outreach Activities of the Korea Office

Name of event	Korean partners	Description of activities
National Assembly's Africa New Era Forum Breakfast Seminar (July 3, 2019)	National Assembly	Hoon Sahib Soh, the WBG Korea Special Representative, gave the keynote speech on the World Bank's program in Africa and the Korea office's support to African projects and knowledge exchange.
Korea International Water Week 2019 (September 4–7, 2019)	MOE of Korea; K-Water; and MOLIT, with Daegu Metropolitan City	Hoon Sahib Soh, the WBG Korea Special Representative, delivered a speech addressing the World Bank's water sector engagement, including projects supported by the World Bank and the use of innovative and technology- based solutions in the water sector.
Korea-WBG Conference on Greenhouse Gas Reduction and Global Carbon Markets (October 11, 2019)	KEITI, MOE	Hoon Sahib Soh, the WBG Korea Special Representative, gave the congratulatory remark, emphasizing the importance of pilot programs to develop the necessary tools, build institutional capacity, and facilitate informed decisions based on practical experience in carbon pricing and climate markets.
The Ninth International Symposia for Green, Smart Development and Vision 2019 (November 26, 2019)	Ten Korean institutions, including SNU, the Korea Advanced Institute of Science and Technology, and Pusan National University	Hoon Sahib Soh, the WBG Korea Special Representative, provided the keynote speech, highlighting new opportunities to improve urban management and delivery of public services by harnessing digital technologies as well as the need for collaboration and partnerships to address the multisectoral nature of smart city developments.
2019 Science and Technology Policy Institute International Symposium (December 11, 2019)	Science and Technology Policy Institute	Hoon Sahib Soh, the WBG Korea Special Representative, delivered the keynote speech, titled "Partnership in Innovation and Technology for International Development."

Note: KEITI = Korea Environmental Industry and Technology Institute; K-Water = Korea Water Resources Corporation; MOE = Ministry of Environment; SNU = Seoul National University; WBG = World Bank Group.

# World Bank Global Practices and Themes in the Korea Office

Green Growth Innovation for Sustainable Development Finance, Competitiveness, and Innovation Korea Program for Operational Knowledge Fragility, Conflict, and Violence Education

#### **Green Growth Innovation for Sustainable Development**

The WBG's Korea office continued to see increasing interest from client countries in FY20 in learning about Korea's innovations in development. The green growth innovation team continued to provide operational support, knowledge sharing, and technical assistance on innovation and technology by leveraging Korean and global green solutions for sustainable development

The Korea Office's green growth innovation team played a critical role in expanding the operational support activities of the Korea office. The team consisted of Kathrine Kelm, Senior Land Administration Specialist; Maurice Rawlins, Natural Resource Management Specialist; Inchul Hwang, Senior Energy Specialist; Hanul Oh, Operations Analyst of KGGTF; Bola Ju, Consultant; and Eunji Shin, Consultant. The team partnered with Korean institutions to provide innovative solutions to clients in developing countries in a range of areas, including fisheries, coastal resources management, solid waste management, pollution control, forestry, land administration, power grids, and agriculture. The KGGTF continues to be a key partner of the Korea office on the green growth innovation program. KGGTF co-finances the staff cost of the green growth innovation team and the team implements KGGTF-financed activities as well as the operational work programs of their respective GPs.

The global pandemic has limited mobility worldwide and prohibited engagement in on-site learning, but it has not dampened the KGGTF's commitment to sharing knowledge and creating impact. KGGTF teamed up with partners and colleagues to share best practices, exchange knowledge, and build dialogue in a virtual modality, conducting virtual knowledge exchange programs such as the program on e-mobility and energy storage systems in the Pacific Islands (May 27–28, 2020) with the Energy and Extractives GP.

The KGGTF and World Bank Korea office partnered and provided funding for the 2020 African Drone Forum, which took place in Kigali, Rwanda, in February 2020. This event showcased the most advanced drone technologies and brought international governments and regulators together with global and local innovators, investors, businesses, and media to promote the best drone ideas, technologies, and practices for the continent.



#### Green Growth Innovation for Sustainable Development

KGGTF also supported the Green Innovation programs at Korea Innovation Week in Washington, DC, collaborating with Korea's Ministry of Environment, Ministry of Agriculture, and affiliated organizations by hosting exhibition booths and workshops. Case studies on Korea's circular economy, disruptive technologies for agriculture, and successful forest use were highlighted.

The Korea Office green growth innovation team is working with Korean partner institutions to help developing countries learn from Korea's experience and expertise (Table 3).

Table 3. Korean Partnerships Supported by the Korea Office Green Growth Innovation Team

Korean partners	Client countries	Key sectors and innovations
• KMI • KOEM • KIOST	India, Myanmar, Vietnam	Fisheries aquaculture, marine pollution, and coastal resources management, including for vessel monitoring systems
<ul><li> Ministry of Environment</li><li> KEITI</li><li> SLC</li></ul>	Cambodia, Lao PDR, Myanmar	Solid waste and pollution management policies and technologies, including for high-technology landfill systems
Korea Forest Service     Korea Rural Economic Institute	Cambodia, Lao PDR, Myanmar	Forest landscape management by digitalizing forest landscape planning and management and developing spatial information and decision-support systems
• KAB • LX	Uzbekistan, Vietnam	ICT-based land administration systems, including land valuation and appraisal systems
• KPX • KEPCO	Pacific Islands, West African countries	Planning, building, and operating a modern power grid system
• KIAT	Nigeria, Philippines, Senegal, Vietnam	Affordable and sustainable modern energy solutions, such as mini-power grid systems
• KT	African countries	Collaboration on the Geo-enabled Monitoring and Supervision initiative using KT's mobile data collection technology
<ul><li>MAFRA</li><li>EPIS</li><li>RDA</li></ul>	EAP and African countries	Digital agriculture knowledge exchange workshop with client country participants

Korean partners	Client countries	Key sectors and innovations
<ul><li>MOLIT</li><li>KOTI</li><li>SMG</li><li>JRI</li><li>KEPCO</li><li>K-BIA</li><li>KIND</li></ul>	Pacific Islands (Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu)	Virtual Knowledge exchange workshop on E-Mobility and ESS for Pacific Islands Countries (PICs)
• LH • LHI • KAIA • KIND	LAC countries (Argentina, Bolivia, Chile, Colombia, El Salvador, Mexico, Peru)	Virtual Knowledge Exchange on Land, Housing and Urban Development in response to COVID-19 and attention to vulnerable populations from urban development for LAC clients
<ul><li>MOLIT</li><li>SMG</li><li>SH</li><li>ITS KOREA</li><li>NIA</li></ul>	LAC countries (Bolivia, Ecuador, Mexico, Panama, Peru)	Virtual Knowledge Exchange on Urban Mobility Using Digital Technologies for LAC city clients

Note: EAP = East Asia and Pacific region; EPIS = Korea Agency of Education, Promotion, and Information Service in Food, Agriculture, Forestry, and Fisheries; ICT = information and communication technologies; ITS Korea = Intelligent Transport Society of Korea; JRI = Jeju Research Institute; K-BIA = Korea Battery Industry Association; KAB = Korean Appraisal Board; KAIA = Korea Agency for Infrastructure Technology Advancement; KEITI = Korea Environmental Industry and Technology Institute; KEPCO = Korea Electric Power Corporation; KIAT = Korea Institute for the Advancement of Technology; KIND = Korea Overseas Infrastructure & Urban Development Corporation; KIOST = Korea Institute of Ocean Science and Technology; KMI = Korea Maritime Institute; KOEM = Korea Marine Environment Management Corporation; KOTI = Korea Transport Institute; KPX = Korea Power Exchange; KT = Korea Telecom; LAC = Latin America and the Caribbean; LH = Korea Land and Housing Corporation; LHI = Korea Land and Housing Institute; LX = Land and Geospatial Informatix Corporation; MAFRA = Ministry of Agriculture, Food and Rural Affairs; MOLIT = Ministry of Land, Infrastructure, and Transport; NIA = National Information Society Agency; PDR = People's Democratic Republic; RDA = Rural Development Administration; SH = Seoul Housing & Communities Corporation; SLC = Sudokwon Landfill Corporation; SMG = Seoul Metropolitan Government.

#### **Energy and Extractives**

Universal access to affordable, reliable, sustainable, and modern energy—Sustainable Development Goal (SDG) 7—is essential to reaching other SDGs and is at the center of the World Bank's efforts to tackle climate change. The World Bank's Energy and Extractives GP supports technological, financial, and policy innovations to help accelerate the expansion of reliable and affordable electricity services and end energy poverty through clean energy projects and various other programs, such as the Energy Sector Management Assistance Program. In particular, the Korea office is helping EAP countries accelerate their transition to clean energy

through renewable energy and energy efficiency projects in collaboration with a number of Korean partners, such as KEPCO and KEA.

## Additional financing to Ulaanbaatar Clean Air Project (P167421, US\$12 million, Mongolia)

The Ulaanbaatar Clean Air Project supports the Mongolian government to improve policy and regulations to promote clean heating and provides technical support and awareness-raising campaigns. Inchul Hwang, senior energy specialist in the Korea office, is engaged in technical reviews and policy advice for energy efficiency components of the project, such as replacing polluting gas boilers and improving house insulation. The Korea office collaborated with the Korea Institute of Energy Technology Evaluation and Planning (KETEP) to invite nine Mongolian government officials, financed by KETEP, to a WBG-KETEP knowledge exchange on Mongolian buildings energy efficiency in November 2019.

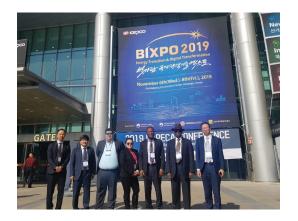
## Vietnam Energy Efficiency for Industrial Enterprises project (P151086, US\$100 million, Vietnam)

To support the Vietnam Energy Efficiency for Industrial Enterprises project, the Korea office organized knowledge exchange events in Korea to demonstrate the viability of various industrial energy efficiency technologies and business models and to facilitate stakeholder engagement and knowledge sharing among industrial enterprises, participating financial institutions, and energy service companies (ESCOs). Participating Vietnamese officials visited the KEA, the Korea ESCO Association, and companies that possess key knowledge and experience in implementing relevant policies and in identifying and implementing energy efficiency–related business opportunities in industries. The aim of these knowledge exchanges was to help develop a robust and bankable pipeline of industrial energy efficiency projects in Vietnam to attract investments in the country's industrial energy efficiency.

## Pacific Islands Sustainable Energy Industry Development Project (P152653, US\$5.66 million, Pacific Islands)

The Pacific Islands Sustainable Energy Industry Development Project aims to increase the data availability and capacity of Pacific Island power utilities to enhance their ability to incorporate and manage renewable energy technologies and long-term disaster risk planning. Inchul Hwang, senior energy specialist, is engaged in developing industry guidelines and competency standards. He worked with KEPCO to invite Pacific Power Association (PPA) clients and World Bank staff working in the Pacific Islands to KEPCO's major flagship event, BIXPO 2019. The invited PPA clients explored opportunities to integrate Korean expertise into their regional e-mobility and battery storage programs. The PPA clients were also invited to a virtual knowledge exchange on e-mobility and energy storage system in May 2020.

#### Bitgaram International Expo of Electric Power Technology (November 6–8, 2019)



KEPCO hosted its annual flagship energy event, BIXPO, in Gwangju, Korea, in November 2019. The KGGTF and the World Bank's Energy and Extractives GP, led by Jie Tang, Practice Manager; Inchul Hwang, Senior Energy Specialist; and Eun Joo Allison Yi, Senior Environmental Specialist (Program Manager of KGGTF), organized a World Bank Energy Forum jointly with KEPCO at BIXPO, titled "Disruptive Energy Technology Applications in Developing Countries." In this forum, they invited nine high-level utility clients from East Asia and the Pacific, Central Asia and Eastern Europe, and Africa to share insights on

disruptive technologies adopted in their projects. During the conference, the World Bank mission team met with various Korean energy institutions, including KEPCO, Korea Power Exchange (KPX), the Korea Export-Import Bank (KEXIM), the Korea Institute for the Advancement of Technology (KIAT) and KETEP, to discuss further collaboration and partnerships.

## KETEP–World Bank knowledge exchange on Mongolian building energy efficiency (November 12–14, 2019)

To support the Ulaanbaatar Clean Air Project, the World Bank's Energy and Extractives (EEX) GP and KETEP held a KETEP-World Bank knowledge exchange on Mongolian building energy efficiency on November 12–14, 2019. Nine Mongolian government officials were invited to Korea on KETEP funding. The officials had a chance to learn how Korea improved the energy efficiency of its buildings by continuously strengthening regulations and incentives and promoting relevant green technologies. The officials visited residential buildings (Energy Zero apartment houses), commercial buildings (the Green Zero Energy Office and the heating facility of the Korea District Heating Corporation), and green retrofit sites (aging apartment complexes).



## Korea office innovation and technology note on Korea's energy storage system (January 2020)

Korea is one of the global leaders in developing and distributing lithium-ion battery energy storage systems. The EEX GP staff coauthored "Korea's Energy Storage System Development: The Synergy of Public Pull and Private Push" as the first note of the Korea Office Innovation and Technology Notes series, and the note was published in January 2020. This report identifies and examines the key success factors of Korea's energy storage industry, including government policies, roles of private companies, and global market factors, and it shares lessons learned from the country's rapid development of lithium-ion battery energy storage systems.

## KGGTF virtual knowledge exchange on e-mobility and energy storage systems (May 27–28, 2020)

The World Bank's EEX GP and the KGGTF held a two-day virtual knowledge exchange event on e-mobility and ESS for Pacific Island countries and territories (PICs) on May 27–28, 2020. The purpose of the event was to share experiences and knowledge; to help PICs understand Korea's electric vehicle and ESS policy framework; and to support specific situations, actual applications, and needs for the deployment of e-mobility and ESS. The speakers from MOLIT, KOTI, SMG, Jeju Research Institute, KEPCO, Korea Battery Industry Association, and Korea Overseas Infrastructure and Urban Development Corporation (KIND) shared their experiences and lessons learned on deploying e-mobility and ESS in Korea. The virtual knowledge exchange attracted more than 60 participants from the Pacific Islands, representing utilities, governments, and international institutions.

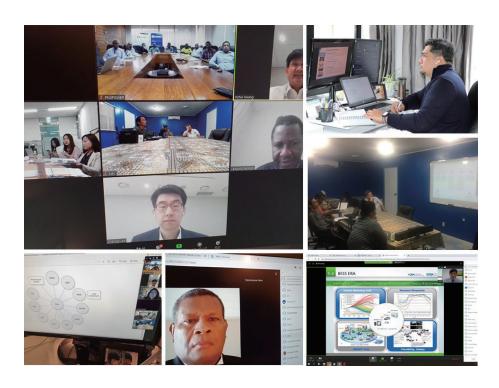


Table 4. Partnerships with Korean Institutions

Project/program	Korean Institutions	Key activities
World Bank Energy Forum at KEPCO's BIXPO, Pacific Islands Sustainable Energy Industry Development (P152653)	KEPCO	Held World Bank Energy Forum at BIXPO     Facilitated knowledge exchange on e-mobility and ESS, conduct site visits, and connect with Korean partners
Training for Power Utilities in West Africa (2019) and its follow-up trainings	KPX	<ul> <li>Connected KPX with African team of EEX GP on trainings for West African power utilities in 2018</li> <li>Coordinated training activities, communicate with KPX and EEX GP.</li> </ul>
Vietnam Energy Efficiency for Industrial Enterprises (P151086)	KEA	<ul> <li>Conducted site visits on industrial energy efficiency and connected with Korean partners</li> <li>Supported Vietnam clients with KOICA grant on Vietnam industrial energy efficiency</li> </ul>
Additional Financing to Ulaanbaatar Clean Air Project (P167421)	KETEP	Facilitated knowledge exchange on building energy efficiency for Mongolian clients     Conducted site visits and connect with Korean partners
World Bank-KIAT pilot project	KIAT	<ul> <li>Signed an MOU (2018)</li> <li>Carried out feasibility study on second target projects (2020)</li> <li>Secure grant budget (2021)</li> <li>Implement pilot projects with KIAT grants (2022)</li> </ul>

Note: EEX = Energy and Extractives; KEA = Korea Energy Agency; KEPCO = Korea Electric Power Corporation; KETEP = Korea Institute of Energy Technology Evaluation and Planning; KIAT = Korea Institute for the Advancement of Technology; KOICA = Korea International Cooperation Agency; KPX = Korea Power Exchange; MOU = memorandum of understanding.

#### **Environment and Natural Resources Management**

The World Bank's Environment, Natural Resources, and Blue Economy (ENB) GP manages operations in the East Asia region that help address natural resources management, solid waste and pollution, climate change, and environmental risk challenges. Through the Korea office, the ENB staff is helping to address environmental and climate change challenges in Cambodia, Myanmar, and the Philippines by providing innovative and digital solutions building on Korea's experiences. Supported initiatives include the creation of incentives and value streams for plastic waste reduction and recycling; geospatial applications in private-community forestry partnerships and solid waste management; and geospatial and digital technologies, such as Internet of Things, in forest and landscape management.

# Cambodia Sustainable Landscape and Ecotourism Project (P165344, US\$54.4 million, Cambodia)

The Cambodia Sustainable Landscape and Ecotourism Project promotes ecotourism as a driver to boost the economic prosperity of rural communities and strengthen the management of natural resources in Cambodia, including the country's rich freshwater fisheries and forests. The project will also strengthen the value chains of the country's nontimber forest products (NTFPs) to further supplement rural incomes. Specific investments in improving connectivity and building entrepreneurial skills for NTFPs and ecotourism will be undertaken, as will targeted investments to strengthen the country's Protected Area system, which safeguards a significant portion of the country's natural capital. Maurice Rawlins, the natural resource management specialist based in the WBG Korea office, supports the supervision of the project and will draw on the expertise of the Korea Forest Service for the project's ecotourism components.

# Knowledge exchange for Myanmar and Vietnam to learn about Korea's expertise in fisheries (September 10–14, 2018, and September 18–25, 2019)

With just-in-time funding and support from the KGGTF and the Korea office, the ENB GP teams in Myanmar and Vietnam partnered with the Korea Maritime Institute (KMI) and the Korea Marine Environment Management Corporation (KOEM) to organize visits to Korea for representatives from Vietnam (September 10–14, 2018) and Myanmar (September 18–25, 2019) to learn about innovative technologies in fisheries aquaculture, marine pollution, and coastal resources management. The knowledge exchange helped convince the Myanmar government to request analytical and technical advisory support from the World Bank on aquaculture and supply chain development; blue economy road map development; and monitoring, control, and surveillance of capture fisheries. The exchange also helped convince the country to pursue World Bank investment lending for its fisheries and blue economy.





# Enhancing the Philippines' climate resiliency through a national risk resiliency program (November 20, 2019)

Maurice Rawlins, the natural resource management specialist based in the WBG Korea office, had co-led a multiyear technical assistance project in the Philippines (2017–2019) to help develop and implement reforms of national planning and budgeting for climate resilience. As part of the project, Rawlins helped organize a joint Philippines–World Bank high-level workshop, "Accelerating Climate Investment through the Risk Resiliency Program," in the Philippines in November 2019. The workshop enhanced awareness among national and local government stakeholders in the Philippines of government actions that have enhanced climate resilience, including reforms of policies, regulations, planning, and budgeting.

# Support to Cambodia on developing a public awareness campaign for solid waste management

The KGGTF and the ENB Korea team provided support to the Royal Government of Cambodia on developing a public awareness campaign for solid waste management (SWM). Lessons learned from South Korea's experience in developing and implementing public awareness campaigns and extensive experience on SWM policy will be leveraged to provide examples and propose options for a public awareness communications campaign for solid waste and plastic management, specifically focusing on reducing street litter and plastic use.

#### Fisheries and Coastal Resilience Project (P174137, US\$200 million, Philippines)

The Fisheries and Coastal Resilience Project will support modernizing and enhancing resilience of the Philippines' fishery and aquaculture sector. The project will invest in improving the management of capture fisheries by using innovative and modern technologies and approaches; improving aquaculture production with new technologies, equipment, and infrastructure; modernizing post-harvest facilities and equipment; and strengthening the enabling framework for private sector investing in the fisheries and aquaculture sectors. Maurice Rawlins, the natural resource management specialist based in the WBG Korea office, co-leads the project preparation and will draw on the expertise of the Korea Maritime Institute for the project.

## Accelerating climate investment in the Philippines

Maurice Rawlins, the natural resource management specialist based in the WBG Korea office, is co-leading a multiyear technical assistance project in the Philippines (2019–2021). The project will support the implementation of needed reforms to the government's convergent planning and budgeting at the national and subnational level for several climate change programs. It will also deepen analysis of needs and practical steps for addressing climate adaptation and mitigation within a number of key areas while responding to the challenges of response and recovery from the COVID-19 pandemic.

# Knowledge exchange on Korean forest restoration and development (February 20, 2020)

The KGGTF and the ENB GP facilitated a one-day knowledge exchange in Washington, DC, in February 2020 with Korea Forest Service for sharing knowledge on Korea's restoration experiences and current technologies on forest management. The World Bank also discussed its forest program in the East Asia Pacific, South Asia, and Europe and Central Asia regions. Following the knowledge exchange, a set of targeted meetings were held to discuss opportunities for collaboration, and a case study has been conducted in collaboration with Global Delivery Initiative (GDI) to showcase Korea Forest Service's data-driven forest fire prediction and monitoring system and to share lessons learned from the implementation of technologies to improve the accuracy of forest fire information and administrative efficiency.

## New partnerships with Korea Forest Service (February 2020)

A statement of intent (SOI) was signed in February 2020 between the Korea Forest Service and the ENB GP for collaboration on forest issues. Under the SOI, the institutions will jointly engage in capacity building, analytical work, and research. The areas of collaboration include forest restoration, commercial forest plantations, community forests and protected areas, forest enterprises, nature-based ecotourism, watershed management, and landscapes. As a first phase of collaboration, the Korea Forest Service and ENB are creating e-learning courses to disseminate knowledge on forest fire management and showcase Korea's use of technologies in its forest fire information system (a collaboration with the Asian Forest Cooperation Organization, an intergovernmental organization committed to strengthening forest cooperation in Asia).

# **Global Land and Geospatial Information Infrastructure**

The World Bank's URL GP finances several land administration and geospatial information management programs in the East Asia and Pacific region. The main objective of the land/geospatial team is to provide global solutions for land reform, land administration, and geospatial information management while contributing to sustainable development in the target countries. The Korea office is supporting developing countries' efforts to adopt geospatial information technology, which has emerged as a major contributor to economic transformation. In addition, the role of geospatial information in combating COVID-19 has emerged as a critical component for global emergency response and recovery.

# Philippines support for the parcelization of land for individual titles (P172399, US\$370 million, Philippines)

The World Bank's new Land Administration Project (US\$370 million) in the Philippines is the World Bank's largest land sector lending operation. Kathrine Kelm, the senior land administration specialist in the Korea office, is the task team leader for this new project, which was approved by the Board with a fast-track delivery on June

## Green Growth Innovation for Sustainable Development

26, 2020. The project development objective is to improve land tenure security and strengthen property rights of agrarian reform beneficiaries. The project will support acceleration of the ongoing government program for agricultural land titling while seeking to gain efficiencies through technology, workflow streamlining, and increased stakeholder engagement. In addition, the team received a Korea Trust Fund (KTF) grant to use innovative geospatial information technologies such as drones (Unmanned Aerial Vehicles) and the GEMS (Geo-Enabling for Monitoring and Supervision) tool for improved mapping and a third-party Monitoring and Evaluation (M&E) respectively. Especially, the use of GEMS tool will enable the project monitoring team to remotely engage and monitor in times of the COVID-19 pandemic. It is expected that a Korean technical expertise on the use of drones for cadastral mapping will be engaged for the KTF-funded ASA activities.

## Vietnam Improved Land Governance and Database Project (US\$150 million, Vietnam)

The World Bank's Vietnam Land Administration Project (US\$150 million) aims to do the following: (a) improve the efficiency and transparency of land administration services; (b) establish and develop a multipurpose land information system and database; and (c) provide sustainable project management, including monitoring and evaluation (M&E). Senior land administration specialist Kathrine Kelm of the Korea office manages the project and coordinates land policy and legislative reform work, including building on the work previously completed by the Korean Appraisal Board (KAB) to introduce a modern land valuation methodology using computer-assisted mass appraisal technology. The project is also supporting the introduction of a land price digital data information system and the development of the National Spatial Data Infrastructure (NSDI).

# Global Geospatial Information Management for Green Growth Operationalization (US\$800,000, Global)

The Global Geospatial Information Management for Green Growth Operationalization Advisory Services and Analytics aims to help countries develop, integrate, and strengthen global geospatial information management (GIM) using the Integrated Geospatial Information Framework (IGIF). The team member supports the global partnership with the United Nations Committee of Experts on Geospatial Information Management (UN-GGIM) to help countries adopt the IGIF, such as by delivering training in selected countries through the World Bank's Korea Program for Operational Knowledge blended learning program (postponed to January 2021 due to COVID-19). The program supports the preparation of country-level action and investment plans in Cambodia, Mongolia, the Philippines, and Vietnam. The Korea office team, Kathrine Kelm and BoLa Ju, delivered a substantial set of knowledge products on Geospatial Information Management (GIM) in partnership with Korea's National Geographic Information Institute (NGII) and Korea's Land and Geospatial Informatix Corporation (LX). It includes the publication of an innovation series note, "The Power of Effective Geospatial Information Management in South Korea: Development and Application," and "IGIF: Korea Case Study", developed in collaboration with NGII. The team also authored a book Chapter entitled "Rapid Development of Location-Based Apps: Saving Lives during a Pandemic - the South Korean Experience," to be published in COVID-19: Geospatial Information and Community Resilience, edited by the UN-GGIM (United Nations Committee of Experts on Geospatial Information Management) Academic Network.

# Finance, Competitiveness, and Innovation

The Seoul Center for Finance and Innovation (formerly the Seoul Center for Financial Sector Development) supports financial and private sector development for developing countries in the East Asia and Pacific region. The partnership is managed by the FCI GP and is based in the WBG Korea office. Since its start in 2011, the Seoul Center has promoted financial sector development by supporting client country demand for technical assistance and capacity building, leveraging Korea's rich experience and expertise in the financial sector. Building on strong results and achievements over the past nine years, the third phase of the Seoul Center partnership was confirmed with an additional commitment of US\$15 million from Korea's Ministry of Economy and Finance. The aim of the partnership is to strengthen and develop financial and private sectors in the East Asia and Pacific region. The renewed partnership will enable the World Bank's FCI GP to continue to support developing countries to update essential laws/regulations, develop tailored solutions, and improve institutional capacity, leveraging the expertise of more than 30 Korean financial sector institutional partners. In addition, the reach of the partnership has been extended to include innovation and competitiveness themes to better align with increasing client demand, donor interest, FCI goals, and the future vision of the World Bank Korea office. The expanded scope of the partnership will allow FCI to respond to a wider range of client demands as well as increase the opportunities for knowledge sharing by developing more partnerships with relevant Korean institutions. The partnership will henceforth be referred to as the Seoul Center for Finance and Innovation.

# Seoul Center presentation at KDIC brown-bag seminar (August 28, 2019)

Youjin Choi, financial sector specialist of Seoul Center for Finance and Innovation, gave the presentation "Working at the World Bank Group" at a Korea Deposit Insurance Corporation (KDIC) brown-bag seminar. This seminar helped KDIC employees gain a better understanding of the WBG and helped in further exploring collaboration opportunities, including a possible exchange of experts between the two organizations.

# International Association of Deposit Insurers' Regional Committee study visit (September 2019)

Sameer Goyal, program manager for the Seoul Center, delivered a talk, "Financial Safety Nets: Key Design Considerations," to the International Association of Deposit Insurers' Asia-Pacific Regional Committee study

visit participants. Hosted by KDIC in Seoul, the study visit explored the roles and responsibilities of financial safety net players, ways in which relevant stakeholders could cooperate and share information, and the roles of deposit insurers in the financial safety net system.



# World Bank participation at fifth IPAF Summit and Conference (September 25–27, 2019)

Katia D'Hulster and Miguel Dijkman, both lead financial sector specialists at the World Bank, gave a presentation at the fifth International Public Asset Management Company Forum (IPAF) Summit and Conference on "Regional Financial Cooperation to Enhance Financial Stability and Development-Harnessing IPAF for Promoting Asian Nonperforming Loan (NPL) Markets," hosted by KAMCO. The conference prompted valuable policy discussions and practical considerations for regional cooperation among stakeholders to establish efficient NPL resolution mechanisms.

## Korea Deposit Insurance Corporation's Global Training Program (November 4, 2019)



Sameer Goyal, program manager for the Seoul Center, delivered another lecture on financial safety nets and NPL resolution at KDIC's fifth Global Training Program. The program was attended by deposit insurance and related agencies from 16 countries in East Asia and the Pacific, Africa, and South America. The World Bank is partnering with KDIC to promote the development of financial safety nets in less developed countries by leveraging KDIC's experience in operating deposit insurance systems and executing bank resolution.

# Conference on Governance, Risk, and Control in the Era of Disruption and technical workshops on cybersecurity and crisis simulation (December 9-13, 2019)

Sameer Goyal, Program Manager of Seoul Center for Finance and Innovation, visited Malaysia to deliver a presentation at the regional conference, "Governance, Risks, and Controls in the Era of Disruption," hosted by Bank Negara Malaysia (BNM) and the WBG Finance Competitiveness and Innovation GP. He also organized a technical workshop on cybersecurity risk management with the BNM Risk Committee to Islamic Financial Services Board, as well as a technical workshop on design and implementation of a crisis simulation for Perbadanan Insurans Deposit Malaysia, BNM, and the Ministry of Finance. During his visit, he also spoke on risk management at the ASEAN Working Group on Operational Risk Management (central banks).

# Innovative Financial Services: Experience of Internet-Only Banks in Korea (January 22, 2020)

As part of the WBG Korea office Innovation and Technology BBL series, the Seoul Center team organized the webinar "Innovative Financial Services: Experience of Internet-Only Banks in Korea" on January 22, 2020. The seminar was organized in partnership with SNU and was livestreamed from the SNU campus. The focus of the seminar was on Korea's experience with its first two internet-only banks, K Bank and Kakao Bank, which operate without branches and provide banking services online and via mobile application platforms. Experts from Sogang University, Fintech Center Korea, SNU, and the World Bank shared their views on the achievements and challenges of Korea's digital banks to derive lessons and implications for other countries pursuing similar banking services.

# Korea Innovation Week: Finance and Innovation Support for SMEs and Startups (February 19, 2020)

As part of the Korea Innovation Week held at the World Bank headquarters in Washington, DC, the Finance, Competitiveness and Innovation Global Practice hosted a workshop on Korea's experience supporting small and medium enterprises (SMEs) and start-ups through finance and innovation, to build a more vibrant and inclusive private sector. Representatives from the Financial Services Commission and Korea Technology Finance Corporation presented Korea's policies and programs to expand access to finance for SMEs and start-ups. Korea Trade-Investment Promotion Agency (KOTRA) shared Korea's initiatives to encourage firm-level productivity for SMEs, and the Science and Technology Policy Institute (STEPI) discussed its role in designing and implementing Korea's science, technology and innovation (STI) policies.

## Korea Fintech Week 2020 (May 28-31, 2020)

The Seoul Center and the WBG Korea office jointly contributed to Korea Fintech Week 2020, a virtual event organized by the Financial Services Commission and the Fintech Center Korea to highlight Korean fintech firms and discuss global fintech policies and trends. Hoon Sahib Soh, Special Representative (country manager) of the WBG Korea office, delivered a talk, "Digital Financial Services in Times of COVID-19," as part of the event's special sessions. The talk can be accessed from the Korea Fintech Week 2020 portal, www.fintechweek.or.kr/.



## IADI APRC webinar on deposit insurance and resolution (June 9, 2020)



Research Hub of the World Bank partnered with the International Association of Deposit Insurers (IADI), KDIC, and Malaysia Deposit Insurance Corporation to organize a webinar on deposit insurance and resolution for the Asia-Pacific Regional Committee (APRC) members of IADI. With the theme of "Preparing Our Path to the New Normal," the webinar provided a virtual forum for IADI APRC members and other stakeholders to discuss concerns, challenges, and responses of deposit insurers as the industry transitions to the post-pandemic phase.

The Seoul Center and the Malaysia Knowledge and

## MOU renewals with Korean financial sector partners (June 2020)

On behalf of the World Bank's FCI Global Practice, the Seoul Center for Finance and Innovation arranged for the renewal of partnerships with three major Korean financial sector partners—the Bank of Korea (BOK), the Financial Supervisory Service (FSS), and the Korea Securities Depository (KSD)—as the previous MOUs with these partners were coming to expiration. The renewed MOUs affirm that the parties will continue to cooperate in all areas of financial sector development (FSS), financial stability and payment systems (BOK), and capital markets (KSD) to contribute to the promotion of sound financial systems in developing countries. The Seoul Center has formed and developed partnerships with more than 30 financial sector institutions in Korea and has provided over 55 knowledge exchange activities to enhance the delivery of FCI's country programs by leveraging Korea's experience, expertise, and institutional capacity.







# Seoul Center Partnership Trust Fund

One of the Seoul Center's key responsibilities is to operate the Seoul Center Partnership Trust Fund, to promote financial sector development in developing countries (see Table 5). The Seoul Center team works closely with country teams and Korean partners to support financial sector advisory programs and analytics and to build tailored knowledge exchanges with the financial support of the trust fund grants. The team also contributes, as appropriate, to implementation of these grants and related country operational engagements. As of the end of June 2020, 22 grants have funded 18 EAP country programs and 4 regional initiatives.

Table 5. Seoul Center Partnership TF-Supported FCI Country and Regional Operations

Project	Country	Grant amount (US\$)	Objective	Korean partnership	Status
Scaling up financial services for the poor (phase 1 & 2)	Myanmar	4,652,000	To help increase access to financial services by the poor in Myanmar through a wide range of advisory services	BOK, FSS, KIDI	Ongoing
Financial sector development (phase 1 & 2)	Lao PDR	2,320,000	To promote the development of a more stable and efficient financial sector in Lao PDR through advisory services	JPRI, JRTI, KDIC, MOJ, SBC	Ongoing
Financial sector development (phase 1)	Cambodia	2,142,600	To support the Cambodian financial authorities in core areas of financial sector modernization and reform	BOK, FSS, KCIF, KDIC	Ongoing
Financial development and inclusion (phase 1)	Philippines	600,000	To support the Philippines' financial system development and financial inclusion	BOK, FSS	Completed (June 2020)
Financial Sector Support	Mongolia	1,500,000	To support the Mongolian authorities in improving financial sector stability	To be discussed	Ongoing
Seoul Center Program Financial Sector Advisory and Partnerships	Korea, EAP	1,150,000	To support World Bank's financial sector advisory work in EAP by sharing Korea's financial sector development experience	More than 30 Korean partners	Ongoing

Note: BOK = Bank of Korea; EAP = East Asia and the Pacific; FCI = Finance, Competitiveness, and Innovation; FSS = Financial Supervisory Service; JPRI = Judicial Policy Research Institute; JRTI = Judicial Research and Training Institute; KCIF = Korea Center for International Finance; KDIC = Korea Deposit Insurance Corporation; KIDI = Korea Insurance Development Institute; KSD = Korea Securities Depository; MOJ = Ministry of Justice; PDR = People's Democratic Republic; SBC = Seoul Bankruptcy Court; TF = trust fund.

# Finance, Competitiveness, and Innovation

The Seoul Center also provided financial support for the FCI's financial stability monitoring work as well as other FCI analytical and research work. The following table lists the key activities in FY20.

Table 6. List of the Key Activities in FY20

EAP Financial Sector Monitor	The FCI GP has a platform in place to produce a quarterly Financial Sector Monitor series for the EAP region (issued for Q3 and Q4 2019 and for Q1 and Q2 of 2020). This monitor aims to have a candid presentation of recent macrofinancial developments and short-term prospects in financial sectors across EAP countries. As such, it has a confidential nature and is intended for WBG internal purposes.
Equitable Growth, Finance and Institutions (EFI)macro-financial initiative	The FCI GP carries out a semiannual integrated assessment of major financial sector trends and themes that may pose systemic challenges to stability and development in EAP. This assessment serves as input for a confidential publication on global macro-financial issues led by the offices of the Equitable Growth, Finance and Institutions Vice President (EFIVP). This publication is internally circulated to senior management in the WBG ahead of the Spring and Annual meetings.
The FCI GP provides input on financial sector issues for the EAP Regional published by the office of the Chief Economist for Spring and Annual meet FCI contributes a box to the publication, for which the topics included in issues are intraregional banking trends in EAP and vulnerabilities in EAP's sector.	
Analyzing Banking Risk (4th edition)  This publication provides a comprehensive overview of topics focus on assessment, analysis, and management of financial risks in bare emphasizes risk management principles and stresses that key place corporate governance process are accountable for managing the dimensions of financial and other risks.	

# **Korea Program for Operational Knowledge**

The Development Economics (DEC) team in the Korea office manages the Korea Program for Operational Knowledge (KPOK), a program that provides development knowledge and learning to help low- and middleincome countries gain relevant knowledge directly applicable to their country-level projects and complex development challenges. KPOK leverages knowledge gained from Korea's growth from a low-income country to a global economic power through a blend of online and face-to-face courses and workshops, case studies, and other activities. KPOK is implemented through the World Bank's Open Learning Campus (OLC), which provides online and blended learning activities and opportunities to share development lessons among peers, and the Global Delivery Initiative (GDI), which documents and shares practitioners' experiences with development projects.



Note: KSP = Korea Knowledge Sharing Program; EDCF = Economic Development Cooperation Fund.

In FY20, KPOK delivered two massive open online courses (on the World Development Report 2019 Future of Work and World Development Report 2020 Global Value Chains), 15 e-courses, four cases studies and nine delivery notes (see Table 6). Many of these activities involved innovation and technology, such as digital agriculture technology, digital skills, geospatial information management and using ICT to respond to the COVID-19 pandemic (see Table 7). KPOK also organized two knowledge exchanges with Korea partners, one on digital agriculture technology with the World Bank Agriculture GP and another on road safety with the Transport GP and the World Bank's Global Road Safety Facility. The key Korean institutional partners were the Korea Agency of Education, Promotion, and Information Service in Food, Agriculture, Forestry, and Fisheries (EPIS) and the Global Knowledge Exchange and Development Center (GKEDC) for digital agriculture technology; and the Korea Transport Institute (KOTI), the Seoul Metropolitan Government (SMG) and the GKEDC for road safety.

In response to the recent impact of the COVID-19 pandemic across learning community, KPOK is adopting more options in virtual delivery for its conventional learning while at the same time expanding its online learning opportunities. KPOK prioritizes strategic alignment with the innovation and technology program of the WBG Korea office and contributes to the office strategy by providing a capacity-building program and a just-in-time learning program to support relevant innovation and technology-focused solutions in World Bank projects.

The DEC team in the Korea office is the focal point for collaboration with Korean institutional partners to deliver face-to-face knowledge exchanges for the OLC blended learning program, Korean case studies research for OLC e-learning courses, and coordination of GDI case study topic selection. The team oversees all deliverables to make sure they are aligned with the strategic direction of the program and coordinates with OLC and GDI to maximize synergies and find opportunities of collaboration with other programs in the office.

## Digital agriculture technology knowledge exchange (August 26–30, 2019)

The Digital Agriculture Technology knowledge exchange (August 26–30, 2019) brought together 70 participants consisting of six country teams involved in World Bank agriculture projects with digital technology components and the member countries of the ASEAN Food Security Information System Network. The knowledge exchange was organized by the World Bank Agriculture GP, EPIS, and GKEDC. The participants learned from global experts and Korean practitioners about the World Bank's Digital Agriculture Framework (which provides plausible digital technologies and their



development implications for five key agriculture challenges), agricultural technology trends, and enabling policies. At the end of the workshop, clients created action plans to incorporate the week's learning in their ongoing projects, which were presented for feedback from World Bank and Korean advisers. Also, the OLC signed a learning partnership MOU with EPIS to build on the collaboration.



## Feedback from Participating Task Team Leaders

- "Together with the country clients, I applied for a Korea-World Bank Partnership Facility (KWPF) grant and successfully secured \$550,000 for a two-year project in Pakistan, 'Unleashing Transformational Power of Agriculture Sector through Experience Sharing and Technology Transfer.'"
  - Guo Li, senior agriculture economist, World Bank Group
- "My proposal for 'Disrupting Smallholder Farming in the State of Maharashtra (India)' was approved for a KWPF co-financing fund of US\$2.7 million, and I look forward to further collaboration with the EPIS, which was the main partner of the knowledge exchange event in Seoul."
  - Balakrishnan Madhavan Kutty, Rural Development Specialist, World Bank Group

## Road safety knowledge exchange (December 2-6, 2019)

On December 2–6, 2019, KPOK delivered a knowledge exchange on road safety together with the Transport GP, the Global Road Safety Facility, KOTI, SMG, and GKEDC. This workshop benefited six transport lending projects with road safety components by hosting country clients and World Bank staff working on the projects. Participants learned from global and Korean experts on topics ranging from crash data risk analysis and safe infrastructure to application of technology for safer vehicles. For road safety in rural areas, the Village Zone Project was introduced through GDI, coupled with visits to two project sites. Country participants commented that the Korean experience of reducing the fatalities on the road by almost 80 percent in less than three decades offered many lessons for developing countries.





#### Quotes from Participants

- "The lessons learned are especially useful for low- and middle-income countries. For Colombia, the Korean experience in school zones, speed management, and technology in data will be very relevant."
   Liliana Paola Onate Acosta, National Road Safety Agency, Colombia
- "Korea dramatically reduced road fatality by 80 percent in less than three decades. This is a very good model for Bangladesh. We are going back with short-, middle-, and long-term goals to implement."
   A. K. Mohammad Fazlul Karim, Roads and Highways Department, Bangladesh

# GDI case study: "The Republic of Korea's First 70 Days of Responding to the COVID-19 Outbreak"

Policymakers and practitioners are asking how Korea has been able to effectively respond to COVID-19 to slow the spread of the virus. To learn from Korea's experience, the GDI has developed a new case study—"The Republic of Korea's First 70 Days of Responding to the COVID-19 Outbreak"—which closely examines how Korea put its response into action. The case study finds that implementation mattered—it was not just what Korean policymakers and practitioners did but how they did it that made the response effective.

# Participation in the Korea-WBG partnership week on innovation and technology 2020

KPOK participated in the 2020 Korea-WBG partnership week that took place at the World Bank headquarters in February 2020. The KPOK booth was organized in partnership with the Korea Knowledge Sharing Program (KSP) to highlight the long-standing partnership with Korea on knowledge, and it featured the ways in which KPOK and KSP work with Korean partners and clients to support development projects and strengthen capacity. KPOK also used the opportunity to showcase how the program is supporting the innovation and technology agenda of the Korea office by providing just-in-time learning and capacity building, which are critical for implementation of innovative and technological solutions in World Bank projects.

Table 7. Korea Program for Operational Knowledge Activities, FY20

Program	Country	Objective	Korea partnership	Deliverables	
Open Learni	Open Learning Campus				
e-Learning Courses	Global	Help build technical capacities to implement development solutions by providing versatile and actionable courses online (including bite-sized, self-paced, facilitated, and massive open online courses).	OLC e-courses infused with Korean cases from more than 40 different knowledge providers	<ul> <li>3 bite-sized e-courses</li> <li>2 massive open online courses</li> <li>6 self-paced e-courses</li> <li>6 facilitated e-courses</li> </ul>	
Blended Learning Programs	Global	Help build technical capacities to implement development solutions by providing a combination of online learning and face-to-face workshop sessions, site visits, peer-to-peer knowledge sharing, and action-planning activities.	<ul><li>EPIS</li><li>GKEDC</li><li>KOTI</li><li>SMG</li><li>21 Korean knowledge providers</li></ul>	<ul><li>Digital agriculture technology</li><li>Road safety</li></ul>	
Global Delive	ery Initiative				
GDI Case Studies	GDI Case Global Build an evidence base to		EDCF  KDCS  KDI School  KERIS  KOICA  KSP  KRC  KRIHS  LG CNS  MOLIT	• 4 case studies	

Program	Country	Objective	Korea partnership	Deliverables
Delivery Notes	Global	Build an evidence base to facilitate and enable more effective implementation of development programs. GDI delivery notes are shorter, bite-sized offerings with more concise analyses of delivery challenges and how project teams worked to overcome them.	EDCF     KDI School     KERIS     KOICA     KRC     KRIHS     KSP     K-Water     LC CNS     MOLIT	• 9 delivery notes

Note: EDCF = Economic Development Cooperation Fund; EPIS = Korea Agency of Education, Promotion, and Information Service in Food, Agriculture, Forestry, and Fisheries; GKEDC = Global Knowledge Exchange and Development Center; KDCS = Korea Disease Control and Prevention Agency; KERIS = Korea Education and Research Information Service; KOICA = Korea International Cooperation Agency; KOTI = Korea Transport Institute; KRC = Korea Rural Community Corporation; KRIHS = Korea Research Institute for Human Settlements; KSP = Knowledge Sharing Program; K-Water = Korea Water Resources Corporation; MOLIT = Korea Ministry of Land, Infrastructure and Transport; SMG = Seoul Metropolitan Government.

Table 8. Korea Program for Operational Knowledge deliverables on technology and innovation, FY20

Program	Deliverables			
Open Learni	Open Learning Campus			
e-Learning Courses	Bite-sized	Earth Observation for Sustainable Development: Satellite-Based Services for Water Management		
		Korea Innovation Week 2020—The Story of Korea's Economic Development		
		Human Capital Project Webinar Series: Korea's Experience Flattening the Curve of the Covid-19 Pandemic Using ICT		
	MOOC	World Development Report 2019: Future of Work		
		World Development Report 2020: Trading for Development in the Age of Global Value Chains		
	Self-paced	Strengthening Geospatial Information Management		
		Innovative Business Models for Fiber-Optic Networks and Closing the Access Gaps		
		Digital Skills Country Action Plan Methodological Guidebook		
	Facilitated	Civil Registration and Vital Statistics Systems		
		Digital Agriculture Technology		
		Solid Waste Management		
Blended Learning	Digital Agriculture Technology			

# Korea Program for Operational Knowledge

Program	Deliverables			
Global Delive	alobal Delivery Initiative			
GDI Case Studies	"Integrating Geospatial Information: How the Republic of Korea Overcame Institutional Obstacles to Improve Data Management, 1998–2016"			
	"Quality Education for All: Colombia's Partnership with the Republic of Korea to Expand Learning Opportunities through ICT, 2012–15 (EDCF Project)"			
	"The Republic of Korea's First 70 Days of Responding to the COVID-19 Outbreak"			
Delivery Notes	"Integrating Geospatial Information: How the Republic of Korea Overcame Institutional Obstacles to Improve Data Management, 1998–2016"			
	"Quality Education for All: Colombia's Partnership with the Republic of Korea to Expand Learning Opportunities through ICT, 2012–15" (EDCF Project)			
	"Implementing a Real Name Financial Transaction System to Increase Transparency and Reduce Corruption"			
	"Improving Public Transportation in the Seoul Metropolitan Area"			
	"The On-nara System for Task and Document Management: Scaling Up Back-Office e-Government Across the Korean Government"			
	"Improving Public Service in Airport Immigration Process through Innovation"			
	"e-Government for Better Civil Services: How the Korean Government Implemented the e-Registration System"			

 $Note: \verb|EDCF| = \verb|Economic| Development Cooperation Fund; \verb|MOOC| = massive open on line course. \\$ 

# Fragility, Conflict, and Violence

As a cross-cutting theme, the FCV group is driving substantive thinking and analysis on strategy and policy on various multidimensional and cross-sectoral development challenges of fragility and violence across the WBG. For the WBG's effective engagement in FCV countries, the group also provides operational and analytical support to country management units and global practices. In addition, the FCV group supports the design and operationalization of innovative financing instruments for FCV situations and manages trust funds, including the State and Peacebuilding Fund and the Korea Trust Fund for Economic and Peace-Building Transitions (K-FCV).

The FCV staff in the World Bank Korea office in Korea (WBG-Korea) contribute to the core deliverables of the FCV group, including (a) analytical studies and country support aimed at strengthening the Bank's FCV-sensitive strategies and operations in FCV settings with a focus on Asia and the Pacific; (b) support for the operationalization

of crisis risk management initiatives such as the Famine Action Mechanism (FAM) and Conflict Risk Monitoring, an integral part of the Global Crisis Risk Platform (GCRP), and (c) promotion of innovative engagements in FCV. In addition, FCV staff in WBG-Korea facilitate interested World Bank teams' engagement with Korean development partners and stakeholders on FCV issues through relationship building, partnership development, project support, and knowledge sharing. The team also provides a liaison to the secretariat of the K-FCV, housed in the FCV Group in Washington, DC, and led by the SPF/KTF program manager, for communications with Korean development partners. The following are highlights of a range of activities involving Korean stakeholders that the FCV team undertook in FY20. Other FCV activities (operational and analytical support for the East Asia and Pacific region and other FCV locations that do not involve Korean partners and stakeholders) are not included in this summary.

# Knowledge generation and exchange with Korean stakeholders on innovative technologies in agriculture

The "Water-Saving, Climate-Smart Frontier Agriculture in Africa's FCV Context" project, supported by the KTF, harnesses technological solutions in the agriculture sector to increase food security and nutrition in FCV settings. The project team visited Korea twice—in August and December 2019—and benefited from advice and knowledge from stakeholders, including the Korean Rural Development Administration (RDA) under the Ministry of Agriculture and the Korean Ministry of Economy and Finance. In partnership with RDA, the team visited several insect farming sites and processing facilities. The project team also benefited from advice and information provided by the Korean private sector, including farmers, agri-food businesses, and food processing companies. Additionally, Korea's experience with innovative agricultural technological practices is generating knowledge that can be useful for FCV settings. These visits were also featured at major Korea news outlets. An upcoming WBG publication highlights some of these practices, specifically related to the insect industry and hydroponics, and it benefited from substantive input by RDA. Further, in June 2020, RDA published the working paper "Development Policy and Plans for the Korean Insect Industry." On the basis of the partnership forged under this grant, the World Bank and RDA will collaborate on a pilot project that will provide training to rural farmers in South Sudan.

#### Korean expertise on responding to FCV issues in middle-income countries

An expert advisory group was formed to provide quality assurance on the "Developing FCV Approaches in Middle-Income Countries" project. It consists of World Bank experts and external members representing academia, policy institutions, and donor agencies, including Seoul National University (SNU), Stockholm International Peace Research Institute, Australia's Department of Foreign Affairs and Trade, the United Kingdom's Department for International Development, the Indonesian Institute of Sciences, Universidad de los Andes (Colombia), and the Carnegie Middle East Center. The advisory group will be invited to review the final synthesis report, along with the main quantitative analytical study and country case studies, to ensure that the final report reflects both the latest global research and policy-relevant insights. Dr. Huck-ju Kwon, a professor at SNU and the president of the Korea Association of International Development and Cooperation, is part of the advisory group and will help guide the team as it moves forward with data collection, analysis, and dissemination.

# Signing of memorandum of understanding between the World Bank Group and Korea Telecom

In February 2020, the WBG and Korea Telecom (KT), one of Korea's leading telecommunications companies, signed a memorandum of understanding (MoU) to enhance a partnership between the two institutions. The contribution from the FCV team in Korea was critical in developing the partnership and facilitating the signing of the MoU between the two institutions. Hoon Sahib Soh, the Special Representative (country manager) of the WBG Korea office, signed the MoU on behalf of the WBG, and Hyung Gyoun Byun, the Vice President of the Artificial Intelligence/Big Data Service department of KT, signed on behalf of KT. The MoU covers cooperation between the two institutions on artificial intelligence and big data—based solutions for developing countries, including FCV-affected countries. As a step for operationalizing the cooperation, the KT delegation engaged in an experience exchange on ICT solutions for project monitoring in the COVID-19 context with the World Bank's Geo-Enabling Initiative for Monitoring and Supervision (GEMS). Once travel restrictions are lifted, the GEMS team aims to travel to Korea to build on these initial interactions and explore the development of joint ICT-based approaches for project monitoring.

## Participation in Korea Innovation Week

Korea Innovation Week was held at the WBG's headquarters in Washington, DC, on February 18–20, 2020. Two KTF grants, "People-Centric Digital Services for Peace and Inclusion in Myanmar" and "Water-Saving, Climate-Smart Frontier Agriculture Technologies for FCV-Affected Populations and Countries in Africa," were introduced at the thematic workshops. An information booth showcased the 10-year partnership between the FCV group and Korea on addressing FCV challenges through the KTF. To mark the 10th anniversary of the partnership, a stocktaking of results achieved under the KTF was published. The celebratory publication "The Korea Trust Fund for Economic and Peace-Building Transitions: 10 Years of Partnership between the World Bank Group and Korea"—highlights the trajectory of the KTF over the decade and demonstrates the complementarity of FCV priorities and approaches between the WBG and Korea.

## Knowledge sharing on Korea's responses to COVID-19

As part of the WBG Korea office innovation and technology webinar series, the FCV team in Korea, together with the WBG Korea office, organized a webinar, "Responding to COVID-19: Early Lessons from Korea & Global Partnerships on Innovation and Technology" in June 2020. The event brought together experts to discuss early lessons, including the use of innovative and technology-enabled solutions, as well as the potential for global partnerships to address the pandemic. Bernhard Metz, senior operations officer in the World Bank FCV group, presented the WBG's application of the Geo-Enabling Initiative for Monitoring and Supervision (GEMS) in the context of COVID-19, a project that is financed by the KTF.

## Ongoing dialogue and outreach

From July 2019 to June 2020, the FCV staff in Korea participated in nine speaking engagements, three of which took place in May and June 2020. Post–March 2020 outreach activities introduced the WBG's approaches and priorities to respond to COVID-19 in FCV contexts. Ongoing dialogues with Korean institutions continue to identify areas of possible collaboration wherein Korea's technical expertise can be leveraged to address development challenges in FCV situations, especially in the COVID-19 context.

# **Education**

The COVID-19 pandemic has affected educational systems worldwide, changing the roles and functions of traditional schools and education. The Education GP in the Korea office has been helping developing countries explore policy frameworks that would strengthen the training systems using education technology and improve the scientific and technical research and innovation capabilities. It will continue to support efforts to enable learning to continue during the time of crisis and prepare the workforce for the global challenges.

#### Supporting skill development in India (September 2019)

To build on the partnership and formalize the knowledge sharing provisions under the Korea-World Bank Group Partnership Facility, a mission was organized in Seoul, Korea, for senior Indian officials from the Ministry of Skill Development and Entrepreneurship, the National Skills Development Corporation, state and district offices, and sector skill councils. The delegates visited HRD Korea, the Seoul Regional Council, Polytechnics, and the Korean Employment Information Service to learn from Korea's experience with decentralized implementation of the skills development programs and the associated management information system.

#### 2019 ASEAN+3 Human Resources Development Forum (October 29–30, 2019)

Recognizing the importance of skills gaps and job creation challenges amid the Fourth Industrial Revolution, the 2019 ASEAN+3 HRD Forum was coorganized with the Korean Ministry of Employment and Labor and the Human Resources Development Service of Korea (HRD Korea). It took place in Busan, Korea, on October 29–31, 2019. More than 100 people from 19 countries gathered at the forum to help build a greater understanding of the changing



#### Education

world of work and promote experience sharing on relevant initiatives on skills development. The forum introduced a series of innovative approaches to training, such as gamification, active learning platforms, and adaptive learning, to promote new strategies to design and implement human resources development. The World Bank also shared key research findings and introduced a standard framework to assess and benchmark national technical and vocational education and training (TVET) systems.

# Webinar series on education technology and country diagnosis in skills development (May–October 2020)

With close collaboration from HRD Korea, a series of webinars was designed to discuss the policy challenges posed by the COVID-19 pandemic and the best practices for applications of education technology in TVET. The webinar series included the topics of (a) enabling policy frameworks to use technology in skills development in the event of crisis, (b) quality and equitability by institutions using technology, and (c) using technology in the workplace. It also introduced the training and workforce development landscape in EAP countries by using the standardized instrument Systems Approach for Better Education Results-Workforce Development (SABER-WfD). On average, about 80 participants from more than 8 countries participated in each webinar. The participants found the webinars very useful in shaping policy priorities and dialogue across countries, and they shared developments and best practice examples from Korea and other EAP countries.

# Support to the Partnership for Skills in Applied Sciences, Engineering, and Technology (PASET) (May–November 2020)

The Partnership for Skills in Applied Sciences, Engineering, and Technology (PASET) is an African-led initiative with the goal of strengthening skills in the applied sciences, engineering, and technology to further promote the socioeconomic transformation in Sub-Saharan Africa. The Regional Scholarship and Innovation Fund (RSIF) is the flagship program of PASET, and it supports the training of a critical mass of African PhD candidates and postdoctoral fellows and supports the building of research and innovation capacity in Africa in priority areas. It is funded by contributions from the government of Korea, the World Bank, and African governments. Since 2019, six students from the first cohort of RSIF have been matched with the Korea Institute of Science and Technology (KIST) and have started their research in Korea. Overall, students are progressing well and continuing to participate in various training sessions and conferences. Selection of the second cohort of 67 RSIF scholars is complete and is currently in the matching process with five Korean partner institutions—KIST, the Korea



Institute of Energy Research, the Korea Research Institute of Chemical Technology, the Institute of Green Bio Science and Technology, and the Global R&DB Center of Seoul National University. The selected second cohort of scholars is expected to begin their research in Korea in the first half of 2021.

# Supporting the Korean Private Sector with Emerging Market Opportunities

International Finance Corporation

Multilateral Investment Guarantee Agency

# **International Finance Corporation**

The International Finance Corporation (IFC) engages with Korea's private sector to identify and support crossborder investment opportunities in developing countries. The IFC Korea team is in discussions with multiple Korean sponsors regarding projects in countries such as Cambodia, India, Indonesia, Myanmar, Nepal, Pakistan, Uzbekistan, and Vietnam, some of which are countries in fragility, conflict, and violence-afflicted (FCV) situations and International Development Association (IDA) countries. Responding to the COVID-19 pandemic, IFC launched a US\$8 billion fast-track financing facility to support existing and new clients to help sustain economies and preserve jobs during this unprecedented global crisis. In four months, IFC has committed US\$3.7 billion of the facility. The IFC Korea team has been actively looking into the financing needs of Korean corporates for their overseas businesses. The team also organized virtual events regarding COVID-19 to showcase effective responses of Korea and to discuss the opportunities and challenges in the post-COVID-19 era. In parallel, IFC Korea has been building a pipeline of investment opportunities across a variety of sectors, including power, manufacturing and services, and financial institutions. Besides these projects, IFC has been proactively working with existing Korean clients to support their project implementation and management under the COVID-19 situation in emerging markets. The pandemic halted global mobility, which in turn caused delays in project implementation across various infrastructure sectors. The IFC Korea team has worked closely with Korean project sponsors to address challenges posed by the crisis.

# Infrastructure

The International Finance Corporation (IFC) closed a landmark infrastructure project with Korean sponsors in FY20, overcoming significant challenges from long lead times and complexities in emerging markets, particularly in IDA countries. A project advised by IFC successfully completed its financing package involving Korean companies. IFC continues to build a robust pipeline of projects, collaborating closely with Korean sponsors from the early stages of project development.

## Upper Trishuli-1 Hydropower Project (public-private partnership [PPP] in Nepal)

Nepal Water and Energy Development Company (NWEDC), a project company, is developing the 216-megawatt Upper Trishuli-1 Hydropower Project in Nepal's Rasuwa district. IFC InfraVentures codeveloped the project scheme between 2012 and 2015, investing US\$4.25 million in the project. The NWEDC's key owners consist of Korean sponsors. IFC is providing US\$190 million in financing, including US\$95 million of equity and loans from its own account and US\$95 million as the implementing entity for other funding sources. Besides investment from IFC's own account, IFC mobilized debt financing packages up to US\$453 million. The project will increase Nepal's electricity supply by one-third from today's levels and provide clean, reliable power to up to 9 million people, part of a larger effort by IFC to create markets and fight poverty in the country.

# Tina River Hydropower Development Project (PPP transaction advisory in the Solomon Islands)

In FY20, IFC and the government of the Solomon Islands announced the formal completion of a landmark financing agreement for the 15-megawatt Tina River Hydropower Development Project, which will see the Solomon Islands move from virtual total reliance on imported diesel to majority renewable energy that will significantly cut power costs and emissions. Tina Hydropower Limited, the Tina River Hydropower Development Project company formed by Korea Water Resources Corporation and Hyundai Engineering Company Ltd., will build and operate the hydropower facility on the Tina River, 20 kilometers southwest of the capital, Honiara.

## **Financial institutions**

IFC has engaged with Korean financial institutions (FIs) on a regular basis to identify their interest in Southeast Asian markets. IFC supported Korean clients in various project opportunities and introduced diverse financing instruments in FY20.

Acknowledging the business expansion opportunities for Korean Fls in Southeast Asia and other emerging markets, the IFC Korea team introduced several M & A deals to them based on local market intelligence gathered through IFC internal teams. While it will take time for the deals to come to fruition, the efforts have led to a strong lead project that is expected to materialize in FY21.

As part of the COVID-19-related funding program, IFC deployed US\$492 million in COVID-19-related trade finance lines in the Asia Pacific region during FY20. This has helped FIs provide liquidity to businesses dependent on trade, especially small and medium enterprises. The program involves support to Korean FIs through one of IFC's global trade finance programs. As such, Korean FIs that are either directly or indirectly related to trade with emerging markets could be less affected by the related risks.

## Manufacturing, agriculture, and services sector and venture capital and start-ups

IFC has significantly increased its focus on the manufacturing, agriculture, and services (MAS) sector as well as venture capital and start-ups in Korea. Especially during FY20, the IFC Korea team embarked on mapping studies for key important countries such as Indonesia, Myanmar, and Vietnam, where a relatively large number of Korean corporations have been and are expected to be active. The studies are intended to increase IFC's market reach to Korean companies, especially in the MAS sector.

At the corporate level, IFC launched a fast-track financing facility in March 2020 to help companies in emerging markets overcome the COVID-19 crisis. The program is a US\$8 billion financing package to existing and new clients to help sustain economies and preserve jobs during the global crisis, which will likely hit the poorest and most vulnerable countries.

## International Finance Corporation

As the pandemic continues to send shock waves through the global economy, IFC supported 13 companies in the region—over 190,000 employees in MAS and energy sectors—with US\$554 million in COVID-19-related funding by end of FY20. Also, about 17,500 micro, small, and medium enterprises and corporations in the region are expected to be among the beneficiaries of IFC's US\$2 billion Working Capital Solutions program in FY20. The aim of the program is to help emerging-market banks extend credit so that businesses can continue to operate, stemming job losses.

IFC has encouraged Korean sponsors to explore investment opportunities not only in Asia but also in Africa and Latin America via conferences such as the IFC Innovation Day and the D.DAY X IFC Demo Day. IFC is currently in active discussions with Korean sponsors about opportunities in various sectors, such as textiles, pharmaceuticals, seeds, and natural resources.

# **Outreach and Partnership**

IFC Korea has participated in and hosted seminars and virtual events to increase awareness of IFC and to share the strategic value proposition of IFC coinvestments with Korean corporations. These outreach initiatives have helped IFC build a diverse investment pipeline. Participation by senior level IFC members attracted strong interest, including extensive media coverage. IFC plans to continue to strengthen its engagement with Korean companies that are interested in business expansion in emerging markets.

## Fourth IFC Innovation Day: Connecting Korean fintechs with Asia (November 11, 2019)



The fourth IFC Innovation Day conference organized by the Korea office of IFC focused on Korea's fintech start-up industry and its potential to affect the unbanked Asian emerging markets. The forum brought together global and local fintech experts and entrepreneurs and leaders from financial institutions, think tanks, and government agencies, including four portfolio companies from China, India, and Vietnam. Participated who shared IFC's insights in the financial industry and fintech sector included Rosy Khanna, IFC regional industry director for financial institutions group based in Singapore; Randall

Riopelle, IFC country manager for China, Mongolia, and Korea from Beijing; and Joon Young Park, IFC regional portfolio manager for financial institutions group from Mumbai (and former IFC Resident Representative in the Korea office, as of the date of activity). From the WBG Korea office, Youjin Choi, financial sector specialist of the FCI GP, presented WBG Findex report findings on financial inclusion gaps in Asia. Hoon Sahib Soh, Special Representative (country manager) of the WBG Korea office, moderated the panel session on promoting Korean fintechs, and Sameer Goyal, program manager for Seoul Center for Finance and Innovation, joined the panel to add that the World Bank is focusing on extending financial services to the underserved in developing countries.

## MDB Project Plaza 2019 (November 25, 2019)

On November 25, 2019, KOTRA hosted the MDB Project Plaza 2019 forum in Busan. Five multilateral development banks (MDBs) and Korea Export-Import Bank (KEXIM), 25 project owners from ASEAN countries, and more than 50 Korean companies joined the forum. Jiyeon Janice Ryu, resident representative of the IFC Korea office, gave one of the keynote speeches regarding infrastructure development with MDBs. She pointed out challenges faced by Korean companies in the maturing domestic market and



opportunities in growing ASEAN economies. She also highlighted IFC's value-added offerings, including Private Sector Window (PSW) facilities, which enable IFC to crowd in private investments and help create markets in PSW-eligible countries.

# Health care webinar: "Public Health PPP and Agile Hospital Management in Times of COVID-19" (June 9, 2020)

IFC Korea team organized a virtual BBL, "Public Health PPP and Agile Hospital Management in Times of COVID-19," with IFC internal and external speakers. Chaired by Randall Riopelle, IFC country manager for China, Mongolia, and Korea, the BBL provided the audience with challenges and opportunities in health industry amid the COVID-19 pandemic. Alexandre Fernandes De Oliveira, IFC chief investment officer, shared his outlook on the health care sector. Other external speakers included Hyunjoon Cho, deputy leader of global medical cooperation team at HimChan Hospital; Joon-pio Hong, professor and doctor at Asan Medical Center; and Hyewon Jung, global team leader at Korea Health Industry Development Institute.



Table 9. Outreach and Engagement Activities of the IFC Korea Office

Name of event	Host/organizer	Description of activities
Bangladesh Infrastructure Investment Promotion conference (July 2019)	KEXIM	Sudipta Husain, investment officer with South Asia INR team, participated in Bangladesh Infrastructure Investment Promotion conference hosted by KEXIM, KIND, HSBC, and Shearman & Sterling. Husain represented IFC in the event by presenting "Infrastructure Financing: IFC Perspective" and attending one-on-one meetings with Korean sponsors interested in developing infrastructure projects in Bangladesh.
Disruptive Agriculture Technology Roadshow (August 2019)	WBG	The event was held to foster knowledge exchange between disruptive technology experts in South Korea, global experts, and the World Bank experts. The event provided a forum to learn from the experiences of the Korean disruptive agriculture technology community and share the experiences of the World Bank's pilot projects deploying disruptive agricultural technologies. Joon Young Park, former resident representative of Korea, participated as panelist and moderator in the event.
GCF Private Investment for Climate conference (October 2019)	GCF	Joon Young Park, former resident representative of IFC Korea, participated as panelist at Green Climate Fund's GCF Private Investment for Climate conference. The conference focused on several key areas seen as vital in increasing the private sector's role in addressing the increasingly urgent need to finance climate action across the globe.
International Financial Institutions Career Fair (November 2019)	MOEF	IFC's senior human resources business partner presented on IFC and interviewed potential job candidates during the career fair.
KOTRA MDB Plaza Conference (November 2019)	KOTRA	IFC's Infrastructure and National Resources Asia and the Pacific director delivered the keynote speech. The IFC Korea team attended seminars and provided one-on-one consultations with Korean companies interested in developing emerging-market projects.
Korea Innovation Week (February 2020)	WBG	The event —cohosted by Victoria Kwakwa, Vice President for the EAP region, and Kunil Hwang, Executive Director representing Australia, Cambodia, Kiribati, the Republic of Korea, the Marshall Islands, the Federated States of Micronesia, Mongolia, Nauru, New Zealand, Palau, Papua New Guinea, Samoa, Solomon Islands, Tuvalu and Vanuatu World Bank Group —was attended by senior leaders from the Korean government and the World Bank Group, including Karin Finkelston, IFC Vice President of Partnerships, Communication, and Outreach, and Nena Stoiljkovic, IFC Vice President for Asia and Pacific.

Name of event	Host/organizer	Description of activities
The New Management Forum (April 2020)	The New Management	A breakfast meeting was held on the topic "Post–COVID-19, Korean private companies' expansion to emerging markets." Jiyeon Janice Ryu, Resident Representative of the IFC Korea office, chaired the meeting, addressing IFC's response to the COVID-19 crisis, its countercyclical role, and IFC's strategy in Southeast Asia.
Breakfast Seminar (May 2020)	Seoul Financial Forum	This breakfast seminar hosted by Seoul Financial Forum (SFF) showcased an agenda of "Digital Commercial Law in Korea." As a new member of SFF, Jiyeon Janice Ryu, resident representative of Korea, participated in the seminar, introducing IFC Korea to SFF members.
Regulatory Framework for Outbound Development Project and Countermeasure against COVID-19 webinar (May 2020)	KRC, MOLIT, and Yoon & Yang Legal	The webinar showcased regulatory issues on COVID-19 in developing countries, including Indonesia, Uzbekistan, Vietnam, and Latin American countries. The session covered legal cases and claims as well as other rising issues in relation to COVID-19, and it stressed a strong need for contractual details in development projects.
Public Health PPP and Agile Hospital Management in Times of COVID-19, BBL/ webinar (June 2020)	IFC	Chaired by Randall Riopelle, IFC country manager for China, Mongolia, and Korea, the BBL provided the audience with challenges and opportunities in the health industry amid the COVID-19 pandemic. Alexandre Fernandes De Oliveira, IFC chief investment officer, shared his outlook on the health care sector. Other speakers included Hyunjoon Cho, deputy leader of global medical cooperation team at HimChan Hospital; Joonpio Hong, professor and doctor at Asan Medical Center; and Hyewon Jung, global team leader at Korea Health Industry Development Institute.

Note: GCF = Green Climate Fund; HSBC = Hongkong and Shanghai Banking Corporation; IFC = International Finance Corporation; KEXIM = Korea Export-Import Bank; KIND = Korea Overseas Infrastructure and Urban Development Corporation; KOTRA = Korea Trade-Investment Promotion Agency;; MDB = multilateral development bank; MOEF = Ministry of Economy and Finance; MOLIT = Ministry of Land, Infrastructure, and Transportation; KRC = Korea Research Center; WBG = World Bank Group.

# **Multilateral Investment Guarantee Agency**

The MIGA team in the Korea office promotes Korean investments in emerging markets by providing guarantees to reduce investment risks and enhance credit terms. The MIGA Korea office worked closely with the deal teams in Washington, DC, on pipeline projects involving Korean companies, including hydropower projects in Nepal and the Solomon Islands and an industrial park in Myanmar. The MIGA Korea office closed two transactions in FY20: the Nepal Upper Trishuli-1 Hydropower Project and the Solomon Islands Tina River Hydropower Development Project. Despite the COVID-19 pandemic, MIGA has continued developing pipeline projects with several investors by having virtual meetings for additional leads in the power, education, and infrastructure sectors in the East Asia, South Asia, Latin America, Africa, and Caribbean regions.

## Tina River Hydropower Development Project, Solomon Islands (US\$14.1 million)



In January 2020, MIGA issued guarantees that will support the development, financing, construction, operation, and maintenance of the Tina River Hydropower Development Project in the Solomon Islands. The guarantees, issued to Korea Water Resources Corporation (K-Water) and Hyundai Engineering Co., Ltd. (HEC), amount to US\$14.1 million. They cover up to 90 percent of the equity investments and future earnings in the project for up to 20 years through Tina Hydropower Limited.

These guarantees provide protections against war and civil disturbance, expropriation, and breach of contract. When operational, the project is expected to reduce retail electricity tariffs without increasing greenhouse gas emissions and to enable greater access to electricity. The project will also generate significant economic flows into the country by displacing diesel generation, resulting in a reduction of 1.3 million tons of carbon dioxide equivalent over the life of the project.

# Upper Trishuli-1 Hydropower Project, Nepal (US\$87.4 million)

In December 2019, MIGA issued a guarantee in the amount of US\$87.4 million to support the development, construction, operation, and maintenance of a 216-megawatt, run-of-the-river hydroelectric power plant on the Trishuli River, about 70 kilometers north of Kathmandu in Nepal. The guarantee will provide protection to equity

injected by Korea South East Power Co. (KOEN) against the risk of breach of contract for up to 15 years. Along with other Korean sponsors, KOEN demonstrated an extraordinary commitment to the project, developing it for more than seven years despite a 7.9-magnitude earthquake in 2015 that devastated the project site and surrounding communities.



# Hiroshi Matano, MIGA's executive Vice President, visited Korea (February 19–21, 2020)

Hiroshi Matano, executive Vice President of MIGA, visited Korea to further advance partnerships with Korean partners and to discuss investment opportunities in developing countries. During his visit, Matano met with KIND, Korea Investment Corporation, K-Sure, Green Climate Fund (GCF), and other public and private sector

companies. Matano also participated in the ceremony to sign the contract for the guarantee with K-Water and HEC for the Tina River Hydropower Development Project. The three parties agreed to continue the close collaboration to seek other investment opportunities in developing countries.



# Merli Baroudi, MIGA's director for economics and sustainability, visited Korea (October 6–8, 2019)

Merli Baroudi, MIGA's director for economics and sustainability, visited Korea on October 6-8, 2019, to participate as a speaker at the Private Investment for Climate Conference hosted by GCF in Incheon. In the session "Climate-Resilient Infrastructure: De-Risking and Overcoming Market Barriers," Baroudi showcased examples of best practices for climate adaptation and resilience that MIGA was able to promote by working closely with governments and clients.



# Vice President and Chief Operating Officer S. Vijay Iyer's visit to Korea (July 21–23, 2019)

S. Vijay Iyer, MIGA's Vice President and chief operating officer, visited Korea July 21–23, 2019. He met with MOEF and thanked the ministry for supporting the MIGA Korea office, and he provided an update on the Korea-outbound transactions that MIGA supported. Iyer also met with KIND and other private and public sector companies to discuss ongoing projects as well as pipeline transactions and leads.



Table 10. Outreach and Engagement Activities of MIGA Korea Office

Name of event	Host/organizer	Description of activities
Private Investment for Climate conference	GCF	This conference showcased examples of best practices for climate adaptation and resilience.
MIGA workshop on collaboration with KDB	KDB	MIGA introduced recent transactions and brainstormed future collaboration with KDB.
Korea-ASEAN Project Plaza 2019	MOTIE, KOTRA, KOPIA	This event provided one-on-one sessions to Korean corporations.
MIGA PRI and project development workshop	KHNP	This workshop presented MIGA's products and recent projects that MIGA closed with Korean investors in FY2020.
MIGA PRI Seminar	KOWEPO	Presented MIGA's products and recent projects that MIGA supported

Note: FY = fiscal year; GCF = Green Climate Fund; KDB = Korea Development Bank; KHNP = Korea Hydro & Nuclear Power Co., Ltd.; KOPIA = Korea Plant Industries Association; KOTRA = Korea Trade-Investment Promotion Agency; KOWEPO = Korea Western Power Co., Ltd.; MIGA = Multilateral Investment Guarantee Agency; MOTIE = Ministry of Trade, Industry and Energy; PRI = political risk insurance.

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