

# Korean Green Growth: A Paradigm Shift in Sustainability Policy, and its International Implications\*

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## Abstract

*This article evaluates Korea's green growth law and policies in order to assess the role of green growth in international environmental law. We provide a short overview of Korean law and policy and contextualize Korean green growth by comparing it to the OECD's green growth vision. We then critically examine green growth from administrative and international law perspectives. Building on this analysis, we consider how the Korean domestic experience, and the initial efforts made to "transplant" aspects of green growth in other nations, can provide insight into future environmental and economic policies.*

*While proponents of green growth continue to face significant challenges in Korea and abroad, there have been notable initial successes. Korea's forthcoming introduction of an emissions trading system and the collaboration between Korea and Cambodia to develop Cambodia's institutional capacity for green growth are two conspicuous examples. Green growth remains a promising framework in Korea and abroad; its ultimate impact will depend upon sustained political and social support for the implementation of the ambitious policies green growth prescribes.*

KEY WORDS: green growth, environmental law, climate change, emissions trading, sustainable development, legal transplantation, complexity theory

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## I. Introduction

On January 13, 2010, Korean President Lee Myung-Bak<sup>1)</sup> signed into law the Low Carbon, Green Growth Fundamental Act (the “LCGGFA” or the “Act”).<sup>2)</sup> This sweeping piece of administrative legislation asserted to dramatically reform Korean environmental regulation and to integrate environmental considerations into a broad set of policy choices.<sup>3)</sup> More than just a watershed moment in Korean environmental law, the Act also presents a unique approach to the diverse problems and opportunities currently presented by changing environmental and climate conditions. The Act takes as its scope a general and inclusive understanding of the relationship between “green growth” and Korean society and economy. Its provisions range from direct supervision of energy and emission-related business and consumption practices,<sup>4)</sup> to channeled investment and stimulus for certain industries,<sup>5)</sup> to reform of the domestic tax code.<sup>6)</sup> With the transition from President Lee to the new administration of current President Park Geun-Hye in 2013, the future of green growth was cast into doubt; after less than a year in office, President Park’s administration announced that it would continue to pursue the green growth vision, with a particular focus on climate change mitigation and adaptation, as “Green Growth 2.0.”<sup>7)</sup>

Due to the Act’s original approach for fulfilling international standards

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1) This article generally follows the Korean practice of stating an individual’s family name first, followed by his or her given name. In the case of referenced sources written by Korean authors, the names are stated as they appear in the publication.

2) Jeotanso Noksaekseongjang Gibonbeop [Framework Act on Low Carbon, Green Growth], Act No. 9931 (Jan. 13, 2010).

3) According to the Act, “The State shall, whenever it formulates various policies, take into consideration impacts on the harmonized development of the economy and environment and climate change.” Art. 4(2).

4) LCGGFA, Art. 42(5)-(11) (describing the regulation of greenhouse gas emissions and energy consumption of so-called “controlled entities”).

5) See generally LCGGFA, Chapter 4.

6) LCGGFA, Art. 30.

7) Shin Hyon-hee, *Korea eyes era of ‘green growth 2.0’*, THE KOREA HERALD (Nov. 10, 2013).

of environmental harm-reduction<sup>8)</sup> and advancing domestic economic and environmental strategies, and given the continued commitment that the Korean Executive has demonstrated to the green growth vision,<sup>9)</sup> other nations should now consider the possibility that Korea is emerging as an innovator in the area of administrative and environmental legislation. These innovations warrant the attention of other nations, and the international community, in designing “green” legislation.<sup>10)</sup> To explore the LCGGFA’s contributions to the international dialogue on environmental regulatory choices, we provide a number of theoretical perspectives for understanding and critiquing the LCGGFA, and further identify and discuss specific criticisms that may be leveled against this legislation. Korea’s experience with the LCGGFA informs the analysis of the usefulness of the Korean case as a model for other nations.

This article proceeds by providing an introduction to the structure and the key provisions of the Act. The precise connotations and conceptions contained within the Korean version of “green growth” are further refined by contrasting the principles embedded in the Korean legislation with the vision of “green growth” articulated by the OECD in its reports on the subject.<sup>11)</sup> The Act is then analyzed from the perspective of the regulatory instruments that it creates and proposes, in order to examine the policy ramifications of the Act and to test the proposition made by the Act’s supporters that it represents a dramatic move in the direction of incentive-based instruments.<sup>12)</sup> We then consider two major criticisms that may be

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8) For a discussion of provisions of the LCGGFA relevant to satisfying international greenhouse gas emission mitigation standards, see Suh-Yong Chung, *Jeotanso Noksaekeongjang Gibonbeopui Gukjebeopseok Geomto* [Review of Basic Act on Low Carbon Green Growth from an International Law Perspective], 16 SEoul INT. L. J. 49, 73 (2009).

9) See *infra* Section VI for a discussion of the status of Korean green growth under the present administration of President Park.

10) Korea has sought to utilize an expanding environmental policy leadership role to integrate green growth into international discourse. See Jae-Hyup Lee, John Leitner & Minjung Chung, *The Road to Doha through Seoul: The Diplomatic and Legal Implications of the Pre-COP 18 Ministerial Meeting*, 12 J. KOREAN L. 55, 66-69 (2012).

11) INTERIM REPORT OF THE GREEN GROWTH STRATEGY: IMPLEMENTING OUR COMMITMENT FOR A SUSTAINABLE FUTURE, OECD, C/Min(2010)5 (2010) (hereafter “OECD Interim Report”); TOWARD GREEN GROWTH, OECD, 10-1787/9789264111318-en (2011) (hereafter “OECD Final Report”).

12) The decisive move towards incentive-based instruments stands in contrast to the

leveled against the Act, from a general and specific level. First, generally, does complexity theory advise against the approach adopted by the Act, as a matter of administrative law policy? Secondly, and more specifically, if the proposition of a new and elaborate framework based around a touchstone concept survives a complexity theory analysis, is “green growth” the preferable basic concept? In particular, is “green growth” more promising as a policy bedrock than “sustainable development”<sup>13)</sup>?

Our analysis continues by considering what nexus may form between the Act and legal systems external to Korea. We evaluate the possibility of legal “transplantation” by first articulating our meaning in employing this concept, and then identifying reasons why “transplantation”, so understood, is particularly vital for generating the linkages between domestic systems that many global environmental problems require. We then continue the analysis by examining the value that transplantation of Korean green growth may provide for foreign legal systems.

## II. The LCGGFA

### 1. *The Green Growth Concept*

What is the substantive content of the concept of “green growth”? In a narrow and immediate sense, “green growth” describes in particular a set of institutions and policies that facilitates investment in, and development of, economic projects related to “green” industries, such as alternative energy sources, pollution-reduction inventions, and energy-efficiency

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elaborate and command-and-control oriented posture of pre-existing Korean environmental regulatory law. See Hong Sik Cho, *Against the Viability of Private Enforcement: Focusing on Korean Environmental Law*, 7 J. KOREAN L. 81, 94-97 (2007).

13) “Sustainable development” is enshrined as a foundational principle of the United Nations Framework Convention on Climate Change, Art. 3(4), GE.05-62220 (E) 200705, entered into force 1995, available at <http://unfccc.int/resource/docs/convkp/conveng.pdf>. As indicated by the language of the Convention, sustainable development contemplates that environmental protection and harm reduction measures should be crafted to reflect the economic and social realities of developing nations, maintaining a dynamic and context-specific balance of environment, economy, and social justice objectives.

technologies.<sup>14)</sup> However, a society that successfully develops these industries is not necessarily one that is also “low carbon”. A good example is China, a country that is currently experiencing considerable success in expanding green industries.<sup>15)</sup> However, China as a society continues to consume natural resources at an increasing rate.<sup>16)</sup> Its total carbon emissions per year are expected to continue to increase for another twenty years or longer,<sup>17)</sup> and until recently, the *rate of growth* of emissions (roughly related to the concept of “carbon intensity”<sup>18)</sup>) was also accelerating.<sup>19)</sup> The situation in China is further complicated by other environmental consequences that may result from the implementation of “green industry”, such as pollution and other contamination.<sup>20)</sup> Concerns about managing the broader environmental impact of industrial and consumer behavior in even “green technology”-invested societies leads to the balanced approach of green growth. Under the analysis established by the OECD, “Green growth can be seen as a way to pursue economic growth and development, while

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14) According to the OECD, green growth “builds on existing sustainable development initiatives in many countries and aims at identifying cleaner sources of growth, including seizing the opportunities to develop new green industries, jobs and technologies, while also managing the structural changes associated with the transition to a greener economy.” OECD Interim Report, *supra* note 11, at 9.

15) See, e.g., Dan Kiedmeyer, *This is How Far Ahead of the U.S. China is on Green Energy*, TIME (May 21, 2014); Keith Bradsher, *China Leading Global Race to Make Clean Energy*, N.Y. TIMES (Jan. 30, 2010).

16) The New York Times reported that in the fourth quarter of 2009 and the first quarter of 2010, China posted the “largest six-month increase in the tonnage of human generated greenhouse gases ever by a single country”. Keith Bradsher, *China’s Energy Use Threatens Goals on Warming*, N.Y. TIMES (May 6, 2010). China’s second quarter results demonstrated some subsequent reduction in carbon intensity.

17) See Matt McGrath, *China’s Experts Divided over Carbon Emissions Peak*, BBC (June 5, 2014).

18) “Carbon intensity” refers to the amount of emitted carbon per standardized unit of GDP produced. Where growth in GDP itself is stable or decreasing, and the rate of carbon emissions is increasing, carbon intensity is increasing as well.

19) See Alex Morales, *China Sticks to Carbon-Intensity Target, Dismisses CO2 Cap*, BLOOMBERG (June 4, 2013).

20) See, e.g., Ariana Eunjung Cha, *Solar Energy Firms Leave Waste Behind in China*, WASHINGTON POST (March 9, 2008) (describing environmental contamination from the production of solar panels in China). In the case of energy-efficiency production activities that are themselves harmful to the environment, a further source of tension between “green” and “growth” becomes evident.

preventing environmental degradation, biodiversity loss and unsustainable natural resource use. It aims at maximising the chances of exploiting cleaner sources of growth, thereby leading to a more environmentally sustainable growth model.”<sup>21)</sup>

As formally invoked in Korean legislation, “green growth” has a larger if aspirational meaning. Under the LCGGFA, “green growth” is defined as “growth achieved by saving and using energy and resources efficiently to reduce climate change and damage to the environment, securing new growth engines through research and development of green technology... and achieving harmony between the economy and environment”.<sup>22)</sup> It captures the simultaneous promotion of new industries that relate to environmentally sound technologies and the cultivation of a society that balances environmental consciousness and economic development. Applying this “green growth” strategy on the level of a national economy, GDP increases are driven by expansion of the “green economy”, while particular environmental goals are met (mitigating carbon emissions, maintaining ecological integrity, preserving biodiversity, and other qualitative standards for environmental protection).

## 2. Context and Purposes

Amongst the environmental challenges facing the societies of the world, climate change, destruction of habitats and reduction of biodiversity,<sup>23)</sup> ozone depletion, and natural resource management all have a significantly global character.<sup>24)</sup> Loss of environmental resources, including biodiversity and depletion of finite resource deposits, may impact particular societies

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21) OECD Interim Report, *supra* note 11, at 13.

22) Art. 2(2).

23) While the impacts of biodiversity loss may be less obviously of a shared and global character, the permanent deprivation of an environmental resource and qualitative injury to ecological richness are not limited by geopolitical boundaries. See, e.g., Richard L. Revesz, *Federalism and Environmental Regulation: Lessons for the European Union and the International Community*, 83 VA. L. REV. 1331, 1344 (1997).

24) See Jonathan Wiener, *Global Environmental Regulation: Instrument Choice in Legal Context*, YALE L. J. 677, 690-91 (1999) (discussing the “global public good” of minimizing externalities with an uncontainably international character).

most immediately, but the consequences bear a global character. The climate-related impact of greenhouse gas emissions and the depletion of ozone have a directly global impact, because the root cause activities, namely greenhouse gas emissions and the emission of ozone-destroying substances,<sup>25)</sup> each originate in a particular geographic location, but the materials in question, once released into the atmosphere, are not bound by borders. The accumulation of all the relevant emissions in the world collectively alters the chemistry of the atmosphere and renders a particular ecological consequence. The LCGGFA notes these environmental considerations in its text.<sup>26)</sup>

The LCGGFA also sought to address the need, more pressing in light of the global economic recession then occurring, for a perceived economic stimulus plan. In its basic statement of purpose, the LCGGFA speaks to both economic and environmental imperatives: “The purpose of this Act is to promote the development of the national economy... so as to pursue the harmonized development of the economy and environment...”<sup>27)</sup>

Other stated purposes of the LCGGFA include advancing the state of environmental law and enforcement and providing a demonstration to the world of Korea’s emerging status as a responsible and sophisticated stakeholder (and co-solver of international problems).<sup>28)</sup> The international aspirations of the Act may relate to the objective of presenting Korea as a “top-class, advanced country”,<sup>29)</sup> but also reflect a practical economic dynamic, inasmuch as the legislation seeks to facilitate international cooperation that could benefit the Korean economy, such as “expansion in overseas markets”.<sup>30)</sup> The emphasis placed on a balance and harmony amongst the economy, environment, and quality of life of citizens<sup>31)</sup> is an apparent effort to advance green growth as a tangible embodiment of, and

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25) See Richard B. Stewart & Jonathan B. Wiener, *A Comprehensive Approach to Climate Change: Using the Market to Protect the Environment*, AM. ENTERPRISE 112 (1990).

26) See, e.g., Art. 38.

27) Art. 1.

28) In three separate articles, the LCGGFA states a purpose related to improving or advancing Korea’s status in the international community. Art. 1; Art. 3; Art. 61.

29) Art. 1.

30) Art. 61.

31) See, e.g., Art. 1.

not a stark alternative to, sustainable development; the notion of sustainability is explicitly discussed as a foundational policy dimension of green growth.<sup>32)</sup>

### 3. Key Provisions

The Act seeks to establish a framework of duties and responsibilities, including binding obligations and incentivized voluntary behavior, for public and private parties, both institutional and individual. Beyond the general emphasis on responsibilities for the national government,<sup>33)</sup> the Act includes local government responsibilities,<sup>34)</sup> business entity responsibilities,<sup>35)</sup> and responsibilities for citizens.<sup>36)</sup> In the Korean context, one might ask whether the force of popular will and desire for environmentally sound social transformation has created the basis for meaningful “citizen responsibilities” for each individual.<sup>37)</sup> The test of whether popular support for these measures exists will arise in the context of future lawmaking to create specific and binding obligations for the general public.

#### 1) Implementation/Enforcement measures and related government bodies

The Act establishes a centralized structure of actors oriented around the key and highest-level decision-maker, the Korean president (the “President”). The Presidential Committee, the executive power-wielding body for the Act, is “instituted under the control of the President”.<sup>38)</sup> The functions of the Presidential Committee are vast and include making key determinations regarding the basic direction of policies under the Act, the development and execution of the national green growth and climate

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32) Art. 22; Art. 49.

33) See, e.g., Art. 3-4.

34) Art. 5.

35) Art. 6.

36) Art. 7.

37) For a detailed and comprehensive analysis of the relationship between popular will and the enforcement of environmental law in Korea in general, see Hong Sik Cho, *The Pathology of Korea's Under-Enforcement of Environmental Law: Is Public Awareness and Deliberation the Key to Success?*, 4 U. TOKYO J. L. AND POL. 47-64 (2007).

38) Art. 14(1).



change strategies, and supervision and support for administrative agencies as they participate in the implementation of green growth.<sup>39)</sup> The national strategy for green growth, as received and deliberated upon by the Presidential Committee, is developed by the “Government” (the executive branch, at the discretion and under the control of the President) and includes broad and comprehensive plans relating to the multifaceted concerns of the LCGGFA.<sup>40)</sup> The head of each central administrative agency is responsible for establishing and implementing an “action plan” for that agency, pursuant to Presidential Decree.<sup>41)</sup> Similarly, local government leaders can be instructed by Presidential Decree to advance and implement action plans for the local area in question.<sup>42)</sup> In all of these essential matters, the President resides at the focal point of policymaking and, through the influence he or she exerts on the composition and conduct of the Presidential Committee, the President possesses considerable power for managing green growth-related measures and initiatives.

2) *Measures bearing on the “national economy”*<sup>43)</sup>

Consistent with the many interconnections between green growth policy and national economic policy, the Act contains many provisions that articulate general principles for the relationship between “green” and “growth”, and provides specific initiatives and policy directions. The executive is instructed to undertake a central role in “materializing green economy”, including by identifying and fostering what it considers to be promising industries<sup>44)</sup> and supervising existing economic actors.<sup>45)</sup> Further provisions instruct the government to manage and facilitate improvements

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39) Art. 15.

40) Art. 9.

41) Art. 10.

42) Art. 11.

43) Such measures include Art. 26 (Facilitation of Research, Development, and Commercialization of Green Technology), 28 (Support for and Boosting of Finance), 29 (Establishment of and Support for Companies for Investment in Green Industries), 31 (Support and Special Privileges for Green Technology and Green Industries), 32 (Standardization and Certification of Green Technology and Green Industries), and 33 (Support for Medium and Small Enterprises).

44) Act, Art. 23.

45) Act, Art. 25.

in resource recycling.<sup>46)</sup> Numerous provisions relate to support for research and development and the subsequent product commercialization of green technology.<sup>47)</sup> The Act prescribes the government-facilitated establishment of “green finance” (measures to promote investment in key industries and development of useful financial instruments, and to create a carbon-trading market).<sup>48)</sup> Tax policy is to be reformed in the direction of “green” objectives.<sup>49)</sup> In general, the character of these provisions is to establish potentially broad discretion for the executive, with the latitude to exercise regulatory power to cultivate efficient incentives and stimulate the progress of “green industry”.

### 3) Measures bearing on “climate change”

Climate change lies at the heart of international environmental law negotiations. This issue squarely presents the challenge of achieving mutually reinforcing economic growth and environmental protection. Climate change is embedded in the underlying purposive fabric of the Act, and is explicitly discussed in certain key provisions. The government is instructed to compose and implement successive five-year plans concerning climate change, with the deliberation of the Presidential Committee and the State Council.<sup>50)</sup> Emission targets shall be set by sector and by individual “controlled entity” (emitter of a certain amount of greenhouse gases) as part of the target management scheme.<sup>51)</sup> The government is to establish reporting and information management standards for emissions.<sup>52)</sup> Of considerable domestic and international interest is the language concerning a greenhouse gas emission cap-and-trade system (as the Act describes it, using “market functions”);<sup>53)</sup> the Act gives the government the discretion to introduce a carbon market,<sup>54)</sup> a

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46) Act, Art. 24.

47) Art. 26; Art. 31-35.

48) Art. 28.

49) Art. 30.

50) Art. 40.

51) Art. 42.

52) Art. 44-45.

53) Art. 46; *see also* Art. 28.

54) Art. 46(3).

course of action that the President and the Korean national assembly (the “National Assembly”) have jointly pursued.<sup>55)</sup> Finally, the research component of developing and refining climate change-related policies is addressed with a command to deepen and enhance the useful output of such research.<sup>56)</sup> While this chapter of the Act is most commonly discussed in the context of the cap-and-trade system, it advances a more immediate set of regulatory parameters related to the target management scheme for “controlled entities”.

Korea’s subsequent efforts to create an emissions-trading system illustrate that the President’s power, while broad, is not unchecked. The creation of a trading system has been the subject of extended debate by the National Assembly, which, after several rounds of legislative drafting, passed a bill to establish an emissions-trading system in May of 2012.<sup>57)</sup> The final bill garnered nearly unanimous support in the National Assembly, passing 145-0 (with three abstentions).<sup>58)</sup> The emissions trading system is currently scheduled to take effect at the beginning of 2015, though business groups continue to advocate for delayed implementation.<sup>59)</sup> While the law retains the approach of allowing for significant regulatory discretion, including pricing of emission permits, exact emissions caps, and enforcement practices,<sup>60)</sup> the legislative process reaffirmed that the President enjoys wide latitude in this area because the National Assembly deems that latitude to be efficacious policy.

Another general category of notable provisions, related to the Korea-legislated vision of “sustainable development”, is discussed in detail, *infra* Section IV(b).

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55) *S. Korea to start cap-and-trade from 2015: reports*, REUTERS (Feb. 25, 2011) (describing the first years of the iterative legislative drafting process for the Korean cap-and-trade bill).

56) Art. 48.

57) *Onsilgas baechulkwonui haldang mit georae e gwanhan beopryul* [Act on the Allocation and Trading of Greenhouse-gas Emission Permits], Act No. 11419, May 14, 2012.

58) Sangim Han, *South Korean Parliament Approves Carbon-Trading System*, BLOOMBERG (May 3, 2012).

59) *Biz groups urge gov’t to reconsider cap-and-trade program*, YONHAP NEWS (June 1, 2014).

60) *See South Korea’s Emissions Trading Scheme*, BLOOMBERG NEW ENERGY FINANCE (2013), available at <http://about.bnef.com/white-papers/south-koreas-emissions-trading-scheme/>.

### III. Context of Korean Green Growth: Contrasted with the OECD Green Growth Vision

This section briefly discusses several points of comparison between the OECD elaboration of green growth<sup>61)</sup> and the framework currently being utilized in Korea. Specifically, we analyze the emphasis on environmental objectives relative to emphasis on economic growth; the focus on climate change relative to other environment-related objectives; and the level at which policy proposals are intended to be advanced (international vs. domestic). These distinctions highlight a number of unique features of Korean green growth and illustrate the potential of the Act to provide a novel contribution to the body of law- and policy-making in this area. Our purpose in drawing these distinctions is not to suggest that the OECD and Korea have incompatible visions for green growth, or that one is objectively preferable to or more coherent than the other. Rather, our purpose is to illustrate the accretive relationship between the OECD's focus on green growth and Korea's efforts to apply green growth in its domestic legal and economic affairs.

#### *1. Environmental and Economic Objectives: Importance of "Green" Relative to "Growth"*

It is a mantra of green growth policy analysis, especially in Korea, that "green" and "growth" are mutually reinforcing and synergistic principles.<sup>62)</sup> Nonetheless, one can identify different points of emphasis in the inevitable trade-offs between a greater degree of environmental caution and a more aggressive strategy for short-term economic growth. In the OECD Interim Report and the OECD Final Report, an emphasis on urgent economic improvements is manifest even from the forewords, in which OECD

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61) The foundational sources for OECD-conceptualized green growth are the OECD Interim Report and the OECD Final Report, *supra* note 11.

62) See, e.g., Act, Art. 1 (stating that the purpose of the legislation is to seek "harmonized development of the economy and the environment"). See also GLOBAL GREEN GROWTH INSTITUTE, information available at <http://www.gggi.org> (describing the basic structure and objectives of a research institute founded in connection with the Act).

Secretary-General Angel Gurría describes the recent international economic downturn as “the greatest crisis of our lifetimes”<sup>63)</sup> and “the worst crisis most of us have ever known”.<sup>64)</sup> In the context of a green growth report, some might have imagined Mr. Gurría would refer to climate change as humanity’s most pressing challenge. Both reports reflect a consistent emphasis on generating short-term improvements in economic fortunes, as well as promoting longer-term goals of economic prosperity. The Korean approach, in both the language of the Act and subsequent commentary, rhetorically advances a balance of objectives and an insistence upon the co-equality of economics and environment.<sup>65)</sup> While the OECD version of green growth is calibrated to maintain broad appeal, including to societies with little capacity or willingness to defer economic gains, the Korean green growth system is explicitly articulated as long-range planning that realizes ultimate economic gains through environmentally responsible intermediate steps.

## 2. *Is Climate Change Mitigation the Primary Environmental Objective?*

The OECD Interim Report generally regards mitigation of climate change (principally through the reduction of greenhouse gas emissions) to be the environmental concern representing the “green” element of green growth.<sup>66)</sup> The OECD Final Report sets forth a set of environmental objectives and indicators that includes the human health effects of pollution, biodiversity loss, and water scarcity.<sup>67)</sup> These indicators capture a broader range of environmental issues than were explicitly considered in

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63) OECD Interim Report, *supra* note 11, at 7.

64) OECD Final Report, *supra* note 11, at 3.

65) See J.S. Lee, GREEN GROWTH: KOREAN INITIATIVES FOR GREEN CIVILIZATION, 34-36 (2010) (defining green growth as “economic growth and economic progress at the same time” and raising the possibility of building “environmental capital” as part of green growth policy); Sang In Kang, Jin-gyu Oh & Hongseok Kim, *Korea’s Low-Carbon Green Growth Strategy*, OECD Working Paper No. 310, 16-25 (2012) (describing and evaluating green growth strategies for accomplishing carbon-mitigation and economic development simultaneously and collaboratively).

66) See OECD Interim Report, *supra* note 11, at Box 2, p. 16, Section III, *Preliminary Results on key elements of the green growth toolkit*, 23-41.

67) *Id.* at 129-130.

the OECD Interim Report, but are ultimately framed in terms of a consolidated analysis that is oriented towards maintaining economic growth.<sup>68)</sup> Korea has directly utilized the OECD indicators approach, becoming one of the first nations<sup>69)</sup> to conduct an official self-evaluation based on these indicators.<sup>70)</sup>

However, Korean green growth arguably extends the scope of its environmental agenda beyond that of the OECD's green growth analysis by explicitly defining an environmental agenda that includes but is not limited to the concept of "low carbon" emissions.<sup>71)</sup> In particular, it places considerable emphasis upon areas of environmental concern that address quality of life,<sup>72)</sup> as well as qualitative value judgments about the need to reduce pollution and preserve natural habitats.<sup>73)</sup> Korea has a considerable body of law and regulation related to these issues, but until recently enforcement has not been strong and uniform.<sup>74)</sup> This issue will be discussed further, *infra*, in connection with suitability of green growth for developing nations; in the context of advancing green growth agendas in nations less developed than Korea, both the OECD indicators approach and the broad set of Korean objectives provide valuable guidance.

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68) *See id.* at 126-129 (describing obstacles to the realization of verifiable, incremental returns on investment to justify green growth policies).

69) OECD, *Green Growth in Action: Korea*, available at <http://www.oecd.org/korea/greengrowthinactionkorea.htm>.

70) Statistics Korea, *KOREA'S GREEN GROWTH BASED ON OECD GREEN GROWTH INDICATORS* (2012).

71) The language of the Act asserts a vision of harmony between human society and the natural environment. *See, e.g.*, Arts. 1, 2, 4, and 6. According to early commentary, the Korean policy concept of green growth is "broader than the narrowly defined climate change issues". *See* J.S. Lee, *supra* note 65, at 93.

72) As a matter of principle and the highest domestic legal instruction to government actors, the Constitution of Korea states, "All citizens shall have the right to a healthy and agreeable environment. The State and all citizens shall endeavor to protect the environment." Heonbeop [Constitution of the Republic of Korea], Art. 35(1).

73) *See* Act, Art. 46 (identifying ecological conservation as a fundamental policy goal).

74) *See* Cho, *supra* notes 12 and 37.

### 3. Domestic and International Forums for Policy Advancement

It is not surprising that the OECD places considerable emphasis on international agreement and joint implementation of green growth-related policies. In part, this relates to the notion that “green” domestic policies may undermine collective economic objectives.<sup>75)</sup> To address such perceived conflicts, much OECD analysis is targeted at fostering cooperation between the OECD nations and non-OECD nations.<sup>76)</sup> Korean green growth contemplates bilateral and multilateral cooperation and potential regional initiatives,<sup>77)</sup> but is fundamentally based on domestic legal reform and political administration.

However, such domestic efforts can serve as a bridge to international cooperation. Korea has made significant efforts to integrate green growth with international institutions, as demonstrated by two conspicuous examples.<sup>78)</sup> Korea was selected to host the secretariat of the recently formed Green Climate Fund (the “GCF”). The GCF was created by the decision of the parties at the Conference of Parties 16 for the purpose of raising and allocating \$100 billion per year by the year 2020 for climate change mitigation and adaptation.<sup>79)</sup> Headquartered in the “U-City” of Songdo, the GCF is on schedule to begin receiving financial pledges late in 2014.<sup>80)</sup> In addition, the Korean government chartered and provided essential funding for the Global Green Growth Institute (“GGGI”). GGGI’s successful conversion into an international organization in 2012 has allowed it to pursue an increasingly ambitious and global agenda, while the GCF has made considerable progress in the operational rule-making process and laid the foundation for significant fundraising. In each case, Korea has thus far been able to infuse its international leadership roles with

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75) See, e.g., OECD Interim Report, *supra* note 11, at 20, “Market Failures”; 31 (environmentally harmful subsidies); and 41, “Leakage”.

76) *Id.* at 14.

77) Act, Art. 61.

78) See Lee et al., *supra* note 10, at 71-73.

79) REPORT OF THE CONFERENCE OF THE PARTIES ON ITS SIXTEENTH SESSION, held in Cancun from 29 November to 10 December 2010, FCCC/CP/2010/7/Add.1 (2010).

80) U.N. climate fund sets November goal for first cash pledges, REUTERS (May 21, 2014).

the goals and, in the case of GGGI, the policy tools of the green growth framework. GGGI's role in green growth transplantation is discussed *infra* Section V.

#### IV. Potential Critiques

Green growth, in particular the version that has been established under Korean law, provides a distinctive paradigm for structuring public and private efforts that impact environmental goals. To assess the capacity of Korean green growth to impact the future course of legal development, several major objections should be considered. We focus on two foundational issues: first, whether the legal “complexity” of the Act and its progeny obstructs efficient public administration; and second, whether green growth meaningfully builds upon the existing “sustainable development” principle in international law. Based on our analysis of these two issues, we then proceed to examine the international relevance of green growth, especially in the context of legal transplantation.

##### 1. Green Growth as Inefficiently and Counterproductively “Complex”

Complexity theory applies theoretical models of system behavior to sociolegal institutions, in particular interactions between legislatures and administrative states, as a means of contextualizing and critiquing particular legal structures. As a descriptive matter, complexity theorists seek to explain the key forces and pressures under which law actually develops and to differentiate and identify some of the elaborate and (by definition) unpredictable<sup>81)</sup> interactions between the elements of the sociolegal system; normatively, the theory has also been utilized to critique various forms of legal policy. One such critique argues that, rather than

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81) Complexity theory suggests that while specific causal interactions may be impossible to predict, the trends and character of such interactions are not. See J.B. Ruhl and Harold J. Ruhl, Jr., *The Arrow of the Law In Modern Administrative States: Using Complexity Theory to Reveal the Diminishing Returns and Increasing Risks the Burgeoning of Law Poses to Society*, 30 U.C. DAVIS L. REV. 405 (1996-1997).



properly recognizing that administrative law is a dynamic and evolving system, social trends pressure the over-expansion of precise legal provisions in a misguided effort to create a perfected static image of the administrative structure.<sup>82)</sup>

The promulgation of the Act catalyzed a sharp debate over the role of domestic administrative mechanisms in addressing the broad goals of climate change mitigation and the protection of environmental value.<sup>83)</sup> Complexity theory provides analytical structure to this debate. Stated directly, is the policy choice embedded in the Act, to develop and administratively supervise an elaborate system of environmental and economic measures, an illustration of overly complex, and fundamentally counterproductive, lawmaking?

The most potent response that can be made in defense of the LCGGFA is that it is not, in principle or (thus far) in practice, an attempt to “freeze” in time and place an idealized and comprehensive legal structure. Rather, the approach taken by Korean policymakers acknowledges and accommodates key insights from complexity theory: that regulatory law, as a system, should evolve through time and interact with the social and economic dimensions of institutional and individual behavior in the society.<sup>84)</sup> The particular combination of laws promulgated to advance the objectives and satisfy the commands of the LCGGFA will inevitably be lengthy, detailed, and, in many cases, issue-specific. Each such measure should be carefully considered, individually and in combination with other laws, to formulate educated predictions about the true impact and benefits and detriments of each law, in context. However, at the theoretical level, the delegations of power and framework of principles contained in the Act address the

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82) One article summarizes this view as follows: “Ironically, new and supposedly improved laws, the fundamental weapon the administrative state uses to weed out inequality and other social maladaptations, fuel yet more inequalities and maladaptations.” *Id.* at 413.

83) See, e.g., Seung-Kyu Rhee, Dae-Chul Jang & Younmin Chung, *A critical review and new policy framework of low-carbon, green-growth strategy of Korea*, in GREEN GROWTH: MANAGING THE TRANSITION TO A SUSTAINABLE ECONOMY, 27-42 (2012) (criticizing the ability of the green growth framework to accommodate dynamic views of multiple stakeholders and to defend a vision of qualitative environmental value).

84) See Donald T. Hornstein, *Complexity Theory, Adaptation, and Administrative Law*, 54 DUKE L. J. 913, 917-934 (2005).

concern of complexity theory that administrative law, as a system, must be highly adaptive.

In practice, Korean lawmaking has thus far adopted an approach that further addresses the allegation that green growth policy cannot adapt to dynamic environmental and economic challenges. As an early example, the Act on the Construction, Etc., of Ubiquitous Cities<sup>85)</sup> exhibits two valuable features: though elaborate, the legislation expounds a durable and forward-looking (incentives-sensitive, technologically adaptable) regulatory structure, and also creates an effective “one-stop” compliance gateway for developers of “U-Cities”. This latter idea, of consolidating into a single piece of the legislation all of the necessary regulatory measures and legal compliance considerations for the development of a U-City, produces apparent efficiencies and creates a strong basis for organized rule-making, enforcement, and the accommodation of socially desirable development.

## 2. Viability of “Green Growth” Concept as Compared to “Sustainable Development”

### 1) Sustainable Development as a Principle of Environmental Law

Sustainable development has long been a touchstone concept<sup>86)</sup> of international economic, environmental, and sociolegal philosophy.<sup>87)</sup> It asserts that policymakers must account for the “3E” elements: economy, environment, and (social) equity. The 2005 United Nations World Summit Outcome Document stated that “sustainable development in its economic,

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85) Act No. 9052 (March 28, 2008); most recently amended by Act No. 9758 (June 9, 2009). “U-Cities” are an attempt to integrate a ubiquitous computing network into essentially all facets of a fully functioning urban development.

86) An early formulation of sustainable development presents the principle as follows: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” WORLD COMMISSION ON ENVIRONMENT & DEVELOPMENT, OUR COMMON FUTURE 43 (1987). Such a definition potentially de-emphasizes economic development (at least beyond the level necessary for meeting present “needs”) if limitations on economic growth are viewed as valuable in ensuring the environmental and social stability necessary for safeguarding the needs of future generations.

87) As a principle of international environmental law, sustainable development dates back at least to the United Nations Framework Convention on Climate Change, *see supra* note 13.

social and environmental aspects constitutes a key element of the overarching framework of United Nations activities."<sup>88</sup>) Sustainable development emerged through time as distinguishable from, and generally preferred by policymakers over, other environment-related principles, such as the pre-existing "deep ecology" and "environmental justice" concepts.<sup>89</sup>) If green growth advances a different (though overlapping) policy framework from that which sustainable development counsels, can green growth be seen as refining or even succeeding sustainable development as an organizing principle? Or, rather, is green growth critically missing an essential element of the philosophy of sustainability? Before answering these questions, we first explain the role of sustainable development within the Act itself.

## 2) *The LCGGFA and Sustainable Development*

The LCGGFA seeks to incorporate and give concrete meaning to the concept of "sustainable development"; in fact, it defines the notion of "green economy" as the effort to "materialize the economy pursuing sustainable development". The Act incorporates the definition of "sustainable development" from the Sustainable Development Act<sup>90</sup>): "development based on sustainability that is implemented simultaneously in the pursuit of economic growth, social stability and integration, and the preservation of the environment."<sup>91</sup>) In its current form, as amended (and, in effect, substantially incorporated and restated) by the LCGGFA, the remaining provisions of the Sustainable Development Act are quite general and function principally to create and operate information-gathering channels.<sup>92</sup>)

As the law that succeeded and directly amended the Sustainable Development Act, the LCGGFA contains numerous provisions that are, on their face, related to sustainable development. The President is charged

88) United Nations, 2005 WORLD SUMMIT OUTCOME, A/Res/60/1, 2 (2005).

89) See J.B. Ruhl, *The Co-Evolution of Sustainable Development and Environmental Justice: Cooperation, then Competition, then Conflict*, 9 DUKE ENVIR. L. & POL. FORUM 161 (1999).

90) Act No. 8612 (Aug. 3, 2007); amended by Act No. 9931 (Jan. 13, 2010). Note that the Sustainable Development Act was amended by the LCGGFA.

91) Jisokganeungbaljeonbeop [Sustainable Development Act], Art. 2(2).

92) See Sustainable Development Act.

with preparing measures to address land management and efficient development, such as “carbon-neutral” and resource self-sufficient cities and other “environment-friendly” development.<sup>93)</sup> The executive branch is further charged with overseeing water management<sup>94)</sup> and the transportation network<sup>95)</sup> in a manner that both mitigates climate change and adapts<sup>96)</sup> to its consequences. The President lies at the center of policy-making for design and efficiency standards to promote the proliferation of “green buildings”<sup>97)</sup> and is given the broad instruction to promote environment and energy-sustainable production and consumption choices by ensuring that the energy consumption and emissions resulting from goods and services provision are “reasonably linked to and reflected in the price of goods and services”.<sup>98)</sup> The executive branch of the government is charged with promotion of carbon sinks domestically through a variety of channels, including regulation of land use (forests, farmland), agriculture, and territorial sea waters.<sup>99)</sup> The discretion to provide developing countries with climate change-related “financial support”<sup>100)</sup> may have considerable application in the area of carbon sinks, such as afforestation and reforestation projects in the tropical regions of Southeast Asia.<sup>101)</sup>

### 3) Relationship Between Green Growth and Sustainable Development

At the most aspirational level, the LCGGFA asserts to fulfill the basic premise of sustainable development: that policy reflects a full consideration and accommodation of environmental, economic, and social justice considerations. As described above, the Act purports to enact a version of

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93) Act, Art. 51(2).

94) Act, Art. 52.

95) Act, Art. 53.

96) Considering the social dimension of sustainable development theory, adaptation takes on special significance, especially if one assumes that the most economically and socially vulnerable individuals would bear the heaviest burden of climate change impacts in the absence of effective adaptation.

97) Act, Art. 54.

98) Act, Art. 57(2).

99) Act, Art. 55.

100) Act, Art. 61.

101) See, e.g., John Leitner, *The Expansive Canopy of Korean Green Growth: Key Aspects for Forest Conservation Projects in Southeast Asia*, 10 J. Korean L. 171 (2011).

sustainable development through particular policies that frame the context in which Korean development occurs and, ultimately, the physical and social environment in which individual Koreans live. The relevant provisions of the Act have an evident balance of environmental and economic policy: they capture the intersections of environmental conservation<sup>102)</sup> and harm reduction<sup>103)</sup> with intermediate- and long-term sound economic planning. As some economists have argued, sustaining and broadening the current base of Korean prosperity requires the utilization of emerging technology markets and, in essence, a new transformation of the Korean economy.<sup>104)</sup> These provisions provide a framework and template for the balancing and mutual satisfaction of environmental and economic objectives.

Does the LCGGFA accommodate the “social” dimension of sustainability? Various Korean scholars have criticized the Act as insufficiently reflecting social equity. It has been argued that Korean green growth elevates economic interests over the environment,<sup>105)</sup> lacks the “3E” balance necessary for international legitimacy,<sup>106)</sup> and does not reflect the public participation and support that define the implementation of social equity-based legislations.<sup>107)</sup> These are important considerations that, if one is committed to the “policy mix” prescribed by sustainable development orthodoxy, are serious objections. We address in detail the first and third, as

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102) The Act contains, for instance, provisions related to the preservation and promotion of habitats and ecosystems, such as forests and oceans.

103) In example, consider provisions related to reduced energy consumption and lowered carbon emissions, as enacted by measures ranging from design standards to the cap-and-trade system for carbon emissions that is scheduled to take effect in 2015.

104) See J.S. Lee, *supra* note 65; see also Dong-Xin Li & Taewon Kang, *Inspiration from Green Effect of South Korea's Low-Carbon Economy Development to China*, 3 *LOW CARBON ECONOMY* 4 (2012).

105) Mun Sang Deok, *Noksaekseongjanggibonbeope daehan hwangyeongbeopjeok Geomto* [A Study on Green Growth Act from the Point of View of Environmental Law], 31 *ENV. L. REV.* 15, 37-38 (2009).

106) *Id.*

107) Hahm Tae-Seong, *'Noksaekseongjang'gwa 'Jisokganeunghaljeon'ui gwangyejeongripe wanhan beopjeok gochal* [A Legal Study on the Relationship between 'Green Growth' and 'Sustainable Development'], 31 *ENV. L. REV.* 355, 375-76 (2009).

the second is an empirical observation that is debatable at best.<sup>108)</sup>

As to the first point: it has been alleged that the Act is structured in such a way as to systematically prefer economic gains to environmental protection. If cases inevitably arise where the two objectives are not synergistic, and choices and trade-offs must be made, does green growth systematically favor short-term wealth over long-term environmental health? The Act itself does not on its face indicate that this policy resolution would be reached. The facilitation of investment and incentivization of “green industry” has been construed as pro-business, but these measures arguably re-contextualize the inevitable and necessary expansion of business ventures in a manner that best harmonizes economic activity with environmental protection. The notion that each economy-related policy should be tested against not just environmental impact assessments, but also equity analysis, and that a certain “sustainable” conclusion must be reached for each policy, burdens green growth with achieving the elusive objective of social justice that should be the perpetual quest of all law and policy. In short, if green growth-related policies do achieve significant popular support<sup>109)</sup> and are defensible on the basis of environmental impact, the Act instructs the government to accomplish those objectives that are achievable and can provide at least incremental advancement in the direction of environmental protection and optimization of social welfare.

Can the social equity element of sustainable development be satisfied by a certain threshold of public support for green growth policies? Social equity may, in some cases, require more than majoritarian support. Especially given the disparity of impact of ecological harms according to socioeconomic status, environmental policy in a society that enshrines

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108) As discussed *supra*, sustainability has been an embedded component of international environmental law rhetoric for more than two decades. However, the ubiquity of sustainable development as a referenced concept does not indicate that it cannot be supplemented or, as the Act purports to do, integrated into an elaborated vision for policy implementations. Therefore, the objection that Korean green growth is inadequate on an international stage due to the established position of sustainable development is unavailing.

109) Especially in a vigorous young democracy like Korea, it can be a daunting task to sustain popular support and political will. *See, e.g.*, John A. Matthews, *Green growth strategies – Korean initiatives*, 44 *FUTURES* 761, 761-769 (2012). One of the perpetual challenges of social sustainability is a durable political coalition in favor of a shared green growth commitment.

equality, due process, and even clean environment-related rights must account for the impact on groups that are politically vulnerable due to lack of expressed voice through the electoral process. The vast discretion vested in the executive by the Act provides, ideally, an opportunity for accounting of interests, entitlements, and minimum standards. Where this process of protecting the rights of minorities is not happening effectively, litigation and private enforcement of statutory provisions or even defense of individual constitutional rights can potentially invoke the judicial review power of the Korean courts.

Inasmuch as the broad outlines of green growth policy should be driven by the general popular will, however, is green growth consistent with the preferences of the Korean people? Some specific projects identified as green growth-related have been subject to intense public scrutiny and been heavily modified or abandoned as a result.<sup>110)</sup> However, this does not reveal a defect in the LCGGFA framework, but rather the proper functioning of political discourse and debate in defining the applications of the framework in the future. The failure of any particular initiative is at once a reaffirmation that ultimate oversight in a transparent and open democracy lies with the polity, and also an invitation to policymakers to continually innovate the manner of translating the broad outlines of green growth into concrete and implemented government action. Further, the lengthy public deliberation over Korea's most famous green growth implementing legislation to date, the cap-and-trade bill, and the ultimate consensus that emerged in the National Assembly,<sup>111)</sup> provide a vivid illustration of an engaged democratic process.

## V. International Impact: Transplantation

The Korean government and GGGI have both shown considerable interest in facilitating the international study of green growth and the use of Korean laws and regulations as potential models. Put simply, Korea has encouraged the transplantation of the green growth framework, and

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110) One such example is the "Four Rivers Project". See Hahm, *supra* note 107.

111) See Han, *supra* note 57.

specific green growth concepts, to other legal systems. Through such transplantations, the LCGGFA may exert significant influence, especially in the Southeast Asian region. We briefly explain the idea of legal transplantation before describing the present and future prospects for the “exportation” of green growth principles to other nations.

### *1. Transplantation in Environmental Law*

The concept of “legal transplantation” as a means of analyzing changes in legal systems was popularized by Professor Alan Watson in his book “Legal Transplants: An Approach to Comparative Law”<sup>112)</sup>, but the term (and its basic idea) date back further.<sup>113)</sup> Transplantation may be defined generally as borrowings between and amongst legal systems, ranging from the adoption (or imposition) of an entire legal system to the excerpted borrowings of particular laws and policies.<sup>114)</sup> In the modern context, transplantation may be of vital importance in environmental legislation.<sup>115)</sup> Because of the global nature of environmental problems and the reality that solutions must engage many nations as active participants,<sup>116)</sup> environment and international development are particularly well suited to the harmonized benefits that deliberate and organized transplantation can accomplish.<sup>117)</sup> Concerning green growth in particular, transplantation from Korea to other nations has arguably already begun, and may continue on the basis of the domestic benefits that other nations can derive from such borrowings; should this trend continue, compatible green growth approaches

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112) Alan Watson, *LEGAL TRANSPLANTS: AN APPROACH TO COMPARATIVE LAW* (1974).

113) According to the distinguished scholar and dean of Harvard Law School, Roscoe Pound, as quoted almost 100 years ago, the “history of a system of law is largely a history of borrowings of legal materials from other legal systems and of assimilation of materials from outside the law.” Jonathan B. Wiener, *Something Borrowed for Something Blue: legal Transplants and the Evolution of Global Environmental Law*, *ECOL. L. Q.* 1295, 1296 (2001).

114) See Watson, *supra* note 112.

115) See generally Wiener, *supra* note 113.

116) See Wiener, *supra* note 24.

117) See, e.g., Benedict Kingsbury, Nico Krisch, Richard B. Stewart & Jonathan B. Wiener, *The Emergence of Global Administrative Law: Foreword: Global Governance as Administration – National and Transnational Approaches to Global Administrative Law*, 68 *LAW & CONTEMP. PROB.* 1 (2005).



in multiple nations might have the important collateral benefit of yielding greater capacities for transnational collaborations and institutional linkages.

## *2. Transplantation of Korean Green Growth*

Can the Korean green growth legal framework be usefully transplanted, in whole or in part, to the domestic legal systems of other nations? The Korean approach is particularly well-suited to a nation with a preference and capacity for policies that encompass a broad set of environmental goals, including but not limited to the mitigation of greenhouse gas emissions. The framework approach may be appropriate for nations that have the political and social capacity to proceed with green growth policies on an initially domestic scale, with potential bilateral and multilateral projects in the future. Nations with a citizenry or political leadership that insists upon broad international consensus and commitment as a condition precedent to adopting “green” policies may not benefit from the Korean approach. Further, developing nations may find Korean green growth more suitable and attractive than developed nations; in the case of the latter, Korean-style green growth legislation may not represent an efficient and targeted supplement to existing economic and environmental policies.

Particular characteristics that would promote transplantability include: a strong central policymaker (similar to the President) who can utilize the general framework and coordinate the efforts of regulatory bodies to enact concrete green growth-related policies; an openly acknowledged national goal to achieve a heightened stature in the international community; and a desire to facilitate cooperation with other nations implementing similar legislation, including (but not limited to) Korea.

In predicting the potential for the Act and (and Korean green growth policies more generally) to impact the legal frameworks adopted and implemented in other nations, one central and readily transplantable idea is the direct inclusion of mechanisms for linkage with domestic laws of other nations, and with international market mechanisms.<sup>118)</sup> Some of the other

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118) For a discussion of the potential of the LCGGFA to establish linkages with international market mechanisms, see Jae-Hyup Lee, *Noksaekseongjanggibonbeopui chinhwangyeongjeok silhyeonul uihan beopjeoksudan: Gihubyeonhwadaeung sijangjeok mechanismul*

general principles may also find a relatively broad audience. Of particular note are the heavy emphasis on incentive-based instruments<sup>119)</sup> and the cultivation of broad and inclusive incentive structures. This incentives approach, a signature of the Act, is intended to create a decision-making environment for entities and individuals that rewards choices seen as reinforcing specific green growth objectives. Actual “transplantation” of the framework may be of more regional influence, but could be a reality in East and Southeast Asia<sup>120)</sup> amongst nations well-situated to benefit from partnership with Korea and to make comparatively favored contributions to multinational efforts at environmentally sound growth.

If Korean green growth is and continues to be utilized as a basis for laws and policy strategies in other nations, it will represent, in the history of Korean legal evolution, a dramatic inflection point. Korea has, for more than a century, been the recipient of many transplantations of law, many of them literal, and, in the early Twentieth Century, many of them under compulsion.<sup>121)</sup> Korea’s foundational codes, the Civil Code and the Criminal Code, were introduced during the Japanese occupation, and were translated from the Japanese (Japan, in turn, had borrowed them from Germany and France).<sup>122)</sup> Other examples of imported law are numerous; the Korean Copyright Act represents just one specific illustration.<sup>123)</sup> While

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*jungsimuro* [Legal Measures to Fulfill Eco-friendly Implementation of the Proposed Basic Law on Green Growth: Market Mechanisms for Responding to Climate Change], 31 ENV. L. REV. 39, 61 (2009).

119) For an analysis of the benefit and importance of market-based mechanisms and an argument of their expansion in environmental regulation, see Chun Jaekyong, *Hwangyeonggyuje paradigmui jaepyeon* [Paradigm Shift of Environmental Regulation], 32 ENV. L. REV. 81, 106 (2010).

120) We discuss below the collaborations that have already occurred in the adoption of green growth reforms in Cambodia.

121) Michael J. Seth, A CONCISE HISTORY OF MODERN KOREA: FROM THE LATE NINETEENTH CENTURY TO THE PRESENT 43 (2010) (describing Japanese colonial rule of Korea). The Japanese codes, in turn, were based on the civil law codes of continental European nations, especially Germany and France. Tom Ginsburg, *Introduction: The Politics of Legal Reform in Korea*, LEGAL REFORM IN KOREA 2-3 (Tom Ginsburg, ed. 2004).

122) *Id.* See also Walter Wallace McLaren, A POLITICAL HISTORY OF JAPAN DURING THE MEIJI ERA: 1867-1912 (Cass 1965) (1916).

123) See Soo-Kil Chang et al., INTELLECTUAL PROPERTY LAW IN KOREA 121 (Christopher Heath ed., 2003); see also John Leitner, *A Legal and Cultural Comparison of File-Sharing Disputes in Japan*

the post-World War II era has seen many innovations by Korean lawmakers, the trajectory of Korea-related borrowing remains in the direction of Korea as the recipient of foreign-made law. The significant international interest in the LCGGFA suggests that, in this area of policy, Korea may become, arguably for the first time, a source nation for legal transplantation. As discussed by Watson, a major basis for historical transplantations is the status of a particular source of law or legal jurisdiction as an established innovator.<sup>124)</sup> The utilization of aspects of Korean green growth by other nations would be meaningful endorsements of Korea's efforts as efficacious and importable policy.

### *3. Green Growth Transplantation in Practice*

Korea is uniquely situated in a "bridge" position between developing and developed nations. One of only two nations to transition from charter membership in the G77 to membership in the OECD, Korea is a G20 nation and has realized a sustained and dramatic growth trajectory that has catapulted the nation from total lack of development to wealth and global prominence in approximately 50 years.<sup>125)</sup> In many respects, Korea occupies the status of a developed nation: an aid-provider, capable security ally to the United States, and responsible stakeholder in a variety of international and intergovernmental institutions. Korea possesses considerable material and infrastructural resources, but also an awareness of the essential nature of sustained growth for developing nations, and a domestic agenda that does not neglect Korea's continuing need for the individual and collective benefits of economic development. This context has been essential in facilitating Korea's work with other nations, especially in Southeast Asia, to promote the transplantation of green growth.

The cooperative efforts of Korea and GGGI with Cambodia provide the clearest case thus far of transplantation in action. Cambodia adopted an

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*and the Republic of Korea and Implications for Future Cyber-Regulation*, 22 COLUM. J. ASIAN L. 1, 8-10 (2008).

124) See Watson, *supra* note 112.

125) See J.S. Lee, *supra* note 65, at 23-26.

initial green growth plan in 2009,<sup>126)</sup> but greatly developed its legislative and regulatory approach in subsequent years. In 2011, Cambodia joined GGGI and separately entered into a memorandum of understanding with Korea in order to facilitate collaboration between the nations' governments.<sup>127)</sup> GGGI used the Korean green growth program as a model in advising Cambodia, recommending that a national committee, master plan for green growth, and intermediate-range plans could parallel Korea's presidential committee, the LCGGFA, and Korea's successive five-year plans.<sup>128)</sup> In 2013, Cambodia adopted a "Korean-style" administrative approach to green growth by establishing a national committee to function as the steering body for green growth policy, adopting the national plan formulated in consultation with GGGI, and setting forth a national action plan for the period from 2013 to 2030.<sup>129)</sup> The Cambodian framework takes a similar approach to Korea by establishing an administrative structure that promotes and supervises green growth policies on a sectoral basis, with the ultimate objective of facilitating economic value creation through green technologies and industry.<sup>130)</sup>

Why would transplantation of green growth be of interest to both Cambodia and Korea? While conjectural, certain benefits seem likely on both sides of the transplantation. Cambodia benefits from the expertise of cooperative Korean officials and GGGI staff, who worked closely with Cambodia to develop its master plan for green growth.<sup>131)</sup> Cambodia is not presently well-positioned to rapidly develop green technology innovations,

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126) Kirti Avishek, Xiubo Yu & Jian Liu, *Ecosystem management in Asia Pacific: Bridging science-policy gap*, 3 ENVIRONMENTAL DEVELOPMENT 77, 85 (2012).

127) E.Y. Mohammed, S. Wang & G. Kawaguchi, *Making Growth Green and Inclusive: The Case of Cambodia*, OECD GREEN GROWTH PAPERS, No. 2013/08, 18 (2013).

128) GGGI's advice for Cambodia is expressed in consolidated form in presentation materials of GGGI's former Cambodia Program Manager. See Helen Lee, *GGGI's Cambodia Green Growth Program* (2012), available at [http://lowemissionsasia.org/sites/default/files/pdf\\_file/GGGI%E2%80%99s%20Cambodia%20Green%20Growth%20Program%20Development%20Impact%20Assessment%20-%20Helen%20Lee.pdf](http://lowemissionsasia.org/sites/default/files/pdf_file/GGGI%E2%80%99s%20Cambodia%20Green%20Growth%20Program%20Development%20Impact%20Assessment%20-%20Helen%20Lee.pdf).

129) *Green Growth: A Greener Cambodia*, CAMBODIA HERALD (March 19, 2013).

130) See Danh Serey, *Green Growth for Sustainable Development in Cambodia*, available at [http://www.mfa.go.th/business/contents/images/text\\_editor/files/\(cambodia\)GG%20fo%20SD%20in%20Cambodia%20Oct%202013.pptx](http://www.mfa.go.th/business/contents/images/text_editor/files/(cambodia)GG%20fo%20SD%20in%20Cambodia%20Oct%202013.pptx).

131) See Helen Lee, *supra* note 128.

but it can meaningfully benefit from the more efficient use of energy and resources, as well as from a more deliberate approach to promoting a healthful environment. For Korea, the prominence and influence of green growth can be the source of significant prestige; more tangibly, if green growth-related economic and environmental innovations acquire heightened international value in the future, Korea may well realize a “first mover” advantage.

The ultimate similarities between Korean and Cambodian green growth will depend upon the future experience of both nations (and the degree to which each society remains committed to the green growth vision). Already, though, the Cambodian example demonstrates the potential for the diffusion of green growth, especially if Korean government ministries, GGGI, and other institutions continue to work to facilitate transplantations.

## **VI. Five-year Plan of Implementation of the LCGGFA**

The Korean government prepared a five-year plan for green growth in order to implement the long-term plan of “green growth as national strategy.” The first five-year plan of green growth launched in 2009, presenting 387 detailed tasks. The second five-year plan of green growth, which focuses on successful settlement of green growth institutions, will begin in 2014.

### *1. Major Achievements and Limitations of the First Five-Year Plan*

The first five-year plan of green growth elevated the issue of climate change to the national development agenda and emphasized “coexistence of economy and environment.” In view of the importance of institutionalization, the Korean government established a government-wide system to promote green growth implementation during the early stages of the first five-year plan. The LCGGFA and its implementing ordinance were enacted in 2010; the Committee on Green Growth, headed by the Prime Minister’s Office, has taken a leadership role since 2009 in promoting green growth policies at the local government level.

The plan sets the target reduction of greenhouse gas emissions, which

was the highest level among developing countries, at 30% below “business-as-usual” by the year 2020.<sup>132)</sup> The Korean government introduced several detailed plans to achieve this goal. A target management system for greenhouse gas and energy was established, and the Greenhouse Gas Inventory and Research Center was founded in 2010. Furthermore, new legislation was enacted in 2012, providing a legal basis for the future implementation of an emissions reduction system utilizing market mechanisms, such as an emissions trading scheme.<sup>133)</sup> As discussed *supra*, the Korean emissions trading system is scheduled to commence in 2015.

The research and development of green technology were also emphasized; the Korean government secured a budget for research and development of green technology in its efforts to match the level of green technology of developed countries. The Korean government actively participated in promoting green growth at the global level, suggesting green growth as an agenda in the G20 summit, and adopting a modified version of the OECD’s green growth strategy. The Korean government succeeded in becoming the host venue for the secretariat of the GCF and establishing GGGI, affirming its international leadership in the field of green growth.

However, the first five-year plan was somewhat unsatisfactory in producing tangible outcomes. The Korean government injected 89.3 trillion won into the implementation of green growth policy, but major green industries such as solar power generation and smart grid systems failed to achieve the expected results. As the government played the leading role in the first five-year plan, the plan depended heavily on regulating energy supply, and consequently neglected the importance of managing energy consumption; stakeholders other than central and local governments were virtually excluded from the plan. The aforementioned limitations have made many reluctant to evaluate the first five-year plan favorably.

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132) Suk Gee-hyun, *Korea aims for 30% cut in carbon emissions by 2020*, KOREA HERALD (January 28, 2014).

133) *Onsilgas baechulkwonui haldang mit georae e gwanhan beopyryul* [Act on the Allocation and Trading of Greenhouse-gas Emission Permits], Act No. 11419, May 14, 2012.

## 2. *Plan and Outlook of the Second Five-Year Plan*

As the first five-year plan successfully built the institutional basis for green growth policy, the second five-year plan will focus on achieving tangible outcomes of green growth policy. The Korean government has set four basic policies for the second five-year plan, based on its analysis of the present situation. First, during the second five-year term, the government will implement the plan with an emphasis on core areas of green growth, namely the effective reduction of greenhouse gas emissions, establishment of a sustainable energy system, and scaled-up capacity for adapting to climate change. Second, green growth policy will lead to a stimulated “creative economy” by combining green technology and ICT (information and communications technology) and reinforcing development of green technology and green industry. Third, the government will work closely with the private sector in implementing green growth policy. Fourth, the balance and harmony of economy, environment, and society will be emphasized.<sup>134)</sup>

The philosophical mission of the second five-year plan is to realize the well-being of the people through balanced development of economy and environment. To serve that end, the Korean government set 20 core objectives of green growth. Those objectives are expected to elevate Korea to a global leadership position on green growth policy and economics, to enhance Korean companies’ competitive position, and to provide the Korean people with a safe and pleasant environment. The central government and the metropolitan council will draft a detailed scheme of implementing the second five-year plan, and the Committee on Green Growth will accordingly evaluate the scheme.<sup>135)</sup>

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134) Office for Government Policy Coordination, Prime Minister’s Secretariat, THE SECOND GREEN GROWTH 5-YEAR PLAN CONFIRMED, June 3, 2014, available at [https://www.kiet.re.kr/part/sDownload.jsp?s\\_idx=39151](https://www.kiet.re.kr/part/sDownload.jsp?s_idx=39151).

135) *Id.*

### *3. Future Prospects of the LCGGFA in Korea*

As explained above, the concept of green growth has been a central political agenda during the previous government's five years in power. However, in the incumbent president Park's government, it seems that the concept of green growth has lost its progenitive power within the government. Despite the ambitious goals of the second five-year plan, few references to "green growth" are found in the government publications of the Park administration thus far. In many policy documents, the term is replaced with the new concept of "creative economy". However, it cannot be denied that policy measures to mitigate and adapt to climate change are still very essential parts of the current government and will remain critical to future governments. In this sense, it will be very interesting to observe how the concept of green growth is moderated and modified in the Korean executive's future policy agendas, and these choices will be critical signals as to whether, and in what form, green growth will continue to shape Korean public policy and remain prominent in international affairs.

## **VII. Conclusion**

Due to the nature of the Act as a "framework" for future lawmaking, the ultimate implications of green growth for Korea and other nations will be determined through time, as major green growth policies continue to be implemented. However, its influence can already be seen. Green growth has assumed the position of a bedrock concept that, as described in Korean law, is simultaneously an embodiment of, and a substitute for, other paradigmatic principles, most conspicuously "sustainable development".

As this article focuses on the relevance and applicability of Korean green growth to other nations, and its possible contribution to international law, relatively little attention is paid to the particular social and political conditions of Korea. However, it may be worthwhile to briefly note that Korea as a society has recently experienced dramatic change, and a state of political dynamism continues to persist. In the area of environmental law in particular, Korea has in the last twenty years passed a flurry of legislation,



though many measures have been largely unenforced.<sup>136)</sup> Under the Kyoto Protocol, Korea was not designated as an Annex I nation, a “developing” status that seems now inconsistent with its level of development and per capita GDP.<sup>137)</sup> The Act provided a dramatic entrance of Korea onto the world stage as a potentially serious factor in any emerging international understanding of environmental and energy policy. We are hopeful that the Act, still in its nascent stages of implementation, can prove a reliable foundation for addressing economic and social challenges facing Korea and, potentially, other nations as well.

As a cautionary note for generalizing the benefits of green growth, some Korean theorists conceive of green growth as just the latest revolution in the Korean economy.<sup>138)</sup> Citing a post-Korean War economy that was founded upon cost-advantageous and low-skill manufacturing, then transformed into a knowledge-based, high-skill manufacturing economy, these economists see “green economy” as the tool to Korea’s continued growth and economic ascension.<sup>139)</sup> The very basis of this notion is not that “a rising tide lifts all boats”, but rather that Korea can once more utilize the opportunities available to it to achieve a comparative advantage. A fundamental tension, not just in transplantability of particular legislation but in international cooperation in “green growth” in general, is the extent to which green growth benefits may be at least partially exclusive and subject to strategic acquisition and utilization by specific nations. In this regard, the cooperation between Korea, civil society, and other nations will be critical in determining whether green growth can ultimately serve as a shared paradigm for realizing international environmental objectives.

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136) Or, at a minimum, under-enforced. See Cho, *supra* note 37.

137) In a post-Kyoto regime, Korea seems likely to be included in an Annex I or equivalent categorization, and recent efforts and proposals reflect the realization and preparation for such a transition. See Hong Sik Cho, *Urinara gihubyeonhwadaecheakbeopui jeonmang* [A Prospect of Korea’s Climate Change Response Act], 30 ENV. L. REV. 311, 337 (2008).

138) See J.S. Lee, *supra* note 65, at 43-48.

139) *Id.*

