

The Greening of Infrastructure: Korea's Experience

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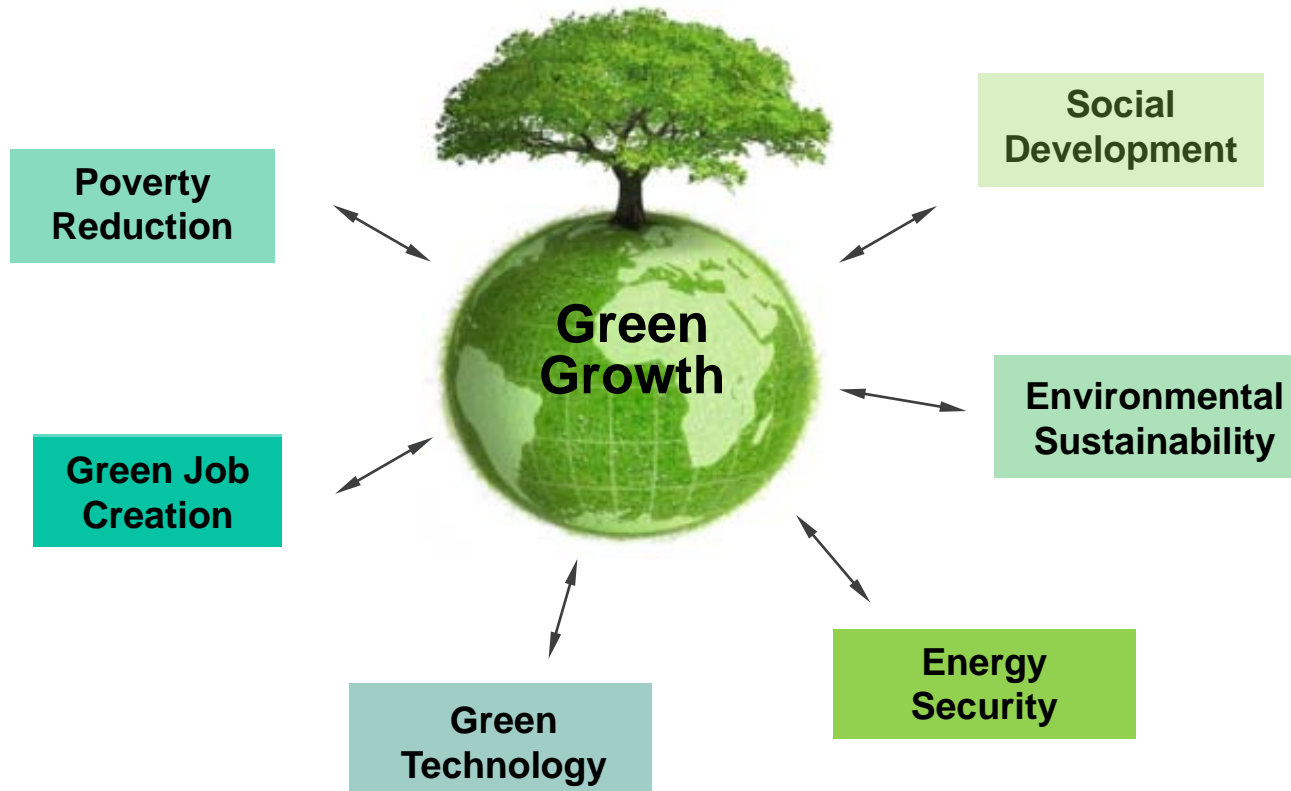
- I. Green Growth**
- II. Korea's Experience of Green Growth**
- III. The Greening of Infrastructure**
- IV. Global Green Growth Institute (GGGI)**

I. Green Growth



The concept of **green growth** suggests that ***“Growth and environmental sustainability are not merely compatible objectives, but are mutually necessary for the future of humankind.”***

Green Growth provides a set of strategies that aims for continued economic growth and environmental progress at the same time.





OECD – *Towards Green Growth*¹

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 achieve **green growth**, it is necessary to “catalyze investment and innovation which will underpin sustained growth and give rise to new economic growth and opportunities.”

UNEP – *Towards a Green Economy*²

Green economy is one that results in “improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.”

The concept of green economy is related to that of **green growth**, and it is one which is characterized as “low carbon, resource efficient and socially inclusive.”

1. "Towards Green Growth." Organization for Economic Co-operation and Development. (2011).

2. "Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication." United Nations Environment Programme. (2011).



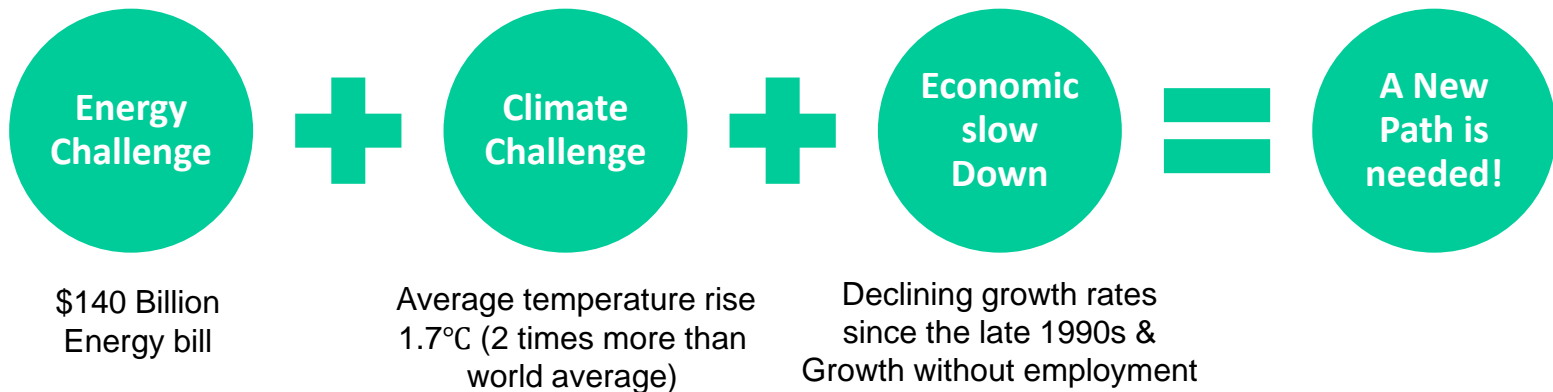
Why Green Growth?

(Korea's case)

Increasing Energy Vulnerability

- **Top 10 energy consumer with 140 Billion USD in energy bill**
- **Trade deficit: 97%** of the energy is imported
- **Dependence on fossil fuels: 83%** of the energy is from fossil fuels

Triple Crunch: energy crisis did not come alone



II. Korea's Experience of Green Growth



- Declaration of New Vision (15 Aug. 2008): **“Low Carbon, Green Growth”** as a new paradigm of development



60 years in the Past

Quantitative, Fossil-Fuel
Dependent Economic Growth



60 years in the Future

Qualitative, Economic Growth
with New and Renewable
Energy Resources



II. Korea's Experience of Green Growth



What makes Korea a model for green growth? (1)

Strong Leadership

- Presidential Committee on Green Growth

Fast Integration of the Vision in All Sectors

- Meaningful partnership with private council (business, financial sector, technology experts, local governments, social groups, etc.)

Competitive Industrial Base in Relevant Areas

- Large competent players

Action - Oriented Strategy

- Secure green budget: 2% of GDP
- Specific guidelines and implementation plans

II. Korea's Experience of Green Growth



What makes Korea a model for green growth? (2)

Committed **2% of its GDP** to green growth between 2009 and 2013, which is twice the amount of investment suggested by the UNEP

Voluntary GHG reduction of **30%** from BAU by 2020, despite being a non-Annex I Party to the UNFCCC

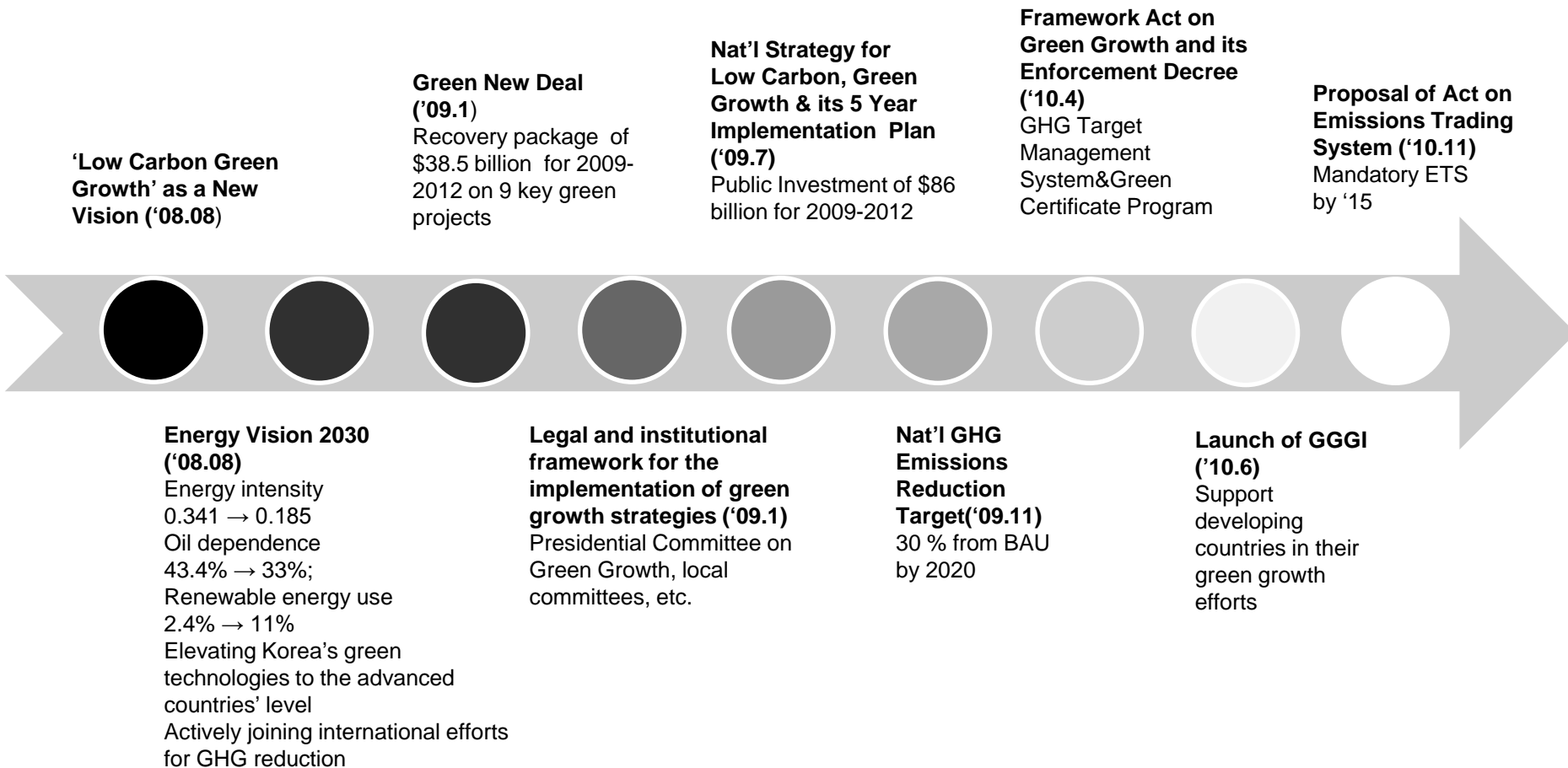
After the economic crisis in 2008, Korea has been most efficient in the actual spending of its green stimulus, with almost 20 per cent of funds disbursed at the end of the first half of 2009, compared to only 3 per cent for most countries.

Active demonstration and advocacy of green growth at international level

II. Korea's Experience of Green Growth



Progress 2008-2010



II. Korea's Experience of Green Growth



Global Green Cooperation

- Can Korea do it alone? UN, OECD, WEF...
- GGGI Initiative, Climate Finance Cooperation

Green ODA

- Increase from 14% in 2009 to 30% by 2020
- More effective and efficient operation of ODA

East Asia Climate Partnership

- 2008 – 17 key projects with 7 countries & 4 International organizations
- 2009 – 18 new projects

Global Green Growth Institute (GGGI)

- To assist countries in formulating their own green growth plans
- To serve as a global think and act tank in leading developing countries to a low carbon society

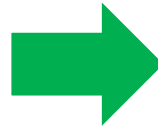
Climate Finance Cooperation

- How do we go about fast start financing?
- Copenhagen Accord agreed on fast start fund of \$30 billion between 2009-2012 / \$100 billion by 2020 a year

III. The Greening of Infrastructure



- ❖ Investing in infrastructure is key to the development of a developing country
- ❖ Infrastructure investment tends to be carbon- and capital-intensive
- ❖ Investment in green industry is often regarded as risky and costly



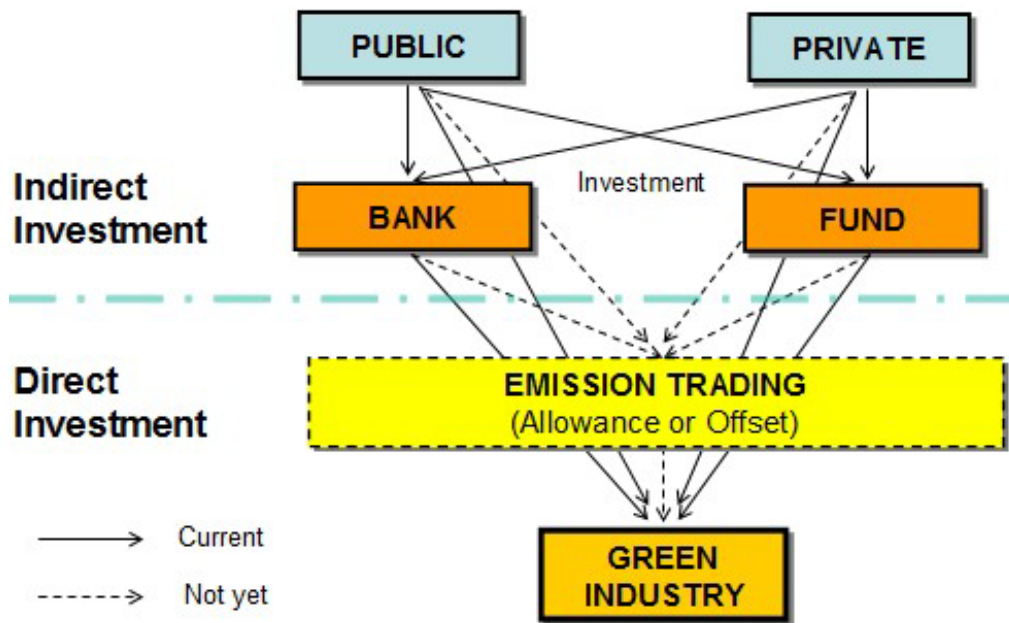
- ❖ **Need for a 'green' finance structure**
- ❖ **Incentives:** market creation for green growth
- ❖ **Regulations:** GHG/Energy Target Management System (GTMS), Emission Trading System (ETS)



1. Green Finance Structure

Current & Future Financing Process:

As market mechanisms are inadequate in dealing with the uncertainty and long payback period of climate change, the public sector should play a leading role in financing investment in the beginning.



- Public and Private investment in green industry through bank & fund accounts
- If ETS is implemented, the investment channel is extended to emission trading

III. The Greening of Infrastructure



1. Green Finance Structure

Policy Direction for Green Finance

Green Finance	Beginning	Mid- to Long-term
Main Agent	PUBLICLY led	PRIVATELY led
System (Mechanism)	INDIRECT INVESTMENT	DIRECT INVESTMENT (MARKET based)
	The public sector should play a leading role in financing investment	Voluntary private investment needs to replace public finance as the major source of financing and the proper role of market fully restored

III. The Greening of Infrastructure



2. Incentives: Market Creation for Green Growth

Green Finance policies are largely divided into two paths,

- 1) Providing Policy Priority to Green Finance (Policy Priority);
- 2) Infrastructure Mobilization for Green Finance (Mobilization Infra)

Green Finance		Context
Policy Priority	Green Loan Green Guarantee Matching Fund	<ul style="list-style-type: none">✓ Preferential lending rates for green leaders✓ Preferential guarantee bounds and reducing service charges for green leaders✓ Raising public-private matching fund
Infrastructure Mobilization	Green Certificate Green Deposit Public Green Information	<ul style="list-style-type: none">✓ Certification to distinguish sustainable, profitable green opportunity from what is not✓ Providing reduction or exemption of income taxes for Green Deposit✓ Deflecting monetary flow away from high carbon, energy intensive companies to greener ones, promoting green business practices and eco-efficient productions



2. Incentives: Market Creation for Green Growth

Example: Korea

❖ Increase Green R&D investment:

1.8 billion USD (2009) → 2.1 billion USD (2010)

- Cross-government action plans for 27 core green technologies
- National budget to reinforce R&D of 10 key green technologies
- Incentives for green investment by private sectors, e.g. Green Certification

❖ Create favorable investment environment for green industries

- Green loans: 6.3 billion USD (2010.12)
- Guaranty support for green industries: 4.8 billion USD (2010.12)
- Tax benefits

e.g. acquisition/registration tax exemption for environmentally-friendly housings; customs duty reduction on renewable energy materials.

III. The Greening of Infrastructure

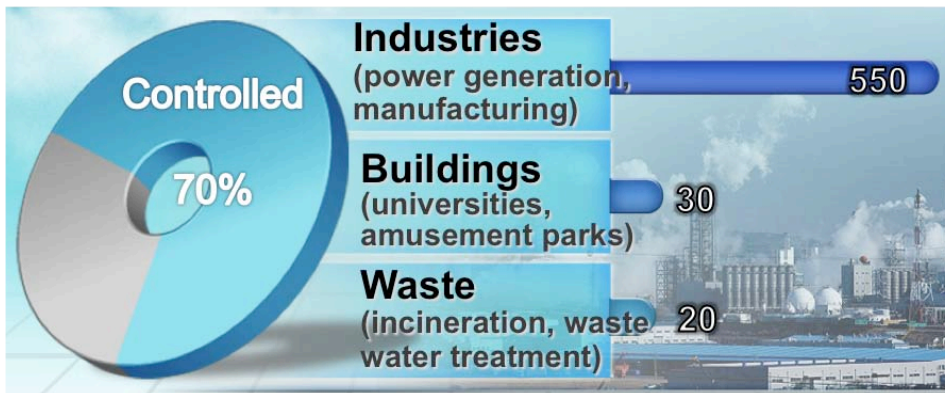


3. Regulations for GHG Mitigation

◆ GTMS (GHG/Energy Target Management System)

To set and manage the GHG mitigation targets

- Legal Basis: Article 25~30 of the Enforcement Decree
- Number of entities: approx. 600
 - It will cover 70% (434ml. ton) of the Nat'l GHG emission (620ml. ton)



- Threshold: 25,000 tCO₂e ton by facility base
125,000 tCO₂e ton by company base
- Penalty: 3~10 mil won (\$ 2,500~8,200)

III. The Greening of Infrastructure



3. Regulations for GHG Mitigation

◆ Cap & Trade System

If succeed in legislation, ETS will take effect from 1st Jan. 2015 in Korea.

[Table] Operating elements of cap & trade system

	Elements	Notes
Coverage	GHGs	CO2 + the rest GHGs
	Participants	Industries + other sectors
	Emission Type	Direct + Indirect
Allocation (auctioning)	Absolute Cap	All sectors (Amount is not decided)
	Allocation	Hybrid (Grandfathering 10%)
	Offsets	Domestic Offset & limited use of overseas offset

At the same time, standards for GTMS target entities will be lowered to 15,000 tCO₂e or above.

History

GGGI is an independent, international non-profit organization dedicated to supporting the new model of economic development, **‘Green Growth’**.

Creation of GGGI announced by President Lee Myung-bak at UNFCCC COP-15

Copenhagen, Denmark
December, 2009

GGGI Side Event at UNFCCC COP-16

Cancun, Mexico
December, 2010



GGGI launched at East Asia Climate Forum

Seoul, Korea
June, 2010



“I will ensure that GGGI will evolve into a permanent common asset of the international community by 2012”

- Lee Myung-bak, President of Republic of Korea, June 2010

“GGGI will significantly contribute to a variety of UN’s activities regarding climate change”

- Ban Ki Moon, UN Secretary-General, June 2010

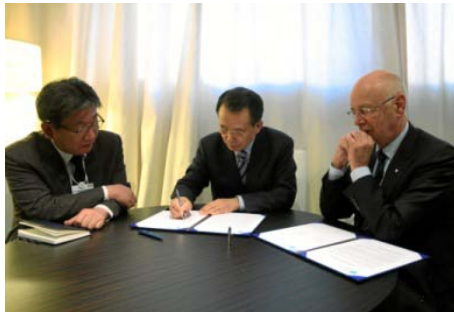


“GGGI is just the right institution at just the right time.”

- Inger Anderson, Vice President of Sustainability for the World Bank, December, 2010



History (2)



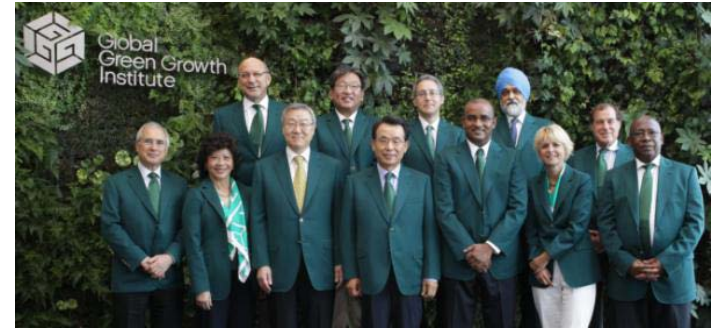
**GGGI-WEF MOU
at World Economic
Forum 2011**

**Davos, Switzerland
January 2011**



**Opening of GGGI
Copenhagen Office**

**Copenhagen, Denmark
May 2011**



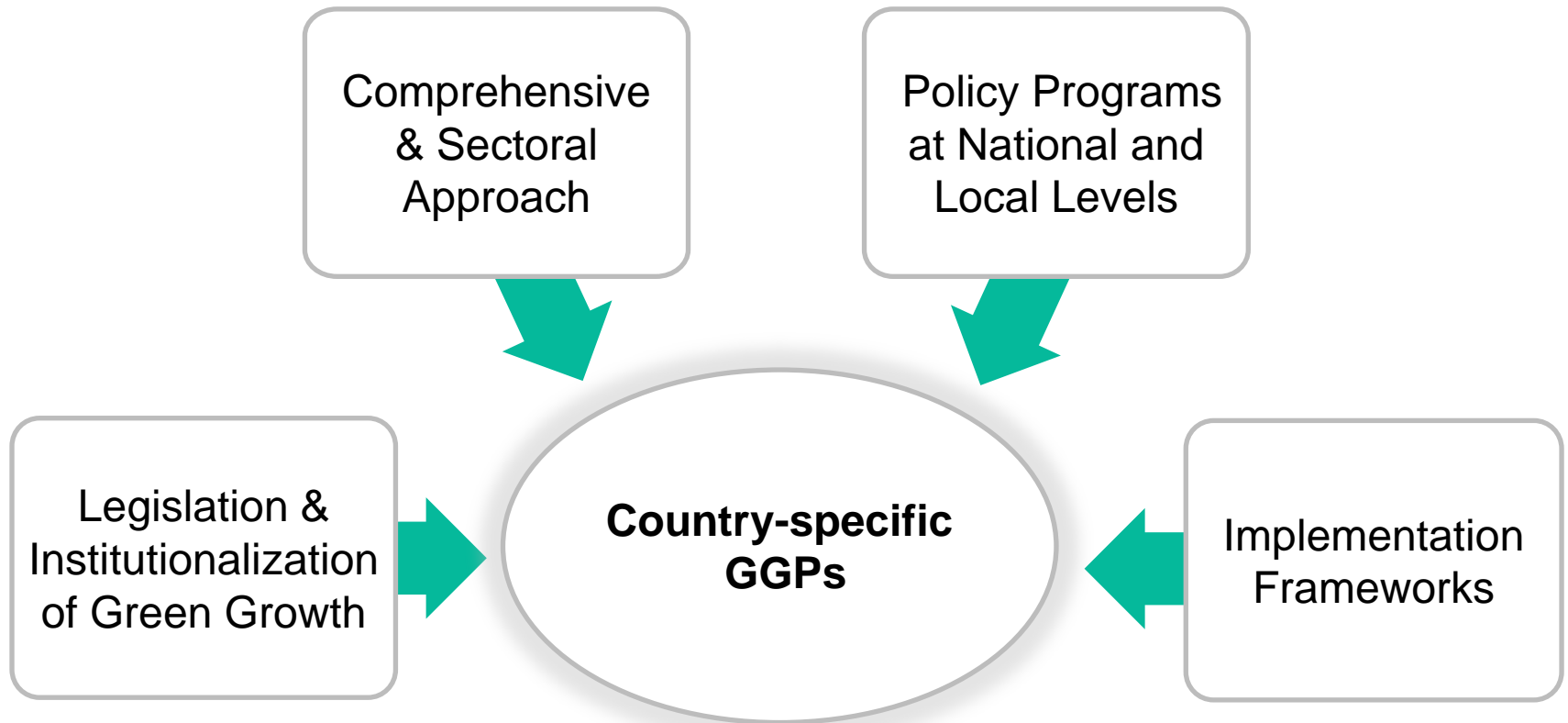
**GGGI's 1st
Anniversary &
Global Green
Growth Summit
2011**

**Seoul, Korea
June, 2011**



Activity: 1. Green Growth Plans (GGPs)

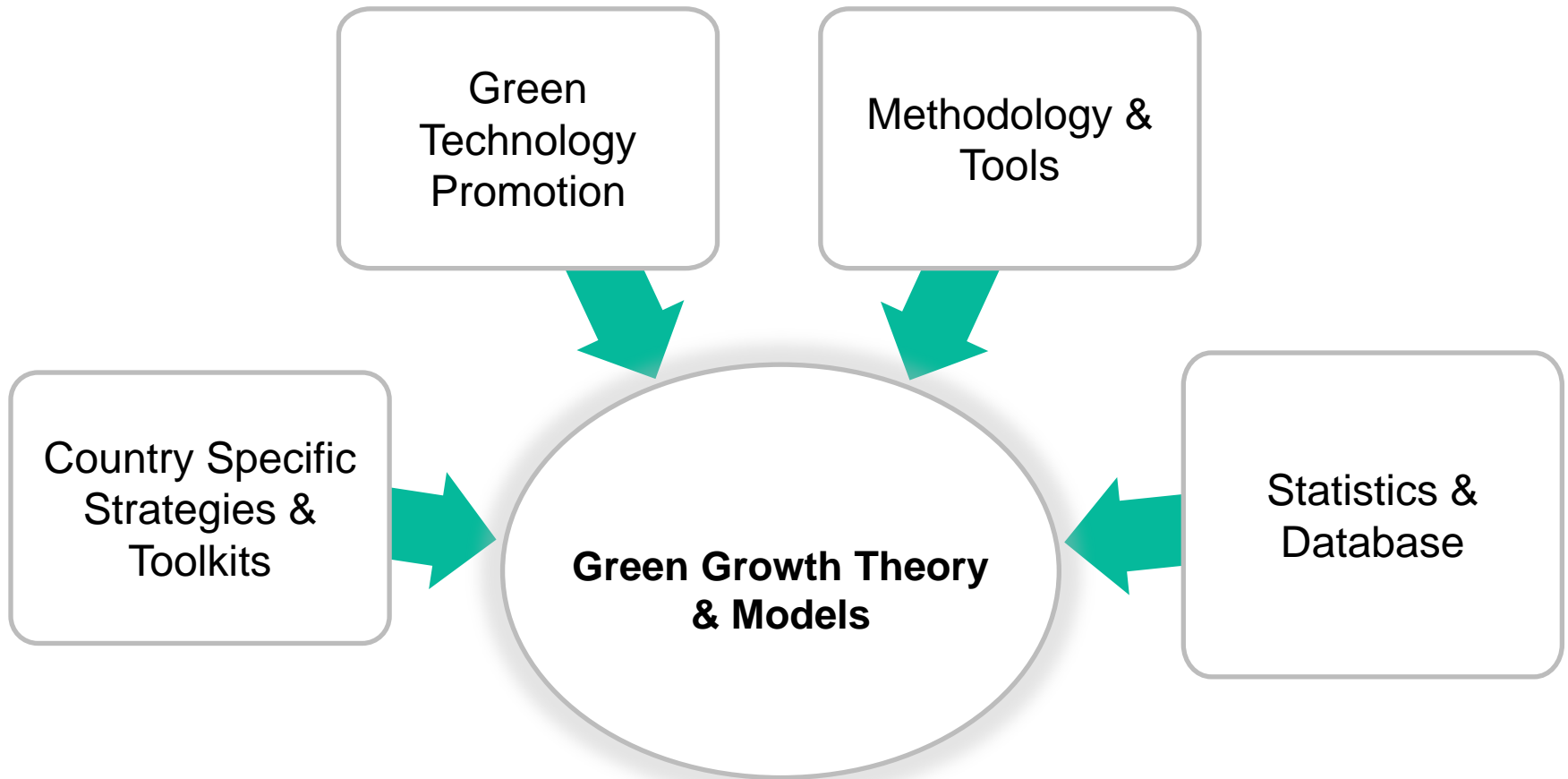
Through Country Projects, GGGI provides supports to developing countries in their endeavors to develop Green Growth Plans.





Activity: 2. Research

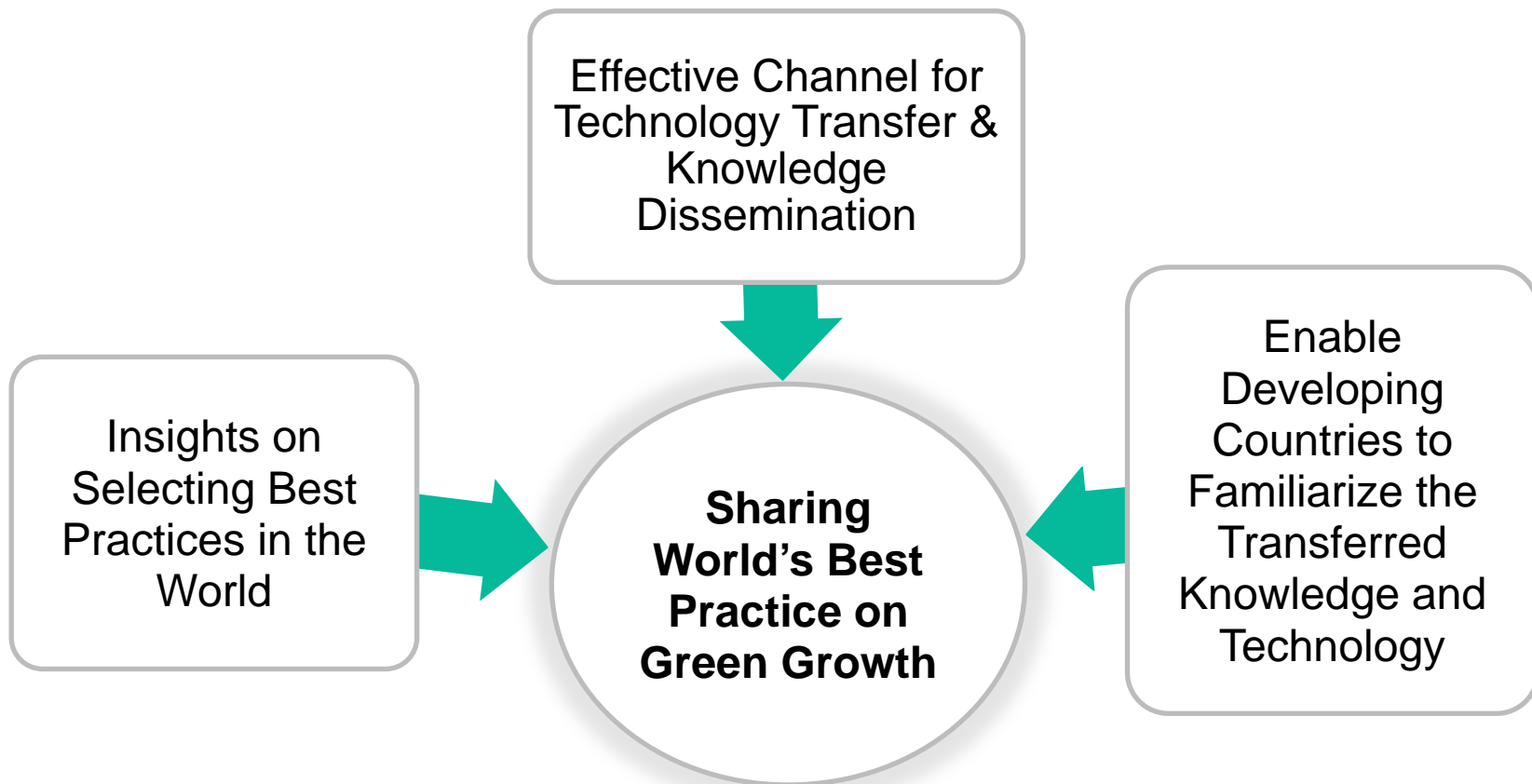
GGGI develops Green Growth theory & models for the new development paradigm.





Activity: 3. Knowledge Sharing

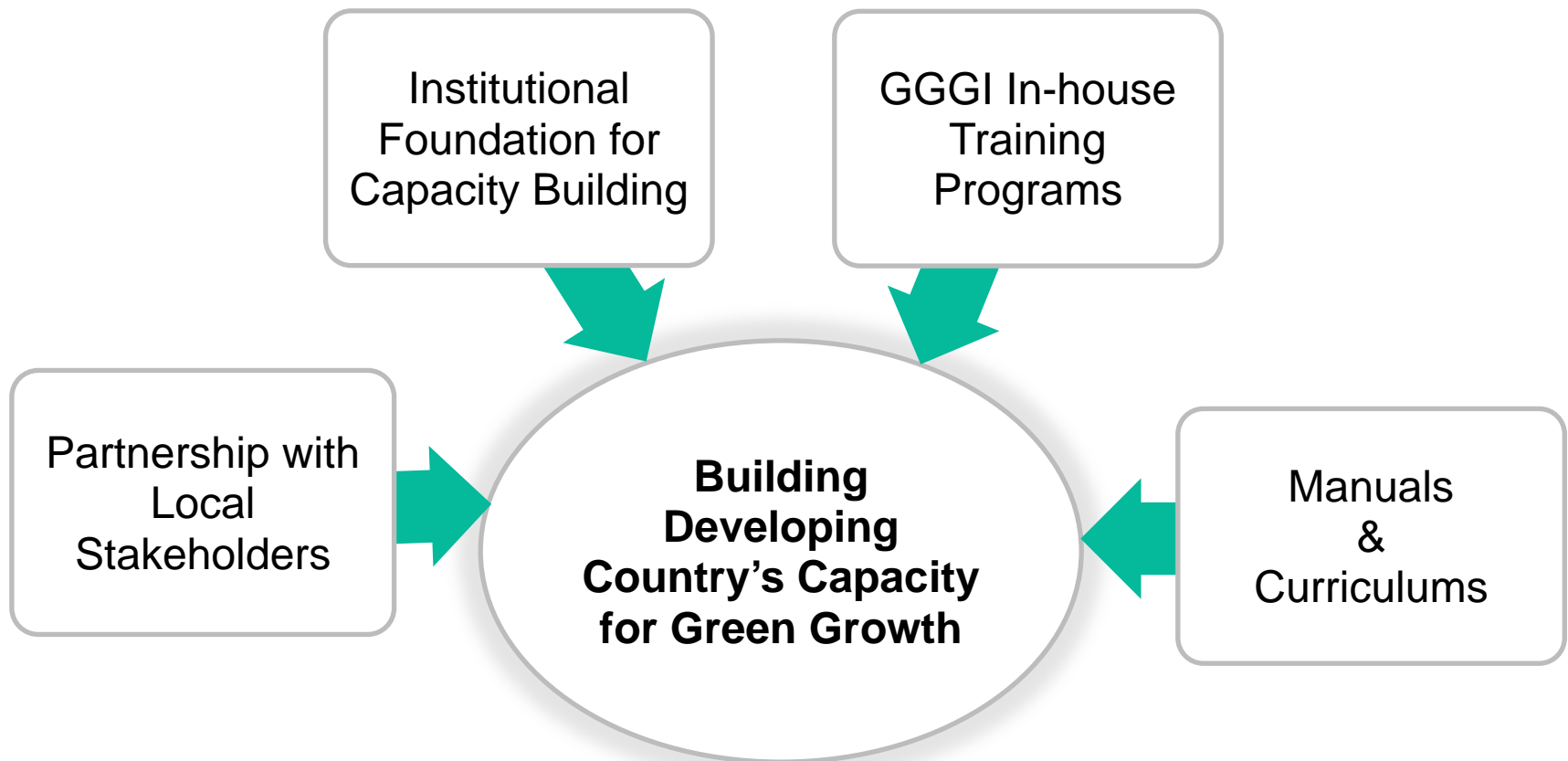
GGGI focuses on “Power of Example” by accumulating and disseminating world’s best practice on Green Growth.





Activity: 4. Capacity Building

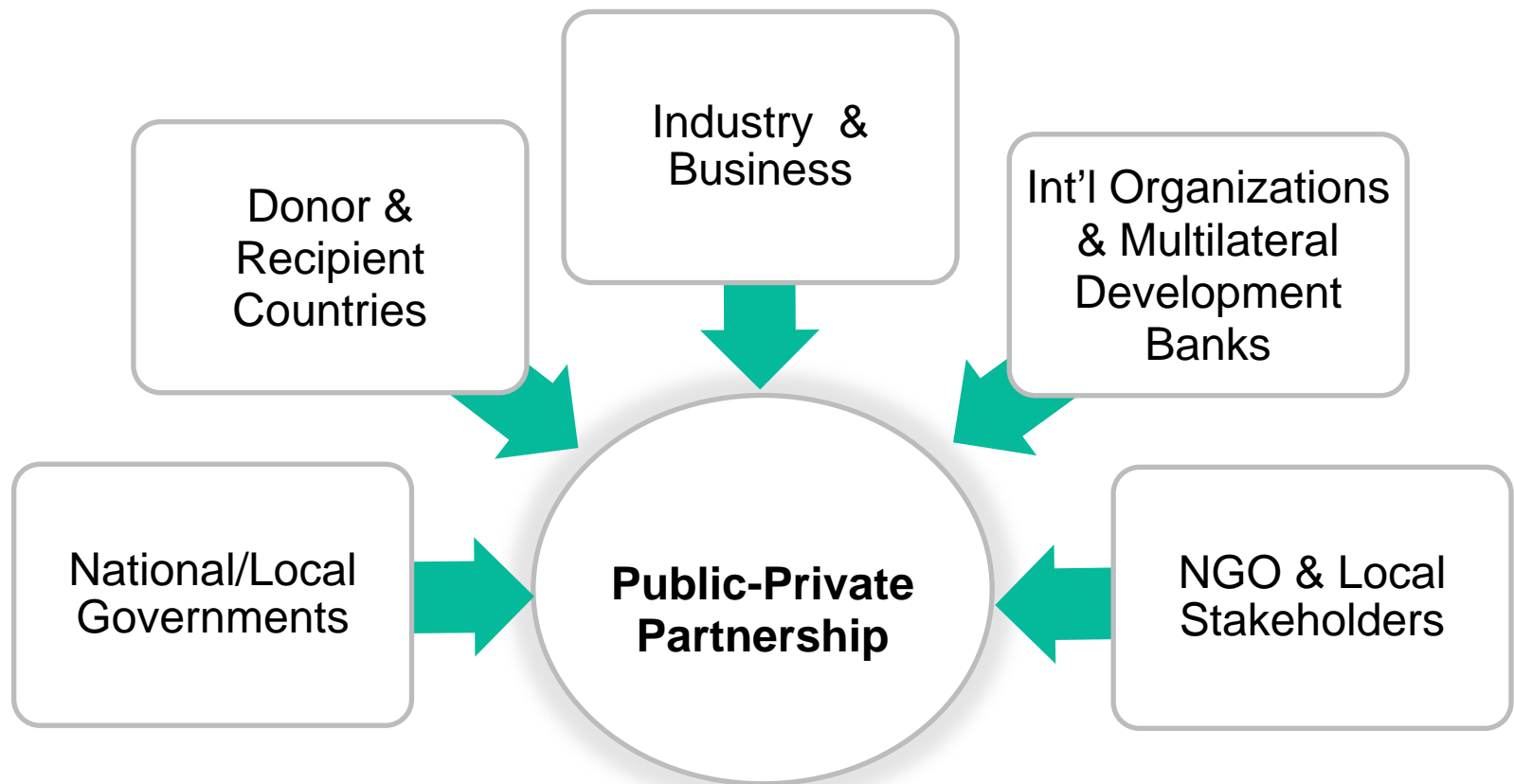
GGGI supports enhancement of developing countries' capacity to sustain their drive for Green Growth.





Activity: 5. Public-Private Partnership

GGGI partners with all relevant groups from public & private, global & local arenas and connects them one another for increased collaboration and efficiency.





Thank you!