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13 Green-blind growth

A critical appraisal of environmental governance in the Republic of Korea

Rakhyun E. Kim

Introduction

The Republic of Korea (ROK) is a densely populated, heavily industrialized country that developed out of the ruins of the Korean War (1950–3). Within an average lifetime, the ROK has grown from one of the world's poorest economies to become the fifteenth richest in terms of Gross Domestic Product (World Bank 2013), and a member of the Organization for Economic Co-operation and Development (OECD) and the Group of Twenty Finance Ministers and Central Bank Governors (G-20). This rapid economic growth was initiated by the developmental state policy dating back to the 1960s (Kim 2004), which placed priority on industrial growth over other social and ecological values. The inscription on the monument erected at the opening of the Ulsan Industrial Complex in 1962 stated, 'dark smoke arising from factories are symbols of our nation's growth and prosperity' (Cho 1999). Given such attitudes persisting more or less to the present day, it is not surprising that today's economic prosperity in the ROK has come with a huge cost to the environment (Eder 1996). According to the 2010 Environmental Performance Index, the ROK ranked ninety-fourth among 163 countries studied – the lowest among OECD members (Emerson et al. 2010).

Government interest in environmental sustainability is a relatively recent phenomenon. The first national environmental laws, the Public Nuisance Act of 1963 and the Environmental Conservation Act of 1977, were largely ineffective as they were designed with a clear intention not to hinder economic growth (Lee 1993; Jeong 2002). It was not until the 1990s, when the next generation of environmental laws began to emerge under the Framework Act on Environmental Policy of 1990 (Cho 1999; Kim 2007). A further wave of legislation came in the late 2000s, when the National Assembly passed the Framework Act on Sustainable Development in 2007 and the Framework Act for Low Carbon Green Growth in 2008. Between 2009 and 2012, the government invested 50 trillion won (approximately 43 billion US dollars) in a Green New Deal, constituting 3 percent of its Gross Domestic Product (Barbier 2010). The ROK's green growth strategy has attracted positive attention from a number of international organizations including the OECD and United Nations Environment Programme (UNEP) (Sukhev et al. 2010; Leflaive et al. 2012).

Despite the alleged 'greening' of economic development policy in the present century, however, conflicts between the government and environmental groups have continued to intensify. This is in part because green growth called for an increase in large-scale infrastructure projects. The reclamation of tidal flats and the dredging and damming of major rivers are but two examples of especially controversial mega-projects planned and implemented by national and local governments in the name of green growth. These construction operations bring into question of the ROK's vision of green growth. In fact, about 64 percent of the Green New Deal budget was allocated to projects associated with such construction work (Yun et al. 2011).

Against this backdrop, this chapter aims to provide an overview of environmental challenges and governance in the ROK. The discussion focuses on specific cases of coastal and riverine development projects and their impacts on the environment. It outlines the key actors and institutions involved in environmental governance, and how they have influenced the state of the coastal and riverine environment with reference to these projects. The chapter concludes with a brief reflection on the ROK's vision of green growth.

Environmental challenges

The ROK faces huge pressure on its natural and physical resources. The ROK has a very high population density of 513 people per square kilometer (as of 2012), approximately ten times the global average (World Bank 2013). The continuing demands for more land and freshwater to support national food security and the needs of an export-driven industrial base has been manifested in a series of large-scale civil engineering developments along the coasts and rivers.

Coastal environment

The west and south coasts of the ROK are naturally indented. Extensive tidal flats that developed over geological time in their natural state provide ecosystem services, habitat to many living creatures, and livelihood for local communities. Since the 1920s, however, the majority of the tidal flats have been lost to reclamation (defined as the conversion of natural wetlands into land and artificial wetland by mechanical means). Although the rate of reclamation projects peaked during the 1980s and 1990s, the development continues at an alarming rate (Kim 2011), despite the government's commitment made at the tenth Conference of the Parties to the Ramsar Convention on Wetlands in 2008 to allow no more large-scale reclamation (Resolution X.22). By 2010, 49.4 percent of coastline on the mainland (excluding islands) was artificial (Ministry of Land, Infrastructure and Transport et al. 2011). Furthermore, over 75 percent of the historical inter-tidal wetland area had been impounded by reclamation projects, leaving only about 1,100 square kilometers remaining (Moores 2012). Less than 5 percent of the coastline is currently protected under national law (MacKinnon et al. 2012).

One of the first large-scale reclamation projects to be actively opposed by the environmental movement was the Lake Sihwa Project, which started in 1987. An estuary was impounded with a 12.7 kilometer-long seawall in an attempt to create 173 square kilometers of agricultural land and 56 square kilometers of freshwater lake. When the seawall was closed, however, the restricted water exchange caused catastrophic deterioration of the water quality within the lake, resulting in numerous fish kills (Cho and Olsen 2003). As a result, the government had no choice but to give up its original plan for a freshwater lake and permanently open the tidal gates in 1998.

Then, in 2004, the government commissioned the world's largest tidal power plant with a capacity of 254 megawatts to be constructed in the seawall (Bae et al. 2010). The Sihwa Tidal Power Plant has been in operation since 2011. Several environmental groups opposed this project as it was predicted to lead to long-term degradation of the tidal flat and a reduction in biodiversity over time. With little public participation opportunities, however, the government pushed ahead, and registered the tidal power plant as a Clean Development Mechanism project in 2006 under the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC 2013). Despite many questions relating to the project's additionality and environmental integrity, the Sihwa Tidal Power Plant is currently generating carbon credits.

An even more controversial project has been under development since 1991. Known as the Saemangeum Project, it entails the damming of two rivers and the reclamation of 400 square kilometers of tidal flat and shallow sea into land and a freshwater reservoir with the world's longest seawall stretching 33.9 kilometers. The seawall was closed in 2006, after years of delays caused by protests and legal challenges. Following a series of changes in plans, the most recent Master Plan for land use and development was adopted in 2011 requiring a further 22.2 trillion won for infrastructure development (in addition to the 3.8 trillion won already invested in the outer seawall construction). Even though most of the inner seawalls are yet to be constructed, proponents contend that agricultural land (30 percent of the total) will be completed by 2020. Other development projects for residential and industrial areas were planned to start in the late 2010s with an aim for completion by 2030.

Although it is difficult to predict the potential economic benefits of the Saemangeum Project, it is clear that the reclamation has already resulted in enormous social, economic, and environmental costs. Previously, 50,000 to 90,000 tons of hard clams and 1,000 tons of mud octopuses were collected annually in the Saemangeum estuary, supporting the livelihoods of many local people (MacKinnon et al. 2012). However, with a gradual reduction in tidal prism caused by seawall construction and then closure in 2006, millions of mollusks and other tidal flat fauna perished (MacKinnon et al. 2012). The degradation of the natural ecosystem has greatly harmed dependent fishing and shell-fishing communities (Hahm 2004; Moores et al. 2008).

The adjacent marine ecosystems have also been heavily impacted, with changes in tidal flows and sedimentation reported, affecting the shellfishery in the Geum

estuary (Moore 2012). The seawall construction itself has caused significant physical disturbance to the local environment, and more changes are yet to come. Most of the sand and gravel required for reclaiming the land inside the seawall (estimated at 700 million cubic meters) will be supplied by dredging seabed 10 to 20 kilometers off the coast (Ministry of Land, Infrastructure and Transport 2011). The dredging risks devastating benthic communities and, ultimately, the surrounding marine and coastal ecosystems.

The documented ecological impacts of the Saemangeum Project extend beyond national borders. The Saemangeum estuary was one of the most important staging sites for migratory shorebirds in the world (Moore et al. 2008; MacKinnon et al. 2012). Surveys conducted between 1997 and 2003 by the National Institute of Environmental Research within the Ministry of Environment suggested that approximately 330,000–573,000 shorebirds depended on the Saemangeum estuarine system during northward and southward migration between Russian and Alaskan breeding grounds and wintering areas in Southern Asia and Australasia (Moore 2012). Between 2006 and 2008, the Saemangeum Shorebird Monitoring Program recorded a decline of 137,000 shorebirds, and declines in 19 of the most numerous species during northward migration alone (Moore et al. 2008; Moore 2012). Over 90,000 Great Knots (about 24 percent of the world population) disappeared from the area following the closure of the Saemangeum seawall (Moore et al. 2008). Survey of adjacent areas and Australian non-breeding areas confirmed that there was a rapid decline in the species at the total population level (Moore 2012), requiring once abundant species to be classified as globally 'Vulnerable' (IUCN 2013).

Despite these negative effects, more coastal developments are planned and implemented. Whereas the rationale and legal permit for reclaiming land was to create more agricultural land, the low-carbon, green growth policy has been used to promote tidal power plant construction. According to the Green Energy Industry Development Strategies prepared by the Ministry of Knowledge Economy (now the Ministry of Trade, Industry and Energy) in September 2008, various agencies within the ROK plan to build a total of six tidal power plants along the west coast, requiring the construction of seawalls of various lengths ranging from 2 to 18.3 kilometers (Ko et al. 2011). Environmental integrity of this kind of coastal development is highly questionable as tidal power plants lead to a direct loss of tidal flats (Lee and Yoo 2009; Wolf et al. 2009; Polagye et al. 2011). In addition to supporting biodiversity (including fisheries), intact tidal flats also act as carbon sinks, while loss of integrity in tidal flats releases stored carbon and methane (Abril and Borges 2005). Yet, the government has sought to register the proposed Incheon Tidal Power Station under the Clean Development Mechanism, like it did with the Sihwa Tidal Power Plant. The public posting of project details resulted in expert opposition, including from major environmental organizations overseas (UNFCCC 2011). The planning process for the project stopped in 2012 and, as of 2014, the status of the tidal power plant proposal is unknown to the public.

Riverine environment

The ROK is situated on a mountainous peninsula with an average annual precipitation of 1,300 millimeters, two-thirds of which falls in the summer months. Demands on water resources are high throughout the year, and this has led to the construction of 18,000 dams and reservoirs as of 2001, among which 1,213 are classified as large dams (Park and Jang 2005).

In 2006, then presidential candidate Lee Myung-bak proposed the Pan Korea Grand Waterway Project. The project required damming, dredging, widening, and straightening several of the nation's major rivers, and connecting them by a canal system carved through mountains. The project was met with fierce public opposition due to concerns about its social and environment impacts (Cyranoski 2008). Soon after Lee Myung-bak took office as the president, however, a remarkably similar project was re-presented as the Four Major Rivers Restoration Project ('Four Rivers Project'). This green growth project was implemented between December 2008 and April 2012 at a published cost of 22.2 trillion won.

As the Board of Audit and Inspection of Korea (2013) later confirmed, the Four Rivers Project was, in reality, the Grand Waterway resurrected. The canal link through the mountains is missing, but otherwise the number of dams and their sites and the amount of dredging has remained the same (Normile 2010). The project is essentially a massive river-engineering project on the Han, the Nakdong, the Geum, the Yeongsan and Seomjin, entailing the building of 16 new dams, completely removing sand banks, and dredging 570 million cubic meters of sand and gravel to deepen nearly 700 kilometers of riverbed to maintain a minimum of 6-meter depth for navigation. It also involved constructing 1,700 kilometer-long bike trails and other recreational facilities along the waterways.

According to President Lee's administration, the project was to secure water supplies, establish flood control, improve water quality and restore ecosystems, provide space for cultural and leisure activities, and promote regional development around the rivers (Normile 2010). These goals were, however, questioned by the Professors' Organization for Movement against the Grand Korean Canal (2009). This group of 2,800 academics argued that none of the stated goals could be achieved through the project. The group accused the government and project supporters of twisting data and ignoring expert panel recommendations on issues such as water quality, flood control, and environmental impacts to justify a massive fraudulent construction project (Normile 2010; see also Yun 2014). While domestic mainstream media remained largely supportive of the project during most of former President Lee's term, the subsequent administration led by President Park Geun-hye has seen an increase in public criticism of the project. An article by the *Korea Times* in October 2013 called the Four Rivers Project 'a bottomless pit', citing massive future costs expected due to increased water pollution in the rivers (Jun 2013).

As the construction has only been recently completed, environmental change is still in progress. Some immediately observable impacts included numerous mass fish kills. For example, in October 2012, 300,000 fish died in the Geum

River from what experts later confirmed as the deoxygenation of the stagnant water (Sim 2013). According to the World Wetland Network (2012), a global network of 500 wetland non-governmental organizations, the Nakdong estuary has seen a drop of 75 percent in its wintering bird populations, and staging sites for threatened crane species have been substantially impacted. The rivers have essentially been turned into a chain of lakes (Normile 2010). A general trend of worsening water quality has been observed due to the waters flowing slower. Environmental groups argued that water quality as measured by COD (chemical oxygen demand) deteriorated from 2006 at 75 percent of sampling sites (Hwang 2013). The Board of Audit and Inspection of Korea (2012) examined the water quality of the four rivers from April to July 2012, and concluded that:

Once the 16 weirs were installed in flowing water, the hydraulic retention time (HRT) of the river water increased (e.g. for the Nakdong-river, it increases from 8.6 to 100 days) and the aquatic environment changed. The probability of algae blooming increased when compared with the conditions before the program even if the overall amount of nutrients such as nitrogen and phosphorus, and the climate conditions are assumed to remain the same.

(The Board of Audit and Inspection of Korea 2012)

Based on ecosystem monitoring conducted between March 2010 and December 2012, the Ministry of Environment also confirmed that the riverine environment has degraded compared to conditions before the start of the project. The Han River Basin Environment Office (2012), for example, reported that the biodiversity of the riparian vegetation of the Han River decreased due to physical disturbances to the environment. The decline in species diversity of fish, amphibians, reptiles, and aquatic macroinvertebrates was also reported. Based on ten reports on the Nakdong River published by the Ministry of Environment, a member of the Environment and Labor Committee of the National Assembly concluded that 28 of 49 endangered species under legal protection were no longer found since the project started (Yoo 2013).

Governance of the environment

How has the environment in the ROK been governed, and by whom? This section outlines the overall architecture of environmental governance in the ROK by exploring different laws and institutions, and the role of key actors and stakeholders such as law-makers, courts, and administrators, as well as corporations and civil society.

Laws and administrators

The Framework Act on Environmental Policy of 1990 defines the environment as consisting of the natural environment and the 'livelihood' environment (Article 3.1). The natural environment includes all natural, living and non-living,

objects in ecosystems (Article 3.2), whereas the livelihood environment includes the environment relating to the everyday life of people, such as air, water, noise, odor, soil, and wastes (Article 3.3). The dichotomous definition of the environment has created some fundamental contradictions in environmental governance as the two environments cannot be managed separately (Kim 2007).

The coasts and rivers fall into the natural environment category. Relevant environmental legislation include the Natural Environment Conservation Act of 1991, the Wetlands Conservation Act of 1999, the Act on the Conservation of Ecosystems in Island Areas including Dokdo Island of 1997, the Natural Parks Act of 1980, and the Cultural Heritage Protection Act of 1962. Key government ministries involved in governance of the natural environment include the Ministry of Environment, the Ministry of Land, Infrastructure and Transport, the Ministry of Agriculture, Food and Rural Affairs, and the Ministry of Culture, Sports and Tourism. They have the power to plan, authorize, and implement development activities, as well as protect the environment by, for instance, designating protected areas. Moreover, these ministries collaborate with each other in projects such as the Four Rivers Project.

The Ministry of Environment, in particular, is the main government agency in charge of establishing environmental policies and enforcing environmental regulations. The Ministry of Environment has a number of regulatory tools, which include reviewing of applications for environmental permits, licenses, or reports, and their issuance or acceptance; investigating facilities requiring environmental permits, licenses, or reports; and imposing administrative or criminal penalties.

However, these regulatory tools are often weak and underutilized. A review conducted by the World Bank (2006) on environmental impact assessment application highlights the weaknesses of existing systems, such as weak enforcement, low penalties, limited public participation, and the lack of coordination between government bodies at local and central levels. Furthermore, as in many parts of the world, environmental impact assessments are usually prepared by the developer, rather than by an independent assessor. Whilst environmental impact assessments seem to be useful in assessing direct physical impacts, such as pollution, noise and land disturbance, it appears that impacts on biodiversity and ecosystem functions are not well assessed (Lee 2005). Overall, environmental impact assessments have been ineffective in limiting environmental damage caused by large-scale construction developments. In addition, the Ministry of Environment is often reluctant to exercise its rights to enforce environmental laws. In the past, under the direction of ruling administrations, it has instead been supportive of major development projects, including the Saemangeum Project and the Four Rivers Project.

The Ministry of Land, Infrastructure and Transport, the principal administrative organ for development, holds jurisdictional rights over land and coastal policy under two main planning statutes: the National Land Framework Act of 2002 and the National Land Use Planning Act of 2002. These exert substantial influence over land use through the designation of land use zones and promulgation of

general land use plans and policies. The Public Waters Management Act of 1961 and the Public Waters Reclamation Act of 1962 provide a legal basis for the planning of reclamation projects utilizing public waters and the issuance of related permits. However, they contained no provisions concerning the environmental status of public waters until minimal recognition was instituted by amendments in 1999. Reclamation permits have been issued by the Ministry of Land, Infrastructure and Transport at its discretion without a specific set of criteria to test their environmental soundness. Furthermore, laws allow the privatization of coastal wetlands by reclamation, and this perverse incentive has allowed development by reclamation a financially viable option for developers (Kim 2011).

In addition, local governments play an important role by enacting local environmental regulations, administering environmental permits, and enforcing environmental laws as the statutory delegate of the Ministry of Environment. In some cases, local governments actively engage in nature protection in order to promote ecotourism (Kim 2008). However, local governments tend to favor development over conservation because it can attract in the short-term more revenues and create more jobs. For example, Incheon has been supportive of building several tidal power plants on its coasts, and provincial governments have been major driving forces behind the Saemangeum Project and the Four Rivers Project.

Public and private corporations

Most mega-projects are proposed and planned by government ministries such as the Ministry of Land, Infrastructure and Transport. The projects are then implemented by state-owned enterprises, such as the Korea Land and Housing Corporation and the Korea Water Resources Corporation (also known as K-water). These corporations in turn hire private construction companies to do the actual work.

The construction industry's contribution to the national economy, from the 1960s to the present, is a key factor explaining why the ROK has witnessed many large-scale infrastructure developments. Major construction companies in the ROK are affiliates of chaebol groups, family-owned conglomerates working intimately with the government (Haggard and Moon 1990; Chang 1993). Since the 1960s, the national government has been subsidizing chaebols as part of its national strategy for economic growth. In fact, one underlying rationale behind large-scale reclamation projects such as at Lake Sihwa and Saemangeum was to provide work to heavy industry companies returning from the Middle East in the 1980s (Cho and Olsen 2003). In the case of the Four Rivers Project, the Ministry of Land, Infrastructure and Transport was found to have leaked critical bidding information to a number of chaebol construction companies to allow them to fix the price and win bids for the multi-billion dollar project (Board of Audit and Inspection of Korea 2013).

Courts

Given the top-down power structure in the ROK, it is not surprising that the Prosecution Service has not been effective when it comes to investigating and pressing charges against government authorities and corporations for alleged environmental crimes. Instead, environmental groups have brought cases to the Court (Cho 2007; Kim 2007; Kim 2011). In general, the Court has been in favor of development in the name of public interest, despite admitting environmental impact from activities in question to some extent.

In 2001, 3,539 people collectively filed a lawsuit in the Seoul Administrative Court against government authorities to stop the Saemangeum Project. Before issuing its decision, in a Recommendation for Adjustment, the Court suggested to the then Ministry of Agriculture and Forestry to reconsider the project from scratch. This recommendation was later rejected by the Ministry, and the Court issued an injunctive order to halt the construction of seawall in 2005 (Seoul Administrative Court 2005).

In reversing the lower court's decision, both the High Court and Supreme Court held that, since the Constitution of the ROK recognizes the importance of both the environment and development, protection of the environment cannot take priority over development (Seoul High Court 2005; Supreme Court 2006). The Court weighed the costs and benefits of environmental protection and ruled that the economic interests of the country as a whole were more important than the environmental rights and interests of affected individuals. In other words, the Court in principle recognized the existence of environmental rights and interests, but these considerations were subordinate to economic interests of the nation. This process of balancing competing interests has been a critical limitation on the effectiveness of the judiciary in maintaining the environmental conditions.

In a joint dissenting opinion, however, Justices Kim and Park argued that the Constitution and environmental legislation do recognize the value of conservation of the natural environment as superior to economic benefits. The dissenting Justices argued that environmental law recognizes a number of important environmental principles, for example, the principle of sustainable development, the principle of prevention, and the precautionary principle. In light of the scientific uncertainty in predicting how marine environmental changes might affect the Saemangeum region, it was contended that even the possibility of harm to the ecology was a sufficient reason to suspend the project. These dissenting opinions are valuable as they provide possibly the most progressive interpretation of Korean environmental legislation and hint at the possible future of Korean environmental law (Kim 2007).

As recently as December 2010, however, the District Court rejected the request for an injunction of the Four Rivers Project filed collectively by 1,819 people (Busan District Court 2010). The decision was appealed to the High Court, which ruled that the project violated procedural provisions of the National Finance Act, but not environmental legislation such as the Environmental Impact Assessment

Act (Busan High Court 2012). In the Court's view, cancelling the project would go against the public interest due to the huge amount of public money already spent on building dams. Therefore, the Court allowed the project to proceed.

Special laws of the national assembly

Any hurdle to development left by court decisions has been conveniently bypassed by the legislature enacting special laws. The Supreme Court gave a green light to the Saemangeum Project based on the condition that 72 percent of the reclaimed land would be used as agricultural farmland in accordance with the initial plan (Supreme Court 2006). Yet it was not economically feasible for the land to be used for agriculture since the water quality of the freshwater reservoir needed for irrigation simply could not be maintained at a reasonable cost. The National Assembly then passed the Special Act to Promote the Saemangeum Project in 2007, which essentially overruled the Supreme Court's decision and put in place legal grounds for residential and industrial use of the reclaimed land. In 2008, a revised plan was adopted which reduced the proportion of agricultural land to 30 percent.

In order to speed up the process of development, the Special Act allows developers flexibility as to consultation procedures under 53 different conservation, development, and planning statutes (Article 17). Given the scale and time-frame of the Four Rivers Project, a special law was required to allow the government and developers to bypass the environmental regulations in place. The Special Act on the Utilization of Riparian Zones was passed in 2010. Again, in accordance with the law, developers do not need to seek consents under 29 different statutes (Article 15).

Another controversial special law worthy of mention is the Special Act on the Development of East, West, and South Coastal and Inland Areas of 2010. What the Act essentially does is grant local governments along the coast arbitrary powers to approve and execute development projects. Many have viewed the vast geographical reach of the legislation as problematic. Once plans are approved by relevant authorities, developers automatically obtain permits under 42 different development-related statutes, including the coastal reclamation permit issued under the Public Waters Management and Reclamation Act (Article 15), which has provided legal grounds for all reclamation projects in the ROK.

It is deeply problematic that in the ROK, special laws trump the principle of the rule of law (Kim 2011). While a special law is a legislation that overrides the basic laws already in place to meet a specific set of purposes, this instrument is being exploited to render otherwise illegal actions legal without public support.

Civil society

After a long period of military leaderships under former Presidents Park Chung-hee and Chun Doo-hwan, civil society began to develop in the late 1980s (Ku

1996; Ku 2011). Several non-governmental organizations that stand at the center of today's environmental movement were formed during that period.

More recently, the environmental movement in the ROK has become institutionalized with increasing in-house policy, legal, and scientific research capacities. Environmental groups have taken major issues to the Court, as in the case of both the Saemangeum and Four Rivers Projects, but often had little success in the end. However, the efforts to challenge and evolve the legal system are ongoing. Environmental groups are currently weighing the possibility of filing criminal charges against former President Lee Myung-bak under the Act on the Aggravated Punishment for Certain Economic Crimes for abusing his power and violating his duty in executing the Four Rivers Project. Although it is unlikely that the prosecutors will take on and bring criminal charges against Lee in the Court, this has denoted the symbolic significance of environmental movement from the ROK civil society.

With civil society becoming increasingly influential in informing the public, there is evidence of increasing attempts to intimidate or disempower critics of major development projects. Choi Yul, the winner of the 1995 Goldman Prize who led the Korean environmental movement from the early 1980s, was for example imprisoned by the Lee administration. While in prison, the Sierra Club presented the Chico Mendes Award to Choi Yul to recognize his contributions to environmental conservation in the ROK as well as the political victimization he was subjected to in relation to the Four Rivers Project (Korea Green Foundation 2013).

Top-down pressure from the government could be overcome, at least in part, by transnational activism (Keck and Sikkink 1998). In the ROK, however, there has generally been a lack of engagement with transnational advocacy networks across borders. Until the World Wide Fund (WWF) established an institutional presence in Seoul in March 2014, there was no office of any major international environmental groups in the ROK. The Korean Federation for Environmental Movement is a regional branch of the Friends of the Earth International, but it has been operating as an independent organization staffed entirely by Korean nationals. Birds Korea is a notable exception, through which its international project partners such as Birds Australia and the Royal Society for the Protection of Birds have at times been able to get deeply involved in ROK-based issues (Herskovitz 2007).

Green-blind growth

In the ROK, socially and environmentally damaging projects have been planned and implemented in the name of green growth. Although ROK green growth policies mainly benefited the construction industry (Yun et al. 2011), a number of international organizations, such as the Secretariat of the Convention on Biological Diversity (SCBD 2010), considered the ROK as a leading nation in terms of green growth policy. This has led to dismay among environmental groups around the world (Ramsar Network Japan 2010; World Wetland Network 2010).

It is necessary to understand the political context in which the concept of green growth emerged in the ROK. Sustainable development, a higher-level concept of green growth, was recognized as a national priority during the progressive Kim Dae-jung and Roh Moo-hyun administrations (1998–2008). In 2000, former President Kim had established the Presidential Commission on Sustainable Development, the legal ground of which was laid in 2007 by former President Roh's Framework Act on Sustainable Development. As soon as Lee Myung-bak became the president in 2008, however, his conservative government downgraded the Presidential Commission into a ministerial commission under the Minister of Environment, with its policy advisory function taken over by the current Presidential Committee on Green Growth. The Presidential Commission on Sustainable Development was a governance body represented by a wide range of stakeholders. In contrast, Lee's Presidential Committee on Green Growth consists almost entirely of pro-government technocrats, representing largely business interests, and excluding green advocates from civil society.

The ROK's green growth strategy to date has not provided a space for public debate on green growth (Yun et al. 2011). As a result, green growth has not been compatible with sustainable development. Whereas sustainable development is about seeking social justice and economic progress *within* ecological limits (Griggs et al. 2013), green growth policies have rather focused almost exclusively on economic growth while merely trying to reduce environmental impact (Ko et al. 2011). Ironically, the vision of green growth has been color-blind to green.

Conclusion

In the ROK, green growth was adopted as a new paradigm of progress. The general public and a number of international organizations have naively assumed that green growth will bring positive changes to the environment. As discussed, however, the green growth policy vision has been translated into environmentally destructive large-scale engineering projects. By adding some features that are popularly considered green, such as bike trails and tidal power plants, nature-transforming mega-construction projects were proclaimed by the government as green and sustainable.

There is government but little governance by the rule of law in the ROK (Mo and Brady 2009). The law has not been instrumental in domestic environmental governance because of 'a weak environmental law regime coupled with the inherent limit of Korea's legal infrastructure [resulting] in arbitrary discretion enjoyed by the regulator' (Cho 1999). Nothing in the environmental legislation may effectively hold government agencies accountable, judicially or otherwise, for the way in which their policies are created and implemented (Kim 2007). In a country where most large-scale developments are planned and implemented by the government itself, the lack of rule of law sets a huge challenge for sustainable development. The exercise of the Korean government's discretion as a keeper of the environment needs to be monitored and checked. A reform of the bureaucratic structure may be necessary to free judges from the control of other political actors.

Environmental governance challenges in the ROK are perhaps, as elsewhere, deeply rooted in national history, culture, and its economic growth model. The Korean economy has been overly reliant on the performance of a few dozen chaebols that are arguably more powerful than the government. The ROK's case is perhaps unique in the sense that chaebols may overpower the government in any environmental decisions to meet their own interests. Ultimately the notion of economic growth will need to be redefined so that it becomes compatible with social justice and environmental sustainability. The role of civil society will be critical in making this transformation.

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14 Editors' conclusion

Environmental governance scenario in Asia – lessons for the future

*Sacchidananda Mukherjee and
Debashis Chakraborty*

The challenges ahead

The analysis presented in the 12 chapters of this edited volume shows an interesting evolution in the environmental governance scenario across the East, South and Southeast Asian countries. The economic growth cycle witnessed by the Asian countries enables one to understand the environmental policymaking in a larger perspective. For instance, Japan embarked on a growth path early during the fifties and played a key role by providing foreign direct investment (FDI) to other East and Southeast Asian economies giving rise to the 'Flying Geese' phenomenon. The investments in core manufacturing sectors, namely, textiles, chemicals, iron and steel, automobiles in the initial phase and in the more sophisticated sectors (e.g. electronics) with the advent of time enabled the investment-recipient economies to grow, but at the same time the need for following a cautious environmental management system emerged. The growth in South Korea, Singapore, Hong Kong, SAR China and Taiwan, ROC, the newly industrialized economies (NIEs), had initially been fueled by the foreign investments but soon a strong domestic entrepreneur class emerged there as well, which propelled their growth engine further (Kwan 2002). Meanwhile FDI-led manufacturing growth progressed to other Asian economies, increasingly amenable to the idea of export-oriented growth, as limitations of the import-substituting growth model were gradually being acknowledged. On the part of the investors, the FDI outflow was driven by low labor cost and resource availability in relatively less developed countries vis-à-vis the home country. The countries to grow in the next phase, i.e. Indonesia, Malaysia, Thailand and Philippines received investment from not only Japan but sometimes also from the four NIEs as well. This growth path, in turn, led to both the *scale effect* and the *composition effects*, with the manufacturing sector growing in all these countries. The growth of Asian economies with reliance on the manufacturing sector resulted in environmental concerns that eventually started affecting the local population, and the raised concerns found their ways into the policy forums. As a result efforts to strengthen environmental governance were visibly noticed, albeit in varying degrees, influenced by multiple country-specific factors (Howe and Wyrwoll 2012).

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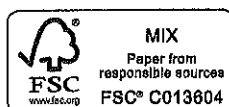
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