

Green Growth: Paradigm Shift of Economic & Social Development Strategy

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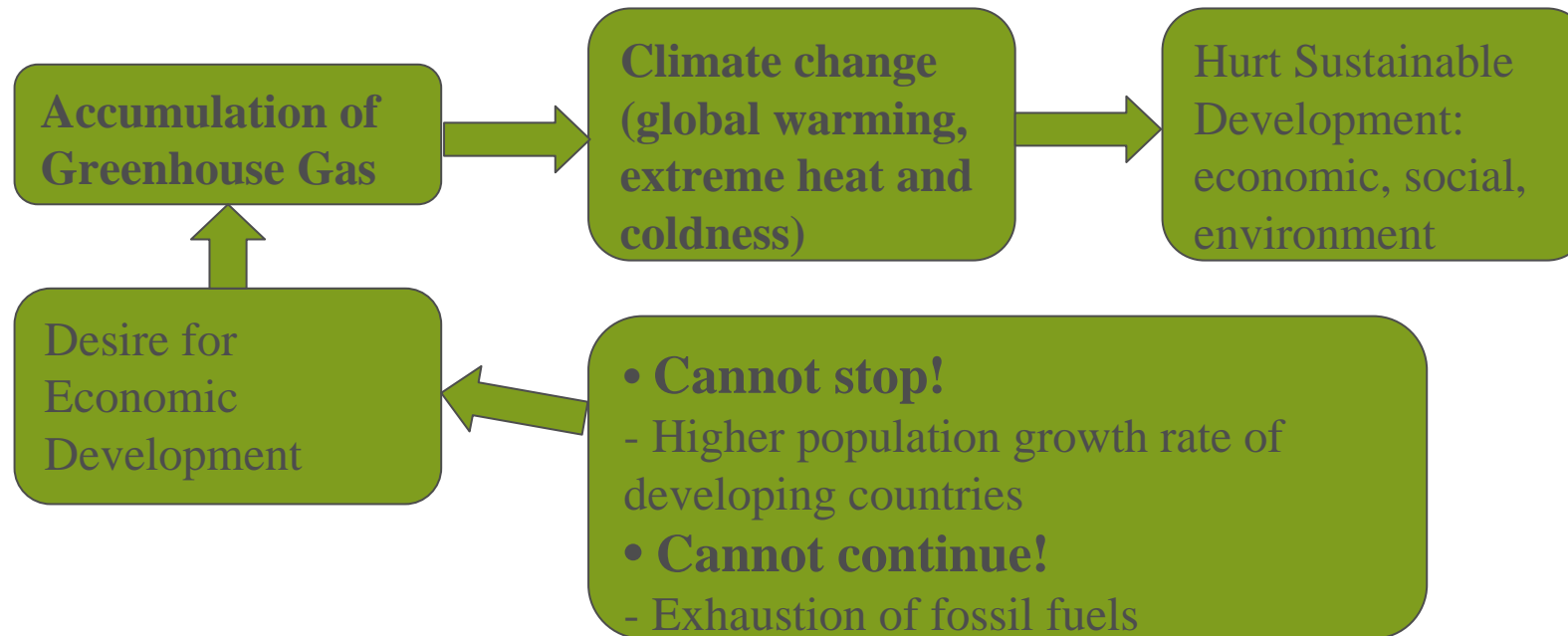
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1. Why Green Growth?

1. Climate Change and Our Common Future



2. Need International Cooperation

- Adaptation to climate change
- New Engines of Growth: Green technology, Renewable energy, Border Tax



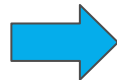
2. What is Green Growth?

President Lee Myung-bak (Aug. 15, 2008):

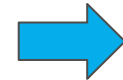
- **“Low Carbon, Green Growth”**
- **“Green Growth refers to sustainable growth that mitigates greenhouse gas emissions and prevents environmental degradation. It is a new national development paradigm that creates new growth engines and jobs through green technology and clean energy.”**

Implication of Green Growth

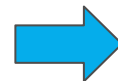
**Green technology,
Energy saving, Energy
efficiency**



**Synergy between economic
growth and environment**



- **Economic development and improved quality of life**
- **Role of bridge between developed and developing countries**



- **5-year Green Growth Plan**
- **Global Green Growth Institute(GGGI)**



3. Key Progress of Green Growth

1. Legal framework: Legislation of the Framework Act on Low Carbon, Green Growth

2. National Greenhouse Gas Reduction Target: : -30% from BAU until 2020(Nov. 17, 2009)

3. Green Budget: 2% of GDP on Green Growth Policies('09-'13)

4. Green Technology Development: 27 core green technology

5. International Role Model: the role of bridge in the international community
- Establishment of GGGI (June, 2010)



5-year National Strategy for Green Growth

3 Key Strategies, 10 Policy Directions

Strategies	Policy Directions
1. Measures for climate change and securing energy independence	<ul style="list-style-type: none">1. Reduce carbon emissions2. Decrease energy dependence on oil and enhance energy sufficiency3. Support adaptation to climate change impacts
2. Creation of new growth engine	<ul style="list-style-type: none">4. Develop green technologies as future growth engines5. Greening of industry6. Develop cutting-edge industries7. Set up policy infrastructure for green growth
3. Contribution to international community	<ul style="list-style-type: none">8. Green city and green transport9. Green revolution in lifestyle10. Enhance national status as a global leader in green growth



2020 Midterm Greenhouse Gas Mitigation Target

- **Greenhouse Gas Mitigation target: -30% from BAU until 2020(Nov. 17, 2009)**
- **the highest level of mitigation recommended by the IPCC for non-Annex I countries**
- **Korea's target setting is a voluntary and unilateral action.**
- **It will create a more conducive atmosphere for other developing countries and further actions from developed countries.**



Green Growth Investment Plans

Fiscal Expenditure on Green Growth for 2009-2013

Trillion KRW, %

	Total	2009	'10-'11	'12-'13	Rate of increase
Total	107.4	17.5	48.3	41.6	10.2
• Mitigation of climate change & energy independence	56.9	8.6	29.2	19.2	14.0
• Creating new engines for economic growth	28.6	4.8	10.7	13.1	9.4
• Improvement in quality of life and enhanced international standing	27.9	5.2	10.5	12.2	3.6

- **Roughly 2% of the nation's annual GDP is allocated to green investment.**
- **Twice of the amount recommended by the Green Economy initiative advocated by the UNEP (1% of GDP)**



Green Growth and Green Technology

Vision and Goals of the Master Plan for Green Technology R&D



Source: National Science and Technology Council (2009.1.13), "Master Plan for Green Technology R&D".
Recited from Jang(2010)



Green Growth and Green Technology

Development Strategies of Green Technology Investment



Source: National Science and Technology Council (2009.1.13), "Master Plan for Green Technology R&D".
Recited from Jang(2010)



Creation of New Growth Engine

Greening of Industries

- **Efforts to reduce GHG emissions for the energy-intensive industries**
 - Through investment on technology
- **Automotive, Semiconductor, Shipbuilding, and Steel industries**

Creation of Green Industries:

- top 30 groups increases R&D expenditure by 48.2% from '08-'10 to '11-'13.

- **Renewable energy: Photovoltaic, Wind, IGCC, CTL, GTL, Biomass**
- **Next-generation power plant: Fuel cell, Power save, LED**
- **Green Car**
- **Climate change and energy saving: facilities for energy saving, GHG reduction**



4. National Vision: Sustainable Development

- **Definition(UN, 1987): Intergenerational Equity**

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

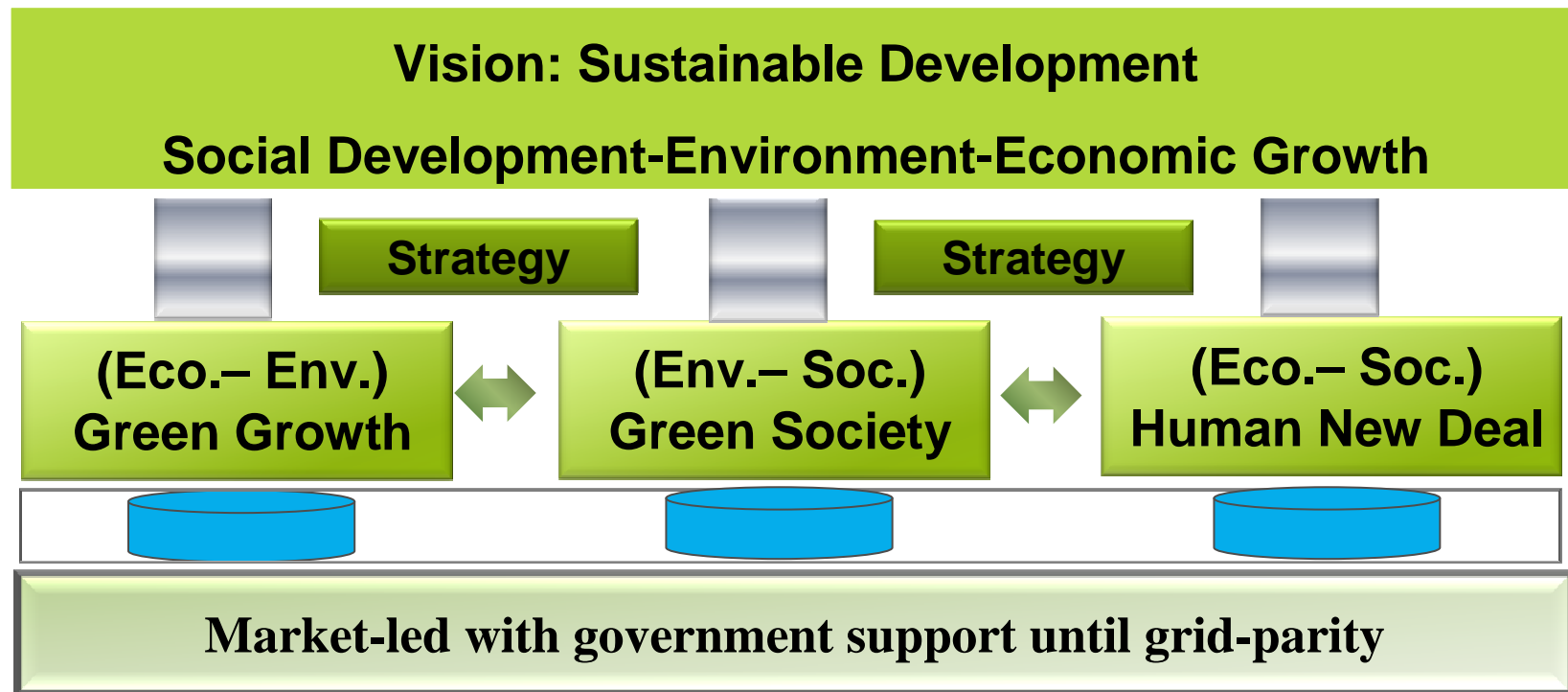
- **Other researchers(e.g., Munasinghe, 1995, 2008)**

Virtuous circle among social development, economic growth and environment



5. Green Growth and Sustainable Development

National Vision & Strategy

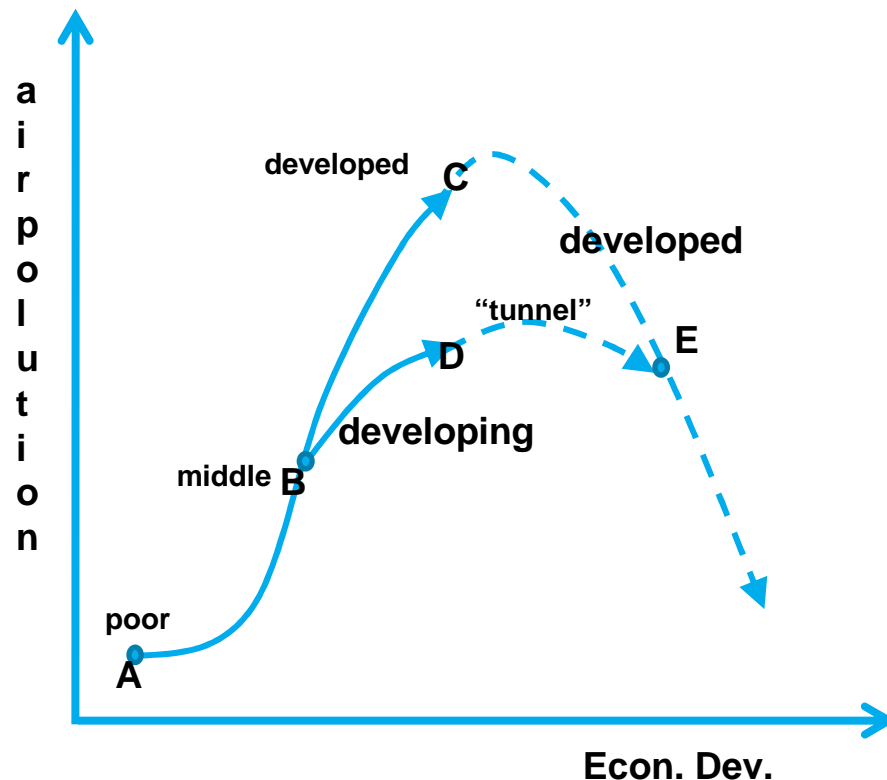


- “Achieve Sustainable Development through new Paradigm for Economic & Social Development toward Green growth and Human New Deal”



6. International Cooperation

- **More income gap with developing countries?**
 - **Lagged green technology**
 - **Less R&D expenditure capacity**



- **Munasinghe (1995,2008)**

- **A->B-> C-> E: Larger gap with developed countries if traditional Kuznet's curve is followed.**

- **A->B->D->E: less gap with international cooperation through technology transfer and fund support for measures against climate change**

6. International Cooperation

**Sustainable Development through international cooperation:
Income gap through green growth strategy**

- 1) Current production process** is more energy-saving and efficient than that used by developed countries.
- 2) Technology transfer or cooperation:** Developed countries can provide technologies and knowledge of eco-efficient production process, use of renewable resources, usage of natural resources.
- 3) Fund support:** Developed countries can provide fund to support measures against climate change by developing countries.

→ International cooperation can play a significant role in catching up with developed countries.



6. International Cooperation

Global Green Growth Cooperation

Green (Growth) ODA	<ul style="list-style-type: none">• Increase from 14% in 2009 to 30% of GNI by 2020• Ratio of green ODA: 11%('07)-> 20%('13)-> 30%('20)
East Asia Climate Partnership (EACP)	<ul style="list-style-type: none">• 2008-17 key projects with 7 countries & international organizations• 2009- 18 new projects
Global Green Growth Institute (GGGI)	<ul style="list-style-type: none">• To assist countries in formulating their own green growth plans• To serve as a global think tank in leading developing countries to a low carbon society



7. Conclusion

- **Background: Climate Change and Human Economic Activity**
- **Shift of Economic and Social Development Paradigm**
- **Market-led policies through Price Signal**



- **Green growth is not completely established but lively and open-ended concept.**
- **Need creative development through common vision of government, citizens, and companies**
- **Green growth strategy is new economic development plan through paradigm shift to transform future life into low-carbon society.**



Thank You!

