

## The Evolution of Green Growth Policy: An Unwelcome Intrusion on Global Environmental Governance?

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The notion of green growth emerged in 2009. Since then, policy makers and practitioners have largely adopted the term. Although rather intermittently, there have been academic observations on green growth, with the term often being cited as a paradigm and a policy guide for generating new sources of growth. The most important reasons for the surge in green growth today as a new trend and an international agenda item are the rather unsatisfactory results and pitfalls of sustainable development, which has failed at promoting a tangible international environmental principle or a concrete policy framework. Green growth has been proposed as an alternative simultaneously to foster the dynamics of global environmental governance and to reinvigorate the world economy. This study examines to what extent green growth plays a complementary role in existing global environmental governance. Available evidence provides reasonable grounds for arguing that a positive outcome may well be expected from the evolution of green growth architecture and followed by practical policies. It became a global agenda out of a few influential national governments' control. However, decision makers in the leading countries, both developed and developing must be willing to continue implementing what has been discussed and agreed thus far, beyond changes in political leadership and administrations.

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### I. Introduction

The term 'green growth' was coined in 2009 by policy makers and practitioners of international organizations. The concept of green growth was allegedly borrowed from the Green New Deal of the United Nations Environmental Programme (UNEP), and the term itself was first used during

the 2005 UN Economic and Social Commission for Asia and the Pacific (ESCAP)'s Ministerial Conference on Environment and Development in Asia and the Pacific (the 5th Conference) after having been mentioned in early 2000 in *the Economist* and at the Davos Forum.<sup>1</sup> Several years later, South Korea took the lead using the term, at the occasion of the Presidential speech on 15 August 2008 entitled 'Low-Carbon Green Growth'. However, similar language with a similar meaning to green growth had started to be used much earlier by a number of environmental economists.<sup>2</sup> In the 1970s, the controversial book entitled '*the Limit to Growth*',<sup>3</sup> once again widely evoked the debates over the concerns on growth and its environmental impact.

The reasons for the rather abrupt resurgence and international endorsement of the notion of green growth as a new narrative of economic growth since 2009 are manifold. First of all, this resurgence is partly attributed to the economic crisis. Countries were eager to seek new sources of growth during this difficult and critical juncture for the global economy. The core elements of green growth, including employment, innovation, technology, and investment, appealed to many political leaders of developed countries. Secondly, it was a commonly held view that the results of sustainable development were rather unsatisfactory. Sustainable development has been criticized for remaining mere environmental rhetoric that addressed neither urgent environmental issues nor development.

Against that backdrop, "green" and "growth"—two words that appear difficult to reconcile or even inherently conflicting—were combined to form the green growth agenda, which was adopted by the Organisation for Economic Co-operation and Development (OECD) during its 2009 Ministerial Council Meeting chaired by Han Seung-soo, the then Prime Minister of Korea. In many industrialized countries at that time, the adoption of green growth as a national agenda contributed temporarily to more or less placating radical environmental activism that advocates an anti-global and anti-growth vision in favour of strict environmental protection.<sup>4</sup> Green growth was expected to be a policy tool which

<sup>1</sup> Interview, via email, with a government official from the Presidential Committee of Green Growth, South Korea (13 November, 2012).

<sup>2</sup> John Stuart Mill is known to be the first economist who recognized and warned a negative causal link between the growth of production and environmental pleasantness of the earth (Ekins(2000), 25). See the quoted text from John S. Mill (1904: 454), *Principles of Political Economy with some of their applications to Social Philosophy* (Pearce(2002), p.60).

<sup>3</sup> Meadows *et al.* (1972). See Randers (2010) for a good summary of the main message of the book.

demonstrates that caring for the environment and economic growth are compatible and even mutually reinforcing.

In the more recent past, re-structuring of global environmental governance is witnessed in the international community, which is tuning its vision to growth while relying less on the ambivalent concept of sustainable development. Global growth governance represented by the Group of 20 (G20) has positively streamlined green growth into the G20 agenda. A search for common denominators between the two areas of governance—economic growth on the one hand and the environment on the other hand—helps yield synergetic effects toward economic growth with the assurance of environmental improvements.

Academic debates on green growth itself are still at a rudimentary stage. At both normative and empirical levels, disagreements around the issue of green growth at present can be broadly divided into the optimistic defenders and the sceptics. The former tend to highlight the possible synergies between green and growth through innovation and investment, similarly with technological optimists advocating the incorporation of green growth into the existing discourse.

Sceptics, on the other hand, tend to stress the negative aspects of green growth. They do so on the grounds that it lacks, first of all, a global vision—it is a theoretical retreat with no substantial policy implications. Thus it is merely an intrusion on the existing global environmental governance which has been built around the sustainable development notion. Consequently, sceptics tend to downgrade efforts that have been undertaken to develop a green growth policy framework and largely ignore what has actually been undergoing in many countries since 2009 in order to implement the green growth policy framework.

In this context, the main focus of this paper is to delineate to what extent the green growth agenda plays a complementary role within existing global environmental governance. In doing so, it aims to help overcome current conceptual confusion and theoretical conflicts on green growth and sustainable development, although scrutinizing all the theories on sustainable development and different views of numerous environmental economists is far beyond the scope of this paper.

The paper tests whether the surge of green growth as a global agenda item is an intrusion on existing global environmental governance. Following

<sup>4</sup> There have been a plethora of journal articles and policy reports written in the Korean language and published in Korea since 2009, mainly dealing with the Korean case of green growth as a national agenda item under the ‘Low Carbon Green Growth’ policy framework. At a minimum, over 1,087 articles have been produced since 2009.

theoretical and conceptual discussions on green growth, the research question will be tested in dual contexts, i.e. ‘legitimacy’ and ‘implementation’. The former is in relation to green growth as a process and an ecological standard. The question of a process concerns the issues around the top-down approach of green growth. The question of an ecological standard relates to a broader discussion on the environmental contents of such a policy to determine whether the critics are justifiable in judging that green growth is an ecological retreat. An analysis of the practical issues on implementation will then be undertaken. This analysis will first attempt to explain how the merge of global environmental governance with the growth regime has arisen; and second, how the policy framework and strategy of green growth has evolved under this integrated global governance.

The analyses are based on information collected from a number of official documents across a range of different organizations. The information obtained from these documents is supplemented with publicly available information, supporting literature, and journal articles. Primary sources consist of interviews with government officials, monitoring of international meetings and workshops, and analyses of laws, principles and policy frameworks.

This paper finally suggests that there are reasonable grounds to argue that a positive outcome out of green growth policy may well be anticipated both on normative and practical levels. Green growth, both as an environmental norm and as a growth engine, is nothing new. On the contrary, the surge of green growth might be seen as mere ‘old wine in a new bottle’ and even a temporary retreat from ecological evolution, from the environmental protectionist perspectives. Nonetheless, the significance of recent developments in green growth lies in efforts to institutionalize the idea of a synergy between the economy and ecology at the global level, as well as in efforts to implement this synergy while reinforcing sustainable development, which might otherwise have taken even lower priority on the list of global agenda items. Therefore, notwithstanding the criticism of green growth’s governing process and ecological contents, certain contributing factors are noteworthy, although not entirely satisfactory to date.

## II. Evolution of Green Growth

### *1. Background on the Surge of Green Growth*

In the wake of one of the worst global economic and financial crises, institutions governing global economies have begun to set a path towards recovery via a low-carbon green economy. This orientation has largely been

attributed to a growing concern that efforts to recover from the crisis might exacerbate other problems such as the energy and climate crises, unless fiscal stimulus is reoriented towards a green growth. The international Institutions are thus calling for a green recovery with the UNEP, for example, advocating a 'Global Green New Deal' to revive the global economy and bolster employment while simultaneously accelerating the fight against climate change, environmental degradation and poverty.

The OECD, through its own 'Declaration on Green Growth adopted at the Meeting of the Council at Ministerial Level on 25 June 2009', has also embraced the concept of green growth by encouraging green investment and technological innovation so as to contribute to economic recovery in the short-term and help build the environmental-friendly infrastructure required for a green economy in the long-term. Since this time, the evolution of green growth has accelerated both at the OECD and among its member countries.

Many countries have endorsed on the OECD's green growth strategy. The OECD formulates the working definition of green growth as follows:

'Green growth means fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies. To do this, it must catalyze investment and innovation which will underpin sustained growth and give rise to new economic opportunities.'<sup>5</sup>

Broad policy frameworks that mutually reinforce economic growth and the conservation of natural capital are present here. Green growth is a political program that proposes a change from the current growth pattern to a low carbon economy. It aims at a fundamental structural adjustment of today's economy, by generating a new paradigm for energy production through carbon pricing, an environmentally friendly energy-mix, and a new way of consumption, and

<sup>5</sup> OECD (2011), p.9. Since Korea played a leading role in establishing the OECD's Green Growth Strategy, the definition also reflects OECD's adoption of the definition of the 'Low-carbon Green Growth' provided by the Korean government. As defined in the 'Framework Act on Low Carbon, Green Growth'(p.35), low carbon means 'lowering dependence on fossil fuels, expanding the use and distribution of clean energy and reducing greenhouse gases to an appropriate or lower level by expanding carbon sinks'. Meanwhile, green growth means '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, creating new job opportunities, and achieving harmony between the economy and environment.'

changes in energy prices. To this end, a new policy for innovation must be put forward and should include incentives for R&D and investment in energy-saving technologies. In addition, new macroeconomic conditions need to be in place, including carbon pricing through taxing on production activities. This may reduce economic efficiency and cause GDP loss in the short and medium run. However, technological changes will help restore economic efficiency, and environmental taxes will raise public revenue.<sup>6</sup>

The conflicting ambience over further progress of green growth as an international agenda was noticed, prior to the World Summit on Sustainable Development (WSSD, Rio+20) in June 2012. This is partly due to the fact that the WSSD is an international realm to evaluate the progress of sustainable development, notably led by a country like Brazil who has a strong sense of ownership of the Rio conferences as a host country.<sup>7</sup> Nonetheless, after several years of discussion through a number of international fora, workshops, seminars and conferences, the international community has gradually reached a consensus that green growth should not override or weaken the sustainable development agenda. It has been agreed that green growth should be more a practical strategy to reinforce sustainable development.<sup>8</sup> Conceptually, if agreeing that development is a positive means to human progress, one must also admit that achieving development might be limited without growth. Sustainable development is associated with enhancing the quality of life, and thus physical growth in quantity is to a certain degree not ignorable.

The debate revolving around the relationship between growth and development dates back several decades as mentioned earlier, and naturally centered around the question of sustainability in connection with the issue of the depletion of natural resources. For this reason, the fundamental ideas behind this seemingly new approach to economic growth through a greener economy may not be something revolutionary afterall and thus not necessarily worthy of the term ‘paradigm shift’. The discourse on greening the economy gained international momentum primarily due to the world economic crisis beginning in 2008 and partially due to both rising skepticism about eco-centrism and disappointment

<sup>6</sup> Chateau, Saint-Martin, and Manfredi (2011) p.10.

<sup>7</sup> Around the time of Rio Conference in June 2012, leading international media, notably, *The Economist* and *Le Monde*, had released numerous articles dealing with the green growth issue, commenting critically on green growth as opposed to sustainable development, mostly expressing mixed comments of expectations with concerns and cautions while labeling green growth as a mercantilist attempt.

<sup>8</sup> OECD (2011) Executive Summary, p.11, Box 0.1.

about the long delay in implementing sustainable development at the operational level. Discussions are invoked by theorists and practitioners on how to keep the global economy growing without causing irrevocable environmental damage. Responses have included the application of better technologies, changing institutions, and the use of economic incentives. The recent globalizing green growth agenda could therefore contribute to adjusting an undesirable growth pattern from the past and greening of the overall economy. The overall novelty of green growth is in the renewed efforts to ensure that a green vision of economic development is put in place.

## *2. Analytical Tools*

To answer effectively the main research question of this paper, ‘to what extent green growth plays a complementary role in existing global environmental governance?’, an in-depth analysis is made, broadly on the following three levels: the rationale of green growth, based on which legitimacy is built (Ch. II); theoretical grounds of green growth (Ch. III. 2 & 3); and implementation of green growth. Implementation is analyzed on two sub-levels: institutionalization of green growth on the global level (Ch. IV. 1); and the components of the green growth as a global environmental and economic policy (Ch. IV. 2).

Criticism of green growth can be placed into two categories. First is the question of ‘legitimacy’ that is posed by those who are interested in the political process of green growth. Secondly, there is a category of pure ecological question that is raised by those who criticize green growth as an ecological retreat in its environmental contents. The former relates to the issues around the ‘top-down’ approach of green growth, while the latter relates to the environmental requirements of the policy. Critics imply that green growth pays insufficient attention to equity and distributional issues, at least compared with the extent that sustainable development does.

On the level of practical implementation of green growth, institutionalization of the green growth agenda incorporating environmental issues to the existing growth regime could be a pre-condition to reinvigorate global environmental governance. However, green growth has been criticized for lacking a substantive and feasible policy and for simply propagating an abstract political slogan. In particular, green growth has been said to preclude views from the poorer countries at the risk of widening the current gap. In this sense, green growth has been interpreted as merely an intrusion upon or an interruption of existing environmental governance.

Finally, ecological concerns can be examined on two levels: the degree of environmental sustainability that the agenda bears and the actual consequences of the green growth agenda on environmental conditions. Those can be demonstrated through well-established sets of green growth indicators, but they are incomplete and still under discussion in the international field. One may argue that green growth is a further retreat from sustainable development, from the ecologist point of view. It would appear that only the emphasis has fluctuated within a limited spectrum of societal concerns in relation to the value of nature, and this emphasis could continue to change in accordance with political priorities.

In a period of economic difficulties, environmental protection usually has a rather low priority in a national economy. Discussions and debates today on green growth are not far from what had been discussed several decades ago in terms of the degree of acceptance of sustainable development. Yet, the scope of discussions on the environment and efficient use of natural resources has narrowed to some extent, now focusing on the provision of new growth sources. As much as the notion of sustainable development was heavily criticized by radical ecologists as anthropocentric when it was first coined in 1992, today many apprehend that green growth uses the environment and nature as an opportunity for economic growth that will be used to further justify deteriorating the nature and ecosystem.<sup>9</sup>

Table 1. Analytical framework

	Components	Objectives of analysis
Concept	Theoretical grounds	Positioning green growth within the existing discussions on the relationship between optimality and sustainability
Legitimacy	Background Origins Necessity( <i>raison d'être</i> )	Agenda-setting procedure Contents(degree of ecological concerns)
Implementation	Practices in the real world	Governance and institutionalization Policy framework Tools for evaluation

Source: Author.

<sup>9</sup> The value of nature is manifold. Ecosystem services as a part of natural capital include services that are provided to economy through natural functioning and habitats. The economic benefits generated by such services include 'recreational and tourism benefits or certain ecological regulatory and habitat functions, such as water purification, climate regulation, erosion control, and habitat provision', as well as many other goods and cultural benefits. (UNEP & UNU-IHDP (2012), pp. 168-69)



### III. New Narrative of Green Growth

#### *1. Green Growth and Sustainable Development*

The core elements of green growth are threefold with regard to the ‘pattern’ of growth. They include ‘efficiency in managing and utilizing natural resources’, ‘innovation and investment in fostering green industries or converting brown industry to green industry’, and ‘sustainability of growth’. Although specific approaches and priorities may vary depending on the organizations and national governments, their primary goal is normally to pursue sustainable and environmentally healthy economic growth. Despite seemingly diverse definitions of a green economy, both green growth and the green economy can be seen as a means to achieve sustainable development by helping reconcile the needs for economic growth and the need to ensure the environmental basis for continued growth. For some countries who have already built strong sustainable development governance and policy framework such as Europe West and North, green growth could be regarded as environmental retrogress, but others such as, Czech Republic, Korea, and Mexico, to the contrary, green growth can be interpreted as a policy pursuing ‘quality in economic growth’ considering their growth patterns over the last decades.

The official definition of the European Commission of green economy in relation to sustainable development, for example, reflects the view of governments in Europe.

‘Whilst green economy aims to contribute to sustainable development, it is not sufficient for sustainable development and is not in any way a substitute for sustainable development. A green economy needs to be promoted jointly with the social dimension of sustainable development in order to have a positive social impact. Thus rather than replacing sustainable development, green economy should be understood as a set of and a roadmap to accelerate and facilitate a transition to an economy that is consistent with sustainable development, integrating social, economy and environmental concerns.’<sup>10</sup>

The definition of sustainable development indicated in the UN WSSD document is ‘development that meets the needs of the present generation without compromising the ability of future generation to meet their own needs’.<sup>11</sup> The

<sup>10</sup> Unpublished document, the EU’s response to the questionnaire circulated by the UN in preparation for the Rio+20 Conference.

critical question posed by ecological economists, for example, on sustainable development is: ‘whether optimal growth, as it is defined above was sustainable in the sense of allowing non declining welfare in perpetuity?’<sup>12</sup> Numerous interpretations on the concept of sustainable development are produced and interdisciplinary approaches have been employed to disentangle the implications of this definition.<sup>13</sup> The definition includes more than narrowly construed growth. Its focus is more on development than on growth, and development is much more an inclusive concept embracing the issues of quality of life beyond a mere increase in real income.<sup>14</sup> Quality of life connotes wider implications apart from economic growth, including social and environmental dimensions not alone with economic abundance. And, growth does not always compromise the development agenda. Daly has succinctly explained the relationship between the two terms when clarifying that ‘an economy can develop(evolve) without growing’. An economy can be green without growing.<sup>15</sup>

Table 2 summarizes the basic differences between the two related concepts, especially distinguishing green growth from the green economy as a sub-pillar of sustainable development.

As implied in the table, the two international agendas are not necessarily conflicting but complementary, since green growth would well feed in one of the three sustainable development pillars, economic sustainability. Conflicts occur more on the operational level, owing to different political interests between countries, regions, agencies and international organizations. In addition, practical issues such as financial support and funding opportunities are taken seriously when the main international organizations involved in this project set their priorities.

<sup>11</sup> Sustainable development “will also promote the integration of the three components of sustainable development - economic development, social development and environmental protection - as interdependent and mutually reinforcing pillars (*Plan of Implementation of the World Summit on Sustainable Development, para 2*). Regarding whether growth is the best means to achieve development is debatable depending on scholars. For example, Pearce argued that sustainable growth means continuous increase in actual GNP whereas sustainable development means continuous increase in ‘per capita utility or wellbeing (Pearce *op cit.* p.33).

<sup>12</sup> Dietz and Neumayer (2006) in Adger and Jordan (eds.) 2009, p.6.

<sup>13</sup> For a multi-dimensional analysis on the concept of sustainable development, see, for example, Seghezzeo (2009)

<sup>14</sup> Pearce, Markandya, and Barbier (1994), p.21.

<sup>15</sup> Daly (1987), pp. 323-326. However, in practice, the two terms, green economy and green growth, have been used interchangeably since the recently held 2<sup>nd</sup> Green Growth Knowledge Platform in April 2013.

Table 2. Comparisons between sustainable development(green economy) and green growth

	Green economy as a sub-pillar of sustainable development	Green growth
Core value	Inter-and intra-generational equity Relatively longer term growth in quality Broader and comprehensive	Not sacrificing well-being Relatively immediate growth in quantity
Perspectives on nature and natural resources	Human development / anthropogenic approach (nature for human)	Efficient exploitation of natural resources for sustainable growth Finding new growth engines and opportunities out of environmental conditions
Policy tools	Employing a balanced approaches to long-term development	Mainstreaming to core fiscal and regulatory settings such as tax and competition policy Innovation policies Providing incentives to use natural resources more efficiently Pricing natural resources Making pollution more expensive
Leading inter-governmental organizations, secretariat at international level	UN WSSD, UNEP, and other UN bodies	OECD, GGGI <sup>16</sup>
Policy framework	Three pillars (social, economic, environmental) UNEP's Green New Deal UN IWI / World Bank's WAVE (based on SEEA)	Mainstreaming economic, budget and fiscal policies (rather than limited to environmental policy) OECD Green Growth Indicators
Implementation (legal framework including soft laws)	Establishment of the Ministry of Environment Enacted laws on environmental protection, Numerous international treaties and agreements based on the notion of sustainable development	OECD Declaration on Green Growth National legislations on green growth
Major players of global governance	UN WSSD, UNEP, Environmental INGOs	G20 Working Group, OECD Ministerial Council, World Bank, GGGF, GGGI, GGKP

Source: Author.

<sup>16</sup> The Global Green Growth Institute (GGGI) was first established in June 2010 headquartered in Seoul, South Korea, and was reborn as an international governmental organization, with 18 member countries to date since June 2012. They include Korea, Indonesia, Vietnam, the Philippines, Cambodia, Australia, Papua Newguini, Kiribasi, Denmark, the UK, Norway, UAE, Qatar, Ethiopia, Mexico, Costa Rica, Paraguay, and Guyana. The main mission of the GGGI consists of, but is not limited to, supporting country-level implementation of green growth strategy, research, and

## 2. *Understanding the Criticism on Green Growth*

Broadly, within welfare economists who have been engaged in the debate on sustainable development, there are two groups of theorists: one is the environmental and resource economists and the other is ecological economists. The former includes Solow (1986) and Beckerman (1994) among many others, and the latter, eco-sensible or strong sustainability defenders include Neumayer (2003), Ayres (2008), and Daly (1987, 1995).<sup>17</sup> Relating to the question of social justice in the discussion of sustainable development, the former tend to focus less on social equity and distributive justice whereas ecological economists pay more attention to a fair distribution of environmental resources. If positioning green growth into the existing academic discourse, green growth defenders would subscribe to environmental and resource economists' vision of a looser sustainability presumption.

The skeptics show a consistent view with the ecological economists, whereas the defenders would share a similar viewpoint with technological optimists.<sup>18</sup> Skeptical views on green growth stem from a variety of grounds. It has been viewed that green growth cares less for ecological questions and imposes an extreme anthropocentric instrumental vision of nature, to a far greater extent than sustainable development. The logic behind the skeptical view on the surge of green growth can be understood in the same line with ecological economists' view on nature and the economy. Ecological economists tend to take a more precautionary approach and oppose the idea of substitutability, advocating 'strong sustainability'.<sup>19</sup>

Theoretically, however, there should not exist much of a gap between ecological economists' viewpoint and green growth theory, at least on the three critical points: firstly, using natural resources efficiently; secondly, minimizing

promoting public private partnership in this field.

<sup>17</sup> Munda (1997), pp. 213-33.

<sup>18</sup> Scholars and experts in this field present their own views on economy and nature in a different context with variant focuses, thus it is not a straightforward task to group them clearly under a few categories. Another difficulty in building a theoretical framework to analyze green growth is the fact that it is a new political program which keeps evolving.

<sup>19</sup> The divided perception between weak sustainability and strong sustainability fundamentally stems from a different viewpoint on natural capital and its substitutability. Weak sustainability based on instrumentalism perceives that human welfare does not depend on specific type of capital, which means, for example, natural capital can be substituted by manufactured or human capital. See, for example, Ekins *opt. cit.* pp.76-77 for a succinct summary of the definition (originally quoted from Daly (1992: 27)).

trade-offs between economic growth and environmental quality; and thirdly, adopting a narrow interpretation of sustainable development to make the notion more implementable.

‘[S]ustainable development carries the ideal of a harmonization or simultaneous realization of economic growth and environmental concerns’.<sup>20</sup> The question of social justice is embedded in discussions on how to achieve sustainable development. ‘The Brundtland Report affirms that ‘inequality is the planet’s main “environmental” problem’,<sup>21</sup> thereby confirming the Commission’s belief that policies for greater material equality are the most important ingredient in any recipe of measures aimed at environmental sustainability’.<sup>22</sup> Some would think that the definition of sustainable development has to be narrowed to limit to economic development, and thus growth would be the primary concern at the cost of distributional issues. However, a positive association between growth and sustainability is not impossible. ‘[W]e can have economic growth and environmental quality without an apparent trade-off’.<sup>23</sup>

Sustainable development is ‘to translate economic growth into a more equitable distribution of wealth and income’.<sup>24</sup> Sustainable development envisions relatively longer-term and multi-dimensional changes, such as progress in quality through equity, whereas green growth views more immediate progress in quantity that is more feasible and less abstract.

### *3. Green Growth, toward even Weaker Sustainability?*

The main goal of environmental and resource economists is to achieve the optimal level of growth to maximize welfare over all time. Optimality concerns welfare, and ‘[w]elfare can also be defined to include considerations of social justice and freedom’.<sup>25</sup> It is important to include, when defining welfare, changes in the level of welfare.<sup>26</sup> Sustainability is defined in terms of maintaining capital stock, meaning the sum of produced capital and natural capital. Strong sustainability is a constraint of welfare maximization, and thus the two concepts

<sup>20</sup> *Ibid.* 215.

<sup>21</sup> Quoted from a leaflet distributed by the WCED, 1987.

<sup>22</sup> Dobson (1998), p.14.

<sup>23</sup> Pearce (1998), p. 79.

<sup>24</sup> Spangenberg (2004), p.76.

<sup>25</sup> Beckerman (1994), pp.191-209.

<sup>26</sup> *Ibid.* 200.

are incompatible. Capital can be measured in terms of money. The assumption is that ‘natural capital was similar to produced capital and labor and could easily be substituted by them. This is the essence of (...) “weak sustainability” and allows us to force different forms of capital to be additive, in monetary terms.’<sup>27</sup> The concept of weak sustainability and welfare can co-exist without inconsistency, since ‘whether a substitution of man-made for natural capital is acceptable’ is a question of ‘whether it makes an adequate contribution to welfare’.<sup>28</sup>

Environmental economists’ assumption is supported by an optimistic vision of technological progress and economic growth. It is recognized that although limited supplies of natural resources may hamper increase in output, ‘these limits can be overcome by *technological progress* (emphasis in the original text)’.<sup>29</sup> This position is represented as weak sustainability<sup>30</sup>.

Further to the common environmental economist view, green growth actively pursues innovation and investment in green sectors, which is consistent with the discussions developed by technological optimists who are more reluctant to accept the necessity of a precautionary approach. It is believed that, with technological advances, more and more environmental problems including climate change will aptly be addressed, rendering human-caused environmental disaster much more controllable.

The core elements of green growth entail a strong emphasis on technological progress and innovation, which is believed to serve to increase efficiency in the use of natural resources. In this regard, while re-emphasizing the importance of technological breakthroughs, green growth does not automatically defend the *laissez-faire* idea that with technological progress, pollution and climate change will naturally be coped with as the U.S. under the Bush Administration had strongly believed following the technological optimists’ logic. Instead, green growth intends to more explicitly and actively push the governments to address directly ‘green’ technology clearly targeting carbon reduction. Consequently, the *laissez-faire* type of technological optimism is closer to the environmental Kuznet argument, whereby overall economic growth together with technological advances, *inter alia*, will naturally rectify most environmental problems, which

<sup>27</sup> Dietz and Neumayer (2006), p. 6, quoted from Pearce et al., 1989.

<sup>28</sup> Beckerman, *op. cit.* 202.

<sup>29</sup> Munda, *op. cit.* 217.

<sup>30</sup> The concept of weak sustainability can also be explained that ‘an economy can be considered sustainable if it saves more than the combined depreciation of natural and man-made capital.’ (Munda, *op. cit.* 217, quoted from Pearce and Atkinson, 1993).

is rather distant from what green growth intends to promote.<sup>31</sup>

Conversely, ecological economists take more ecological views on sustainable development. For them, much emphasis is put on analysis of the interaction between ecological and economic systems. Such interaction is essential to their assumption of a fundamental incommensurability between economic production and environmental resources. In essence, '[e]cosystems can be divided into three categories': 'natural environments', 'domesticated environments', and 'fabricated environments'.<sup>32</sup> It is important for ecological economists to look closely into the scientific features of various natural capital before making economic decisions.

It is clear that neo-classic environmental economists, ecological economists, and environmental philosophers do not seem to share the same view, since they highlight different norms of human life, i.e. optimal economic growth, harmony between human and ecological systems, and other normative values. Their different viewpoints do not necessarily conflict one another, however, in the sense that questions of welfare, equity and distribution have to be dealt more or less in relation with sustainable development, *albeit* to different extents and on different grounds. Jacobs (1995) rightly points out that sustainable development and sustainability meant essentially rather 'ethico-political objectives, more like 'social justice' and 'democracy' than economic growth'.<sup>33</sup>

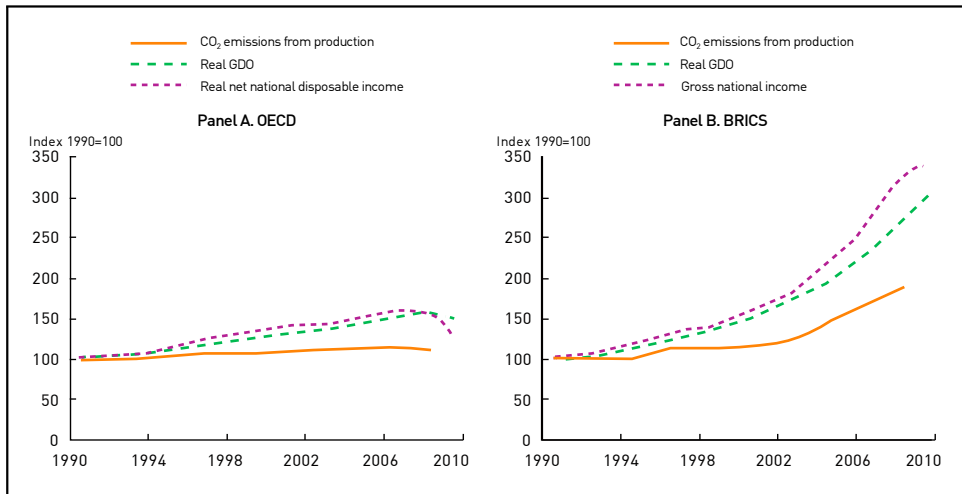
The diversity in theoretical stances stems from the different perspectives on nature and human progress, depending on how one perceives the value of nature and on where to situate human beings in relation to such value of nature. For environmentally advanced countries where decoupling between emission and GDP has already come into play through enhanced energy efficiency, green growth can be viewed as a under-ambitious project. Meanwhile, for middle-income and rapidly industrializing countries as seen in the Figures 1 and 2 below, a relatively radical shift of growth paradigm can be expected through implementing green growth.

<sup>31</sup> For articles containing criticism on the environmental Kuznet theorem, see e.g. Borghesi (1999); Yaguchi, Sonobe, and Otsuka (2007); See OECD (2012) p.38, for the explanations on the Kuznet curve in the developing countries context and for detailed explanations on why developing countries would need a green growth strategy. (p.11)

<sup>32</sup> Munda, *op. cit.* 214.

<sup>33</sup> Jacobs (1995), p. 65.

Figure 1. Decoupling GHG emissions from economic growth



Source: OECD Environmental Outlook 2050 (OECD, 2012), p.77 based on OECD statistics database

As the aim of green growth is a narrowly defined growth rather than a wide range of development, the social dimension seems to be left aside. The question of equity is crucial for the sustainability of the agenda itself. In terms of intra-generational international equity, two levels of equity are worth noting from developing countries' viewpoint. One concerns sustainable use of natural capital, and the other is how to share among countries the potential benefit of greener technology and innovation. As many developing countries are still directly dependent on natural resources and fossil fuels, the realization of a low-carbon economy should be approached in a different fashion from developed countries. Green innovation has until now been considered more relevant to developed countries, thus one of the important issues is how to make green growth more inclusive and shared so as not to let the international community go backward from the international norm of sustainable development. It is worth noting that there have been widespread concerns on this issue. It is being believed that the current effort of the greening economy may widen the gap between developed and developing worlds, even wider than before the green growth strategy was emerged.<sup>34</sup> In this context, 'facilitating trade in green goods and services' and

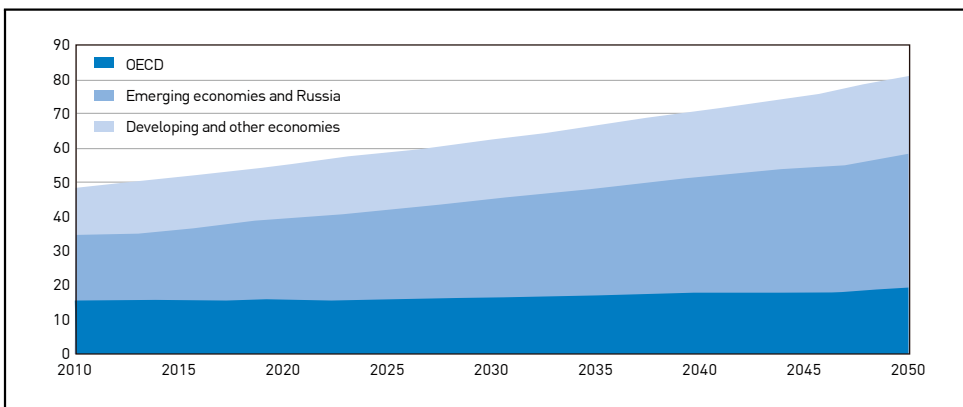
<sup>34</sup> Under the global vision of greening ODA(Official Development Aid), one of the OECD DAC(Development Assistance Committee)'s network, ENVIRONET, has devoted to dealing with incorporation of environmental concerns to the ODA policy design. The ENVIRONET was one



‘promoting green technology’ need to draw broader and continuous attention.<sup>35</sup>

Discussions on green growth among academics are not complete and keep evolving. Whatever the label of the policy is, green growth and the like will continue. It is also true that the environment appears to be the least popular topic in economic downturn, drawing little attention as recent presidential

Figure 2. Trends in greenhouse gas emissions, 2010-50<sup>36</sup>  
Gigatonnes of carbon dioxide equivalent(GtCO<sub>2</sub>e)



Source: OECD database, quoted from OECD, 2013: p.43.

of the main bodies of completing the OECD report on green growth in the context of developing countries. Its first version was circulated to international experts for reviews and comments at the Rio conference in 2012, and its final version has recently been published (June 2013), entitled *Putting Green Growth at the Heart of Development*. (For more detailed explanations on the activities of the ENVIRONET and policy implications, see Park (2011)’s short article, pp. 30-32.)

<sup>35</sup> Incorporating green growth agenda to the vision of further liberalization of trade and to cooperation for technology transfer’ are the ones of the internationally adopted tools undergoing for the purpose of combining international aid and environmental progress in developing countries. Built on the intensive discussions on how to enhance international cooperation on supporting green growth in developing countries, the OECD report (2013) proposes three pillars, namely ‘strengthen green finance and investment’(pillar 1), ‘promote green technology innovation through cooperation’(pillar 2), and ‘facilitate trade in green goods and services’(pillar 3). Pillar 1 includes smart use of ODA and diversification of financial sources. Pillar 2 includes enhancing science and technology cooperation while ensuring technology transfer and protection of intellectual property. The core elements of pillar 3 are fostering international markets for green goods and services while trying to remove trade barriers.(pp.116-7)

<sup>36</sup> Emerging economies include Brazil, China, India, Indonesia, and South Africa.

campaigns in many countries have shown, notably during the Korean and the U.S. presidential campaigns in late 2012.<sup>37</sup> Green growth has its ethical and practical grounds to proceed further, having gone farther than the first stage of forming mere political rhetoric.

Table 3. Comparing major strengths and weaknesses

	Green Growth	Sustainable Development (green economy)
Strengths	Directly addressing economic growth Set clearer priority Developed a quantifiable measuring tool	More extensive inclusion of poorer countries Set broader and longer-term objectives Recognizes de-growth for certain countries Addressing directly poverty reduction
Weaknesses	Creating green protectionism and trade barrier High costs for green innovation Widening technological gap between countries	Climate change is not solved Environmental degradation is worsened in many countries Lack of concrete measuring tool to evaluate
Current efforts (global level)	OECD's agenda for action(including greening trade and cooperation for green technology) Recognition of GGGI as a multilateral ODA provider	Combining green growth indicators with SDGs (for both quantitative and qualitative measurement) Higher level engagement and cooperation with green growth related activities

Source: Author.

#### IV. Toward Further Implementation of Green Growth

In spite of some practical limits, green growth is currently under implementation across the globe. The results of the implementation can be viewed in the context of re-enforcement of existing environmental governance, a concrete political program and policy framework, and increased attention to the growth pattern in developing countries.

Based on the conceptual discussions in the previous chapter, the main focus of this chapter is on how green growth is evolving at the operational level. To this end, analyses are focused on the institutionalization of green growth

<sup>37</sup> For example, in Korea, there has been no environmental agenda put forward to the presidential transition team in Korea.

and the development of a policy framework. Solid green growth architecture can be evolved based on the convergence of the two global governance topics of growth and the environment, a concrete policy framework and guidance, and the efforts of completing the equity question for green growth to gain its legitimacy as an international norm.<sup>38</sup> Unlike sustainable development, from the onset, equity is not the core value of green growth. The core argument of green growth in association with development is that poverty reduction can be achieved, first of all, by a certain degree of growth. Nevertheless, in order to gain wider recognition and to render the agenda more globally applicable, leading international organizations and national governments have made significant efforts. To name a few, an international decision has recently been made on qualifying the Global Green Growth Institute (GGGI) as an ODA provider, which was decided on June 13, 2013 at the OECD Development Assistance Committee meeting. As traditional donors and leading countries in this realm, the European Union and Germany, for example, have operated a number of international projects for the purpose of spurring developing countries' efforts of enhancing energy efficiency and green innovation and investment, through various types of national and international funds.<sup>39</sup>

### *1. Institutionalizing Green Growth: Mainstreaming Green to the Growth Governance*

The term 'governance' is often used to describe 'how states relate to each other in the international system, (...)'. As 'the international system notoriously lacks hierarchy and government',<sup>40</sup> governance is a more appropriate term to define today's de-centralized international politics, thus governing without governments. 'Global governance (...) is any purposeful activity intended to

<sup>38</sup> At the operational level, the three may establish basic conditions to make an international agenda put forward. Governance as an engine, policy framework for a concrete strategy, and equity to ensure the benefits are distributed in a just way while allowing the agenda more sustainable. The limits and challenges may remain to advance green growth further over the longer term unless it meets the following conditions: a widely accepted normative vision as opposed to sustainable development, collective norms and principles, and fundamental and practical solutions to narrow the gap between North and South.

<sup>39</sup> Notable examples include Germany's Kreditanstalt für Wiederaufbau (KfW) and the European Union's Global Energy Efficiency and Renewable Energy Fund (GEEREF). For a comparative study on the roles and mechanisms of different financial institutes of green investment, see for example, Park and Jeong (2013).

<sup>40</sup> Finkelstein (1995), p.367.

control or influence someone else that either occurs in the arena occupied by nations or, occurring at other levels, projects influence into that arena'. Thus, a definition of governance by Finkelstein is that '[g]lobal governance is governing, without sovereign authority, relationships that transcend national frontiers. (...). It accommodates both ad hoc and institutionalized, as well as both informal and formal, processes.'<sup>41</sup> Others, such as Dingwerth and Pattberg (2006)<sup>42</sup>, distinguish the current use of the term in two categories as 'global governance as a set of observable phenomena (ie. analytical use)<sup>43</sup> and 'a political program (ie. normative use)<sup>44</sup>.

Governance for sustainable development in a similar context can be defined as 'the sum of decision making structures and principal guidelines for shaping the process of policy making toward sustainable development'.<sup>45</sup> The main decision-making structure of sustainable development until today has evolved around the UN WSSD and the UNEP at the global level. In a similar vein, global green growth governance would mean the structures of decision making and principles, based on which green growth is realized in the real world.

Green growth as a policy has contributed to expanding its scope to growth concerns with an attempt to incorporate green subjects into the two existing governances. At the same time, the Rio conference of 2012 put forward the agenda of strengthening the UNEP through upgrading its Governing Council as the core UN environmental decision-making body and renamed as the UN Environmental Assembly (UNEA).<sup>46</sup> The evolution of green growth was

<sup>41</sup> *Ibid.* 368-369

<sup>42</sup> See e.g. Dingwerth and Pattberg (2006)

<sup>43</sup> Global governance departs from more traditional views, in the sense that it is constructed by nonstate actors, views world politics as a multilevel system of local, national, regional, and global political processes. It emphasizes the role of norms and advocacy network as the driving force of politics beyond the state horizontally linking activities of various actors, and finally represents the emergence of private authority by non-state and supra-state actors. Dingwerth and Pattberg *op. cit.* pp.192-93.

<sup>44</sup> *Ibid.* 186. Global governance as a political program means 'a political concept that captures a vision of how societies should address the most pressing global problems'. Also, global governance as a political program must contain 'a global civic ethic to guide action within the global neighborhood, and leadership infused with that ethic, is vital to the quality of global governance.' (*Ibid.* 193-4)

<sup>45</sup> Dietz, S. and E. Neumayer (2006) *op. cit.* p.3.

<sup>46</sup> Newsletter (March 20, 2013) 'Environment Minister Altmaier: New Chapter in UN Environment Policy'. The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety <http://www.bmu.de/en/topics/europe-international/international-environmental-policy/vereinte-natio>

embodied in a series of global governance of growth and environment. The 2012 Los Cabos G20 played a critical role in making the green growth agenda more concrete, stimulating green growth to be implemented at national level across the globe. It was the first time at the G20 that the term green growth was explicitly employed and discussed.<sup>47</sup> Finally, the 2011 G20 Leader's Declaration<sup>48</sup> reflects explicit streamlining of green growth to the G20. Such a result should be understood as a continuation of the previous efforts made by the G20 Pittsburgh Summit, where a global green new deal was first discussed.<sup>49</sup>

The G20 Leaders' Declaration in Los Cabos on 18-19 June 2012 explicitly endorsed and pledged commitment to green growth as part of the G20 agenda in light of agreements reached at Rio+20 and the United Nations Framework Convention on Climate Change (UNFCCC). The Declaration recognized and reconfirmed the G20's support and continued commitments to broad issues regarding climate finance, and further exploration of effective mechanisms to mobilize public and private funds for inclusive green growth investment in developing countries. It also recognized that 'green growth and sustainable development have strong potential to stimulate long term prosperity and well being'.

The main actors of the current global green growth program consist of the international organizations that are active in promoting green growth such as the OECD,<sup>50</sup> UNEP (green economy), UNESCAP, the World Bank, and the GGGI together with their member countries. An increasing number of developing countries also participate in green growth project, especially in

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<sup>47</sup> Mexico held a timely workshop concerning 'G20 and Green Growth' in Paris under the auspices of the OECD, prior to the Los Cabos G20 where the discourse on greening growth was consolidated, which helped Mexico's presidency gain confidence in actively promoting green growth. (Seminar on G20 and Green Growth held on 22 May 2012).

<sup>48</sup> Paras 69-76 are devoted to green growth.

<sup>49</sup> Early initiatives towards a green economy bore fruits at the G20 in 2009. When G20 leaders convened in London to restore global economies, they expressed their political will to set the recovery path to the low-carbon economy by stressing a 'resilient, sustainable and green recovery' and reaffirmed their commitments to address climate change. As its first step to this end, G20 leaders at the Pittsburgh G20 summit agreed on phasing out inefficient fossil fuel energy subsidies over the medium term.

<sup>50</sup> There are now 39 adherents to the OECD Declaration on Green Growth including non OECD countries.

Southeast Asia, Latin America, and other emerging economies.

For the purpose of facilitating better coordination of green growth activities across the globe, the Green Growth Knowledge Platform was established, hosting its inaugural conference in January 2012 in Mexico City in partnership with the GGGI, the OECD, UNEP, and the World Bank. The GGKP is a global network of researchers and development experts that identifies and addresses major knowledge gaps in green growth theory and practice, to help countries design and implement a green growth policy. Its second conference was held in Paris in April 2013. At this time, greening global value chains in trade and measuring and reporting green growth were intensively discussed.

It may be premature to attempt a full evaluation of the challenges and achievements of green growth and consequences on the real life of citizens in the countries where green growth policy has been promoted. However, many countries have developed green growth in the national context, and most OECD member countries have explicitly announced many policy programs under green growth or a green economy even though their interpretations, policy priorities, and environmental goals greatly vary. As mentioned earlier, such countries as Korea, Mexico, and the Czech Republic have been particularly keen on establishing green growth governance as they have more room to improve in order to catch up environment-wise with advanced countries.

## *2. Green Growth on the National Level*

The GGGI, hosted by Korea, has the ambition to become a key body in fulfilling the green growth mission. At the national level, for example in Korea, several ministries were involved in promoting and globalizing the green growth agenda initiated by former President Lee Myungbak. The ministries have cooperated horizontally, involving the Ministries of Strategy and Finance, the Knowledge Economy (currently, the Ministry of Trade, Industry and Energy), the Environment, and Education, Science and Technology (currently, the Ministry of Science ICT and Future Planning). The agenda was instituted by the Presidential Committee on Green Growth under the direct control of the President, comprising 50 members with two chairpersons, and domestic legislation, ‘The Framework Act on Low Carbon, Green Growth’ (the Green Growth Act), was enacted on 13 January 2010 and became effective as of 14 April 2010.<sup>51</sup> Initially, one of the main motivations behind this national agenda

<sup>51</sup> The Green Growth Act is divided into six chapters consisting of 59 articles along with one chapter

was to find an exit from the economic crisis in Lee's early presidency and boost the economy while avoiding any risk of disturbing the opposition party. As the growth agenda was promoted together with the 'green' label, the president's growth policy was successful in a way to dilute the fierce opposition from left-wing extreme ecologists in Korea.

In terms of the source of green growth, Korea's low-carbon green growth puts more emphasis on reducing green house gas emissions and related energy fields,<sup>52</sup> whereas the OECD's Green Growth Strategy or the UNEP's Green Economy include a wider range of environmental fields such as biodiversity and environmental protection as source of green growth. The challenge of furthering the green growth agenda in Korea also includes the problem of highly politicized debates and social movements surrounding environmental issues. In Korea, many experts have recently expressed their apprehension over the new political decision of dismantling the Presidential Committee of Green Growth under the new administration. At the domestic level, it is regrettable that the significance of green growth is being downgraded to limit its scope to the Four River Restoration project or strengthening the nuclear energy industry as commonly understood by the Korean public. This also demonstrates that a bottom-up approach to green growth with a view to gaining a wider consensus and sound legitimacy for the program was lacking in the previous administration.

As one of the most enthusiastic supporters of green growth, Denmark led the implementation of green growth with special emphasis on the private sector's role in implementing the policy, through mobilizing investment in green sectors

of supplementary provisions (articles 60 to 64). The Chapter titles include *General Provisions* (Ch.1), *National Strategy for Low Carbon, Green Growth* (Ch.2), *Presidential Committee on Green Growth* (Ch.3), *Promotion of Low Carbon, Growth* (Ch.4), *Realization of Low carbon Society* (Ch.5), and *Realization of Green Life and Sustainable Development* (Ch.6). The existing law, Sustainable Development Act (Act No. 8612) which was enacted in August 2007 was amended in accordance with the new Green Growth Act (as of January 13, 2010). The essential part of the law concerning sustainable development is integrated into the new law on green growth under the articles 49 and 50 of the Act in Chapter 6, *Realization of Green Life and Sustainable Development*. The Green Growth Act clearly stipulates that any other legislation if concerning green growth will 'be brought into conformity with the purpose and basic principles of this Act' (art.8, para.2). This may be interpreted as principles on green growth would take precedence over the existing Sustainable Development Act. However, the latter is still valid unless there being contradicting clauses between the two.

<sup>52</sup> In Korea, according to the 2008 National Energy Plan, in order to achieve the 20% carbon emission reduction target by 2030, national aim for energy sources is set as 59% from nuclear power and 11% from renewable sources.

by private firms and investors. To this end, the Global Green Growth Forum (GGGF) was established by the Danish Ministry of Foreign Affairs. In October 2011 at the GGGF's second reunion, following its inauguration in 2010, high-profile government officials gathered in Copenhagen to enhance public-private partnerships. In spite of the administration change from Liberal Conservative to Social Democrats, the Danish government with newly appointed cabinet members all recognized the importance of carrying out the green growth agenda including the Global Green Growth Forum. By dint of such a decision, Denmark's leadership in this project embodied in the GGGF has been successful, remaining in a good partnership with the GGGI. Similarly to Denmark, the U.K. set a good example, when both Conservatives and Liberals agreed to continuously pursue a green economy agenda regardless of changes in political parties.

As explained above, in terms of the establishment of green growth governance, Korea has been praised as an exemplary case in the international community.<sup>53</sup> Korea is the only country where green growth is explicitly enacted as legislation and where a committee has been established under direct presidential control.<sup>54</sup> In other developed countries where environmental governance was already

<sup>53</sup> Korea has been regarded as a model of energy transformation. Over the last 30 years during its rapid industrialization, energy consumption jumped five times and GHG twice. In 2008, Korea set an aim of raising global ranking of green technology to become the first largest exporters of green technology and to become an environmentally advanced economy aiming at within 7<sup>th</sup> most advanced by 2020, with concrete goal of 30% reduction in GHG emission by 2020, which is 10% higher than Europe (20%). The Korean government puts highest priority on energy efficiency, nuclear power plant and renewable energy. The government made a series of regulations for firms. Korea is particularly in advance in the field of LED, batteries, and nuclear. The shipping industry recently turned to producing onshore wind energy. Hanwha succeeded in acquisition of Germany's Q-Cells. However, Korea still has much room to improve in the field of energy. For example, by 2020, Korea aims to increase energy mix with renewable energy as 7% which is far below the European goal, 23%. Energy intensity/GDP also tripled versus that of Japan. Green growth strategy has been an issue as many disagrees with the idea as shown in the current debates on introducing emission trade system. (*Les Echos*, September 19, 2012).

<sup>54</sup> The Framework Act on Low Carbon, Green Growth stipulates in Art.14 of Ch.3, the composition and operation of presidential committee on Green Growth. At the Joint OECD-GGGI Workshop held on 22 November 2012, Paris), Sang-hyup Kim, the former Senior Secretary to the President for Green Growth, Office of the President, Republic of Korea, made a convincing speech on green growth and global diplomacy, where he explained the elements that support green growth's success as strategy, finance, and technology, 'green triangle synergy' of a green growth architecture both for domestically and globally. He adds 'people' to this triangle for further push meaning education and innovation.



well-formed, two options were pursued: either environmental concerns are streamlined into economic ministries, or economic and financial issues are incorporated into existing environmental ministries and government agencies.

Reflecting this adjustment in the governance system, within the OECD, the previous 'Roundtable on Sustainable Development', the organization's horizontal program across different OECD committees<sup>55</sup> and various external stakeholders, was renamed the 'Forum of Green Growth and Sustainable Development' after a few years of vigorous review of the usefulness of the forum. The forum emphasizes its inclusiveness in membership, particularly embracing economic committees and participation of economic ministries of member countries.

As discussed in detail in this section, institutionalizing green growth at a global level is underway. In order to make the evolution in a more balanced and sound manner, more dialogue is needed with non-governmental organizations and environmental groups for wider support and consensus. Regardless of strenuous efforts by national governments and international organizations, green growth still tends to be considered as a rich and growth-oriented developed countries' 'gimmick', which is believed to widen the gap between the rich and the poor at both national and international levels.

In order to gain sound legitimacy as a contributing norm to environmental governance, debates on green growth and the decision making process within green growth regime need to be far more inclusive. It is commonly believed that international environmental norms and principles are decided by a few countries in the North and flow from North to South.<sup>56</sup> To build solid and long-standing global governance and enhance the credibility of green growth, engaging South and international civil society is critical.

### *3. The Green Growth Policy Framework in Operation*

The OECD Green Growth Strategy (OECD GGS) is regarded so far as a relatively tangible policy guidance which clearly locates it as a means of achieving sustainable development. As OECD GGS tends to be flexible in national implementation depending on the country's level of development, its interpretation and application to national contexts are varied. Many countries,

<sup>55</sup> The involving committees include Environment Policy Committee, Economic Policy Committee, Committee for Scientific and Technological Policy, Committee of Industry, Innovation and Entrepreneurship, Committee on Consumer Policy, Committee for Information, Computer and Communications Policy, Committee on Statistics and so on.

<sup>56</sup> See Clapp (1998), pp. 295-316.

including Germany, Denmark, the Netherlands, and the U.K., have adopted GGS in their own contexts.

Yet, these are the countries where environmental measures are well-advanced in the aspects of carbon tax, institutions, low carbon strategy, renewable energy, protection of natural resources, green technology, and climate mitigation measures. Out of the sound environmental governance, these countries undergo a temporary but smooth transition to an emphasis on growth-oriented strategy in pursuit of maximizing efficiency. This helps a part of the sustainable development agenda and can be quickly adopted. In this regard, achievements in green growth can help accelerate a society's transition to a higher level of sustainable development. Together with the OECD's green growth strategy, UNEP's green economy offers its own policy framework. In spite of substantial differences, the two strategies are in theory neither mutually exclusive nor conflicting.

The Green Economy, led by the UNEP, has evolved based on the late 2008 'Green Economy Initiative'. Its main purpose is increasing investment in green industry and greening environmentally harmful areas of the economy. The official definition of the UNEP's green economy is 'one that results in "improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.'<sup>57</sup>

Conceptually, the economy describes static whereas growth connotes dynamic changes. It is true that green growth emphasizes more development in quantity, whereas the green economy as a sub-pillar of sustainable development is criticized as abstract. It is more so partly due to the lack of a monitoring system similar with green growth indicators. As a follow-up to Rio+20, sustainable development goals (SDGs) are under development, but, as an indicator taking over the Millennium Development Goals (MDGs), SDGs will also remain measuring quality than quantity. In this aspect, green growth has gained more credit, being evaluated as a concrete policy framework with measuring and monitoring tools. Green growth is based more on the market economy, and thus policy tools that GGS recommends are mostly market instruments for internalizing externalities such as tax, incentives, carbon trading/auctioning, etc. Meanwhile, the green economy, from the onset, includes de-growth as a part of the process of achieving the status of a green economy considering developing and less or least developed countries. 'Green Economy also allows for shrinkages and reductions (selective de-growth) where those are also needed (...).'<sup>58</sup>

<sup>57</sup> UNEP 2010.

In regard to monitoring progress in green growth implementation, the OECD has put strong emphasis on establishing appropriate indicators to measure and monitor green growth. After intensive discussions among members, a consensus was made only on a set of headline indicators, which is more generic and flexible than specific and rigid. The headline indicators include environmental and resource productivity, economic and environmental assets, environmental quality of life, and economic opportunities and policy. Sub-indicators under the headline indicators tend to measure economic growth in connection with environmental quality. A few countries have applied, with modifications, this indicator set at the national level. Such countries include the Czech Republic, Korea, Mexico and the Netherlands.<sup>59</sup> Evaluation of green growth progress on a country level is incorporated in the OECD's country reviews<sup>60</sup> including Economic Surveys, Environmental Performance Reviews, Innovation Reviews, and Investment Policy Reviews, as well as the Going for Growth annual report and the Green Cities Program.

The world is moving toward adopting stock-based measurements in line with the UN and the World Bank-led SEEA. Harmonization efforts across different organizations have long been delayed in this field, although many countries including the EU have adopted the environmentally adjusted green account. Progress in indicators working well reflects that green growth has been developed into a more tangible and applicable policy framework than sustainable development.

Similar work to the OECD's green growth indicators and measurements by different agencies include 'the Green Economy Initiative' by the UNEP (2008), and 'IGrowGreen Initiative' developed by the European Commission (2011); this is an attempt at a single aggregated index. In addition, the European Union has been developing 'the 2020 Flagship Initiative' focusing on resource efficiency, which was announced in January 2011 and includes a resource

<sup>58</sup> UNEP 2011. p.16.

<sup>59</sup> Current and planned applications of green growth indicators in countries include the Czech Republic (the Czech Statistical Office (CZSO 2011), Korea (Statistics Korea, KKOSTAT 2012), Mexico (work underway), the Netherlands (May 2011, Statistics Netherlands CBS 2011), Latin America and Caribbean countries (Colombia, Costa Rica, Ecuador, Guatemala, Paraguay, and Peru with participation and technical aid of/from the UNIDO) and the UNEP, Kyrgyzstan (a pilot application with aid of the OECD), and Denmark, where the OECD's green growth measurement framework is used for the field of climate change and energy efficiency.

<sup>60</sup> For the Korean case, for example, refer to 'Achieving the "low carbon, green growth" vision in Korea', chapter 2, *The OECD Economic Survey; Korea 2012* (OECD).

efficiency roadmap specifying policy goals and targets, and indicators to measure progress. Among the UN's new series of biennial reports, 'Inclusive Wealth Report 2012' proposes extensive theoretical background, by examining a country's capital assets, for developing measuring tools in view of reaching a consensus on creating 'Inclusive Wealth Index'. Around the same time, the World Bank produced a report, 'Inclusive Green Growth 2012', stressing that sustained growth is needed to achieve urgent development and that growing cleaner without growing slower is feasible.

The character of the green growth indicators can be grouped somewhere in-between measuring optimality and sustainability. A paradigm shift has occurred toward green productivity concerning more the environmental elements in production. To this end, many countries have agreed that measuring tools beyond GDP are required. This has been pointed out by many countries, which reflects the importance of multi-factor productivity. The OECD also turned its focus to the methodology, which measures different kinds of capitals as input to the economy, to see whether re-investment in each kind of capital would be sufficient and thus sustainable. Blanket input-output would not help much to measure economic growth because environmental concerns are not reflected. This requires additional input such as natural capital and environmental bads. Through this, newly adjusted MFP (multi factor productivity) quantity is produced, which will help avoid overestimating productivity. However, the challenges are the inaccurate exercise of measuring natural resources and a lack of data. Besides, market pricing environmental externalities are ever insufficient, as not all externalities are in trade in the market or borne in the carbon tax.

With the green growth agenda being highlighted by an increasing number of countries, tension has grown among international organizations that have been engaged in similar kinds of projects, notably UNEP and ESCAP, over the 'ownership' of the term and concepts of green growth. Much confusion was evoked in this field accordingly, and a number of meetings were devoted to clarifying and distinguishing the confusingly inter-related terms between green growth and the green economy as opposed to sustainable development.

Such confusion revealed the inefficiency of the current global environmental governance, which lacks an overarching environmental norms and principles. A number of similar and thus unnecessary programs and projects are simultaneously operating under the name of green growth, green economy or something similar, between different organizations and across different directorates following the change in national governments' policy priorities along with the

flow of funds. Their work often overlaps with that of other organizations or reproduces one's results. In addition, a large part of the work entitled green growth projects in major international organizations is at times undistinguishable from their previous work.

#### *4. Conditions for Better Implementation of Green Growth*

At this point, it is hard to provide a fuller evaluation of the green growth policy, including a measurement of actual achievements in the real world. The development of governance, architecture, and policy framework would not suffice for the success of green growth. Several conditions need to be met in order to continue developing green growth toward further implementation.

On the country level, urgent environmental issues need to be addressed regardless of administration changes and thus be less politically influenced. Globally, leading international organizations that are currently dealing with green growth need to make more efforts to improve efficiency, while avoiding duplication of types of projects, not only between directorates within the organization but also across different organizations. Limits on the capacity of international organizations dealing with green growth are often revealed due to the fund-oriented nature in general and due to absence of an international organization, independent from the U.N., exclusively devoted to environmental improvements. In this regard, member states' active and coherent commitment would be the key issue. Streamlining the environment into the economy is the central issue. However, many barriers exist in coordinating different ministries, especially as coordination is an extra burden for a national government entailing expensive transaction costs.

In addition, the problem of legitimacy, both in terms of the process of consensus building and ecological contents, remains unsolved. In order to gain its legitimacy for the green growth agenda, making a stronger connection with internationally urgent issues such as poverty reduction and human rights should be taken into account. In addition, a more bottom-up approach with attempts to include a wider range of groups and international NGOs should be considered. Vigorous efforts need to be made to raise the general public awareness on the synergy between efficient use of nature and human well-being.

## V. Conclusion: Implications for Global Environmental Governance

The main research question that this paper raised was whether the emergence

of a green growth policy would be considered as an interruption, rather than a contribution, to the existing global environmental governance. The argument underpinning this paper was that green growth has facilitated and fostered, rather than impeded, the development of global environmental governance. Only its emphasis has shifted toward more a growth-oriented economy within the existing sustainable development governance.

In spite of critics' skeptical views on green growth, its emergence today certainly entails positive implications on economic and environmental development. Firstly, debates revolving around low-carbon green growth help reinvigorate the sustainable development agenda. The rise of green growth has provided an opportunity to reiterate issues around economic progress and environmental quality, shifting from a conceptual framework to a set of concrete strategies. Discussions on green growth have helped experts in this field to focus more on actual implementation, institutionalization, and specific strategies to achieve environmentally friendly patterns of growth. Secondly, the global green growth agenda has contributed to generating more optimistic and active efforts to advance potential sources of growth, as its emphasis has been put explicitly on 'growth out of green' rather than on green protectionism. This has allowed politicians and policy specialists to pay attention to the policy areas directly related to visible growth such as eco-innovation, green investments, the taxing of emissions, and the creation of green jobs.

On the question of the legitimacy of green growth, however, the search for a more open and wider engagement of civil society and developing countries is required, so as to ensure balanced discussions and effective implementation. It is true that within the spectrum of 'growth versus equity', as opposed to sustainable development, green growth is concerned less with (either inter or intra) equity. It leaves equity as a separate and secondary issue rather than an integral part of the policy. Nevertheless, even sustainable development was at the beginning also heavily criticized as being insufficiently ecological, from a protectionist viewpoint. The emergence, evolution or demise of green growth would not fundamentally shake the existing global environmental governance. Only its emphasis is fluctuating, leaning perhaps temporarily toward an anthropocentric vision, which has been hard to evaluate as harmful under the economic crisis given that otherwise the environmental issues would have been received much less attention than now.

It is worth asking whether green growth will be short-lived and will see its demise soon as national priorities inevitably change in accordance with changing

leadership among the most developed countries. Green growth is more a fast-cure method on a strategic level for developing countries and for industrialized-but-environmentally-negligent countries. There is a possibility that green growth will take a lower priority and become a temporary program at least until the economic recovery. Green growth has served as a good compromise between environmental quality and economic growth. It could be regarded as an ecological retreat from environmentally advanced countries' viewpoint while being considered fit for developing and emerging economies that are undergoing rapid industrialization with an intensive use of natural resources.

Green growth, as a relatively young international agenda, keeps evolving. Although nations' political slogans may vary depending on the changes in political administration, the discourse relating to concerns about human activities causing all kinds of environmental degradation will never cease, taking a position along the spectrum of extreme anthropocentric and radical eco-centric visions. Where a society will stand depends on the economic situation, political will of leading countries, and financial flows to international agencies. However, only a governance with a normative vision will survive many generations, as seen in the global governance of human rights, environmental protection, and quality of life: being worthy of 'global' implies that national governments are limited to pursue such governance because it is a domain beyond short or mid-term national interests and deals more efficiently with the international public good.

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