The Implementation of the Korean Green Growth Strategy in Urban Areas

Korea’s National Strategy for Green Growth was launched in 2009 by the Korean central government. The Strategy identifies three overall objectives:

1. Promote a synergistic relationship between economic growth and environmental protection;
2. Improve quality of life and promote a green revolution in Korean lifestyles;
3. Contribute to international efforts to fight climate change and other environmental threats.

These overall objectives will be achieved via three strategic pillars:

1. Mitigate climate change and promote energy independence;
2. Create new engines for economic growth;
3. Improve the quality of life and enhance Korea’s international standing.

To implement the National Strategy for Green Growth, the Korean government also developed a national Five-Year Plan (2009-2013) that outlines specific policies, initiatives and measures to achieve initial Green Growth targets. The Five-Year Plan allocates portions of the national budget to each strategic pillar, the majority of which is attributed to climate change adaptation and mitigation efforts and development of clean energy. Examples of proposed policies to address the three strategic pillars include:

THE PROCESS OF DEVELOPING KOREA’S GREEN GROWTH AGENDA

The Korean Green Growth agenda has been driven by the vision and strategy of the Korean central government. The Presidential Committee on Green Growth (PCGG) coordinated the agenda-setting, policy formation, and monitoring & evaluation of green growth programs at all levels of government. The PCGG is composed of scientific experts and representatives from ministries, academia, and the private sector. The role of subnational governments has primarily been to comply with the instructions of the central government to implement local green growth projects with considerable, if not exclusive, financial support of the central government.

This top-down approach for setting the Green Growth agenda is in line with historical trends in how national policy shapes local economic development in Korea. In Korea, subnational governments generally exercise control over management of urban services, but tend to rely heavily on the financial support of the central government.

Subnational governments in Korea have not played a significant role in establishing the priorities or policy agenda that will be implemented to meet national green growth objectives, yet their cooperation will be crucial to implementing policies and achieving reduction targets.

THE LEGAL AND INSTITUTIONAL FRAMEWORK GUIDING SUBNATIONAL GREEN GROWTH ACTION IN KOREA

The Framework Act for Low-Carbon Green Growth (Framework Act) enacted in 2010 serves as the legal basis for implementing the central government’s National Strategy for Green Growth. The Framework Act articulates the roles of each level of government, the private sector and citizens. It is the primary centralized enabling framework for green growth action at the subnational level and authorizes the central government to develop policy tools to assist local governments implement national green growth projects and policies.

The Framework Act calls upon subnational governments to cooperate with the central government’s green growth strategy in the following ways:

- Cities are encouraged to take local conditions and green growth impacts into account when formulating plans and projects, to intensify green growth education and advocacy among residents and to encourage green growth among businesses, residents and NGOs through the provision of information and financial support;
- Only metropolitan city and provincial governments are required to establish and implement a local action plan for green growth in conformity with the national strategy; lower-level governments are encouraged, but not required, to develop action plans;

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<th>Strategic Pillar</th>
<th>Project/Policy</th>
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| 1. Mitigating climate change and promoting energy independence | • Mandatory inventory of industrial GHG emissions  
• Construction of nuclear reactors, wind complexes, tidal power plants  
• Create a watchdog unit to monitor climate change impacts |
| 2. Creating new engines for economic growth | • Increased investment in R&D  
• Support for greening of traditional industries and SMEs  
• Implement coherent environmental tax systems |
| 3. Improving the quality of life and enhancing Korea’s international standing | • Create carbon-neutral cities  
• Public information campaigns about green consumption and behavior  
• Active participation in international climate change negotiations |
• Local governments may establish a committee on green growth, under the control of the mayor/provincial governor, to review key green growth policies at the local level;
• Each mayor/provincial governor is authorized to designate a Green Growth Officer from among public officials to promote green growth at the local level and liaise with the central government to ensure vertical coordination of green growth strategies;
• Action plans developed by metropolitan cities and provinces must be submitted to the local committee on green growth, the city council, and the PCGG for approval. All sixteen metropolitan cities and provinces in Korea have prepared green growth action plans, which are closely organized around the ten policy directions enumerated in the National Strategy for Green Growth; a handful of lower-level cities have established action plans as well.

EXAMPLES OF SUBNATIONAL IMPLEMENTATION OF THE NATIONAL GREEN GROWTH FRAMEWORK

Most subnational governments have drafted five-year plans to implement local policies and projects to help meet the national green growth goals. Most local actions are focused on greenhouse gas emissions mitigation and include plans to increase energy efficiency through the introduction of smart grid systems, curb emissions through green building retrofits, expand public transportation networks, foster the development of emerging green technologies and the greening of existing industrial sectors, and develop eco-tourism sites.

The following are examples of proposed actions in subnational five-year plans developed in response to Korea’s national-level green growth framework:

REDUCING CO2 EMISSIONS:

• National-level framework: City action to reduce CO2 emissions has been guided by the national emissions reduction target of 30% by 2020 and the institutional framework put in place by the State, pledging to reduce domestic emissions through the introduction of emission reduction policies, emission inventories and an international research center on GHG emissions.
• Subnational action: A handful of metropolitan city and provincial governments have begun to establish local greenhouse gas inventories. Among the metropolitan city and provincial governments, all but three have created or are in the process of creating emissions inventories. Subnational governments have also committed to implementing specific mitigation projects that will help reduce CO2 emissions and reflect local priorities and conditions.

ENERGY SELF-SUFFICIENCY:

• National-level framework: The central government plans to decrease Korea’s reliance on fossil fuels and enhance the country’s energy independence by investing just over 14% of the Five-Year Plan budget in renewable and clean energies.
• Subnational action: Subnational governments have pledged support for renewable energy in general, solar energy, wind, biomass and waste. Several demonstration projects, such as the smart grid project for Jeju Island and the renewable energy district in Pyeongtaek, are intended to test national strategies for enhancing energy self-sufficiency at the local level.

ADAPTATION & RESILIENCE:

• National-level framework: The National Climate Change Adaptation Master Plan, established in 2010 to guide adaptation measures at all levels of government, called for metropolitan city and provincial governments to submit climate change adaptation action plans by the first half of 2011.
• Subnational action: Some metropolitan cities have already introduced adaptation policies in their local green growth action plans, which include reinforcing disaster response systems, strengthening coastal and ocean management procedures, and developing stronger riverine adaptation measures. One of the central government’s flagship projects to cope with climate change is the Four Major Rivers Restoration, a large-scale sustainable water resources management initiative. Several provincial governments have indicated plans to contribute to this restoration project.
GREEN TECHNOLOGIES AND ECO-INNOVATION:

• **National-level framework:** Korea’s eco-innovation strategy is underpinned by the existing national policy framework, notably the Ten-Year Basic Plan for the Development and Dissemination of New and Renewable Technologies (released in 2003), which provide the strategic objectives for the country’s future technological and industrial development. With the launch of the National Strategy for Green Growth in 2009, the government identified a number of additional technologies and industries as new engines for growth.

• **Subnational action:** Many local governments have pledged to generate job growth through support for green technological development in their five-year plans. In particular, the city of Seoul plans to maximize its existing technological advantage and highly educated workforce to develop a new R&D cluster in the Magok district as a test bed for green technologies. Several model city projects also have emerged to foster green innovation.

TRANSPORTATION:

• **National-level framework:** With the transportation sector accounting for over 19.7% of total energy consumption in 2009, Korea aims to cut transport-related emissions by enhancing energy efficiency and developing renewable energy resources.

• **Subnational action:** In their five-year plans, many metropolitan/provincial governments intend to curb greenhouse gas emissions by developing local and regional transportation network improvements. Seoul has been active in its efforts to reduce air pollution through a series of policies meant to stimulate low-carbon transportation with improvements to the public transportation system, investments in hybrid taxis and electric buses.

SUSTAINABLE CONSUMPTION AND BEHAVIOR:

• **National-level framework:** Korea’s National Strategy for Green Growth proposes to “bring the green revolution into daily life” by promoting green growth in regular school curricula and education for adults.

• **Subnational action:** Some local governments have taken an active role in raising public awareness on green growth. Seoul operates an Eco Mileage program, whereby citizens receive “eco-miles” for achieving reductions in GHG from electricity, water, and gas consumption. Eco-mileage can then be used to buy eco-friendly products. The city of Changwon-si has developed a voluntary carbon mileage program to encourage citizens to reduce emissions.
SUBNATIONAL GREEN GROWTH ACTION IN KOREA: CHALLENGES AND RECOMMENDATIONS

Korea’s integrated approach to green growth is structured around ten strategic axes that are each associated with concrete projects and corresponding evaluation methods. Korea’s Green Growth Strategy represents the first, largest and most organized policy approach to green growth thus far.

At the subnational scale, Korea’s national strategy has attached a strong emphasis on the local/spatial dimension of green growth by identifying urban planning, transport, buildings and infrastructure as key determinants of policy effectiveness toward green growth. The spatial dimension of the economy tends to be underestimated as a driver of green growth in most countries.

However, despite the significant progress Korea has made to develop a comprehensive green growth strategy and facilitate subnational participation, the country still faces a number of challenges implementing sustainable green growth policies and projects on the local level. These challenges can fall into three categories: financial, governance, and information and capacity challenges.

FINANCIAL CHALLENGES

Dependence on Central Government: With the vast majority of the overall green growth budget financed by the central government through grants or matching funds to local governments, the sustainability of programs driven by subnational governments is a considerable challenge, particularly in urban areas where local authorities rely heavily on central government support in general to fund the overall city budget. Most subnational government green growth action plans include five-year investment plans. However, most local green growth projects are financially supported, at least in part, by the central government in the form of inter-governmental transfers and matching funds.

Limited fiscal autonomy threatens the resiliency of local authorities because it limits their capacity to respond to the changing priorities of higher levels of government or sudden budget adjustments.

Recommendation: The central government can play a key role in greening existing urban revenue sources; congestion charges and road taxes can reduce car travel and fund green infrastructure, local energy fees that put a price on wasteful energy use can increase efficiency.

Limited Public-Private Partnerships: Public-private partnerships (PPPs), which have been increasingly used by cities in the last few decades, can bolster urban green growth goals. In Korea, recourse to the private sector and to private investment to finance and leverage public programs is relatively recent. Innovation policy programs so far have been fully funded by the executive branch. PPPs can bear a high risk of failure if local governments rush into agreements with private partners without a full understanding of local economy, urban characteristics and resources.

Recommendation: In order to maximize the possibilities of success, the central government should support subnational governments by providing sample business models, developing guidelines and reinforcing technical capacity at the local level.

GOVERNANCE CHALLENGES

Poor Horizontal Coordination: Enhanced horizontal coordination among local governments can enable local authorities to maximize financial and human resources, facilitate knowledge spillovers and help tackle congestion, air pollution, health problems and greenhouse gas emissions. Cooperation among local governments remains limited in Korea. Regional governments tend to see each other as competitors rather than potential partners in development. National programs like green growth demonstration projects have exacerbated competition among local authorities, as municipalities compete to become one of the selected projects.

Recommendation: The adoption of a city-region policy framework to guide policy-making with respect to inter-municipal partnerships could help to mitigate this issue.

Policy Fragmentation: Fragmentation of urban policies exists at the central level in Korea, as well as for green growth-related tasks involving different government ministries and agencies. Fragmented urban policies are particularly prevalent among departments responsible for public administration, regional development, transport, environment, public finance and budget, culture and protection of national heritage, higher education and health. The atomization of administrative mandates across a wide range of central ministries with jurisdiction over urban issues is not always compatible with an effective, coherent, multi-sectoral approach to urban development.

Recommendation: Employing partnership development tools such as a Memorandum of Understanding can help clarify roles and responsibilities among ministries working on common or overlapping projects.
INFORMATION & CAPACITY CHALLENGES

**Lack of Information**: Inconsistent or nonexistent methodologies for establishing local emissions inventories hamper the ability of Korean cities to assess progress toward green growth over time and across locations.

- **Recommendation**: To help cities become more effective in the design and delivery of locally tailored policy solutions to climate change, Korea should pursue the development of harmonized city-scale emissions inventories so that mitigation performance can be monitored, supported and compared across urban jurisdictions.

**Limited Capacity**: Establishing a common framework for urban inventory remains a challenge in Korea. Emissions data is currently collected nationally, by sector, in each relevant ministry, which in turn submits to the Greenhouse Gas Inventory and Research Center (GIR). Many local jurisdictions lack the technical or financial capacity to develop inventories.

- **Recommendation**: Assistance from the central government is needed to establish a common methodology and monitor progress on the environmental and employment impacts of green growth policies at the metropolitan level.

REFERENCE


This case summary is an abbreviated version of the original article, The Implementation of the Korean Green Growth Strategy in Urban Areas. http://www.oecd-ilibrary.org/governance/the-implementation-of-the-korean-green-growth-strategy-in-urban-areas_5kg8bf4l4lvg-en

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