‘글로벌 변화와 도시정책’에 관한 OECD–국토연구원 국제세미나

(OECD-KRIHS Seminar: Global Big Change and Urban Policy)

2009. 11. 4

일시: 2009. 11. 4(수) 14:00 ~ 18:00
장소: 국토연구원 강당
주최: 국토연구원 KRIHS (Korea Research Institute for Human Settlements)
     OECD

KRIHS 국토연구원
Welcome address

• Yang Ho PARK (President, Korea Research Institute for Human Settlements)

Session I: Urban Policy Issues

• Chairman: Won-Yong KWON (Professor, University of Seoul)

Presentation (14:10-15:20)

1. Global Change and Urban Policy Issues of Korea
   - Young A LEE (Research Associate, KRIHS)

2. National Urban Policies in OECD Countries
   - Lamia KAMAL-CHAOUI (Unit head of urban development at Regional Competitiveness and Governance, OECD)

3. Cross-border Co-operation in the Pan-Yellow Sea Region
   - Hyuck-Jin KWON (Economist at RCG, OECD)

Discussion (15:20 - 15:50)

- Wang-Gun LEE (Research Fellow, KRIHS)
- Won Sup LEE (Research Fellow, KRIHS)
- All participants from OECD

Coffee Break (15:50 - 16:20)
Session II: Green Growth and Cities

- Chairman: Won-Yong KWON (professor, University of Seoul)

**Presentation** (16:20 - 17:20)

1. The effect of Green Growth Strategies on Korean Cities
   - Kwang-ik WANG (Research Associate, KRIHS)

2. Cities and Green Growth
   - Joaquim OLIVEIRA-MARTINS (Division head of RCG, OECD)

**Discussion** (17:20 - 17:40)

- Sang-Heon LEE (Professor, Hanshin University)
- Jinkyu CHUNG (Research Fellow, KRIHS)
- All participants from OECD

**Dinner** (18:00)
Session I

- Chairman: Won-Yong KWON (Professor, University of Seoul)

- **Presentation** (14:10-15:20)
  - Global Change and Urban Policy Issues of Korea
    (Young A LEE, Research Associate, KRIHS)
  - National Urban Policies in OECD Countries
    (Lamia KAMAL-CHAOUI, Unit head of urban development at Regional Competitiveness and Governance, OECD)
  - Cross-border Co-operation in the Pan-Yellow Sea Region
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  - All participants from OECD
세계적 변화와 한국의 도시정책

Global Change and Urban Policy Issues of Korea

이영아 국토연구원 책임연구원
Global Change and Urban Policy
Issues of Korea

OECD-KRIHS International Seminar
4th November 2009

Korea Research Institute for Human Settlements
Young A Lee (yalee@krihs.re.kr)

Contents

- Global Change and Urban Policy
- Economic Dimension
- Environmental Dimension
- Social Dimension
- Conclusion
Global Change and Urban Policy

Ideas on Global Change

- Urban Policy of a country influenced by global change and characterised as a response of government to the change

- Ideas on globalisation
  - Hyperglobalist view vs. Sceptical view
  - Transformationalist view
    - unprecedented diverse process
    - depends on the state’s response
    - diverse effect on the state

- Three dimensions of Global Changes
  - economy
  - environment
  - Society

Global Change and Urban Policy

- Global change is an external factor to influence urban policy and to shape spatial structure of a country.

- How to express the effect of global change on cities
  - Distribution of ‘population’ and ‘industry’ within and between cities
    * Centralisation of population and industry to core cities
    * Decrease of population and industry in periphery cities
  - Environmental and social inequality between people living in different areas

→ Urban policy has been employed as a means to operate the distribution of population and industry and to improve the quality of life in a variety of cities.
Global Change and Urban Policy

Three dimensions of Global Change

**Economy**
- Core and periphery / Spatial disparity
- Balanced development / Competitiveness

**Environment**
- Climate change / Environmental pollution
- Sustainable development / Green growth strategies

**Society**
- Social inequality and diversity
- Social cohesion strategies

Global Change and Urban Policy

Ethics of Korean urban policy and its trend

<table>
<thead>
<tr>
<th>Ethics of urban policy</th>
<th>Environment</th>
<th>Economy</th>
<th>Society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Growth (1960s~1980s)</td>
<td></td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>Sustainable Development (1990s)</td>
<td>○</td>
<td>△</td>
<td></td>
</tr>
<tr>
<td>Participation and Distribution (late-1990s-early 2000s)</td>
<td>△</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>Green Growth (mid-2000s)</td>
<td>○</td>
<td>○</td>
<td>△</td>
</tr>
</tbody>
</table>
Economic Dimension

External Factors
- Global Economic Change

Internal Factors
- Industrialisation
- Local autonomy

Pressure of balanced development

Effects on cities and regions of Korea
- Urbanisation
- Concentration of the Capital region
- Spatial disparities

Policy Response
- Balanced development
- Regional innovation
- Stability of the Capital region
- Preventing Urban Sprawl (Green belt)

Recent Strategies of urban policy:
- Empowering all regions instead of regulation vs. deregulation: mega economic regions
- Classifying cities: the Capital region, stabilised and backward cities & urban regeneration strategies by city types

Recently...
- World economic crisis
- Local autonomy consolidated
- Stabilisation of population growth

Urbanisation Trend
- Rapid urbanisation followed by industrialisation: 37%('60) → 90%('00)
Economic Dimension

Distribution of Population
- Spatial polarisation
  - Population of the Capital region: 21% ('60) → 48% ('05)
  - Dominance of large cities
    - No. of million cities: 2 ('60) → 8 ('03)
    - Population share: 39% ('60) → 52% ('03)

Industrial Location Policy
- 1960s: Light industries in large cities
- 1970s: Heavy/chemical industries in selective growth poles
- 1980s: Small/medium complexes in less industrialized regions
- 1990s: Create new industrial spaces in west coast region
- 2000s: Industrial clusters with RIS and R&D activities

Economic Dimension

Concentration of the Capital Region

<table>
<thead>
<tr>
<th>Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>47.6%</td>
</tr>
<tr>
<td>Mfg. firms</td>
<td>56.7%</td>
</tr>
<tr>
<td>Bank Deposits</td>
<td>88.3%</td>
</tr>
<tr>
<td>R&amp;D institutions</td>
<td>70.0%</td>
</tr>
<tr>
<td>Government agencies</td>
<td>85.0%</td>
</tr>
<tr>
<td>100 Largest corporations</td>
<td>91.0%</td>
</tr>
</tbody>
</table>
Economic Dimension

Policy Responses to Urban Sprawl of large cities

- Green belt established in the 1970s
  - to contain urban sprawl
  - resulting in leap-frogging urban development and higher costs for infrastructure
  - contributing to preserving the quality of urban environment

Economic Dimension

Policy Responses to unbalanced growth between regions

- Regulation – deregulation – regulation
  - Capital Region Management Plan set since the 1980s for growth control of the capital region
  - Deregulation of land use control in 1993 resulting in widespread urban sprawl
  - Fundamental steps were taken in 2002 by introducing:
    * development permit system
    * land suitability assessment system
    * on-site infrastructure provision rule
    * district unit planning system
Economic Dimension

Regional Policy responded to global economy

Objective
• To create ‘Mega Economic Regions (MERs)’ with global competitiveness

Strategies
• To implement leading projects
• To build institutional bases
• To establish governance system

Principles
• Economy of scale
• Area-wide networking
• Specialization
• Decentralization

Vision of mega economic regions

Global business hub
Frontier of tourism, resort, well-being industries

Korea's silicon valley
New growth region of traditional culture and high-tech industries

Creative region for culture & arts and green industries
Center for key industries and logistics

Asia's best international free-trade city
Economic Dimension

Increase Rate of Population by province (TL3)

Urban development strategies by city types

- **Major large cities and the Capital region**
  - New town development in urban fringes
  - Urban redevelopment / regeneration within central areas in a city
  - Making a Livable City project

- **Population stabilised cities**
  - ‘Residential Environment Improvement Projects’ in a city
  - Making a Livable City project

- **Population decreasing cities**
  - Managing a city rather than developing
Environmental Dimension

External Factors
- Environmental issues raised as trans-national concerns

Internal Factors
Industrialisation
Development-oriented urban policy

Recently...
- Climate change
- Need of global effort in the face of climate change

Effects on cities and regions of Korea
- Air / water / soil pollution
- Natural disasters, yellow sand
- Losing green area

Strategies: sustainable development in the 1990s
- securing open space and green area
- stringent ‘floor area ratio’ and ‘building-to-land ratio’

Green Growth strategies in the mid-2000s
- Compact city
- Environmental policy combined with economic growth: to develop environment industry
- Urban sprawl → urban infill

Social Dimension

External Factors
- Transnational migration
- Economic Crisis

Internal Factors
- Aging society
- Disparity between Lower and higher income class
- Residents participation

Issues on cities and regions of Korea
- Underprivileged people increased (eg. unemployed and homeless people, elderly people living alone)
- Foreign migrant workers’ settlement areas formed

Strategies at local level
- Supplying social housing
- Providing more welfare service facilities
- Providing cultural programmes for immigrants to settle down
- Making livable city as community-level development with resident participation

Recent Strategies for social issues
- Providing social housing & private affordable housing and expanding target group for those housing
- Creating jobs in green industry
Social Dimension

<Trend of unemployment>

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Unemployment (%)</td>
<td>2.4</td>
<td>2.1</td>
<td>7.0</td>
<td>6.3</td>
<td>4.4</td>
<td>3.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Unemployment of secondary school graduates (%)</td>
<td>3.4</td>
<td>2.5</td>
<td>8.3</td>
<td>7.6</td>
<td>5.1</td>
<td>4.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Unemployment of university graduates (%)</td>
<td>4.4</td>
<td>2.8</td>
<td>5.9</td>
<td>5.4</td>
<td>4.2</td>
<td>3.4</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Source: statistics Korea, 2006, Social index of Korea

<Trend of population of elderly people aged over 65>

<table>
<thead>
<tr>
<th>Year</th>
<th>1990</th>
<th>2000</th>
<th>2006</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
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</thead>
<tbody>
<tr>
<td>65+ (%)</td>
<td>5.1</td>
<td>7.2</td>
<td>9.5</td>
<td>11.0</td>
<td>15.6</td>
<td>24.3</td>
<td>32.5</td>
<td>38.2</td>
</tr>
</tbody>
</table>

Social Dimension

Trend of foreigners registered to stay and work in Korea

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Ten thousand persons</td>
<td>6.0</td>
<td>6.1</td>
<td>6.6</td>
<td>6.7</td>
<td>8.5</td>
<td>11.9</td>
<td>12.9</td>
<td>17.7</td>
<td>16.8</td>
<td>16.8</td>
<td>24.0</td>
<td>23.0</td>
<td>26.2</td>
<td>47.5</td>
<td>48.5</td>
<td>63.1</td>
<td>66.6</td>
<td>85.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Social Dimension

Strategies for social cohesion

- Supply of social housing
  - for elderly people living alone
  - increase of social housing provided by the public sector

<table>
<thead>
<tr>
<th>Year</th>
<th>Public Sector</th>
<th>Private Sector</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>20,000</td>
<td>20,000</td>
<td>40,000</td>
</tr>
<tr>
<td>1998</td>
<td>25,000</td>
<td>25,000</td>
<td>50,000</td>
</tr>
<tr>
<td>1999</td>
<td>30,000</td>
<td>30,000</td>
<td>60,000</td>
</tr>
<tr>
<td>2000</td>
<td>35,000</td>
<td>35,000</td>
<td>70,000</td>
</tr>
<tr>
<td>2001</td>
<td>40,000</td>
<td>40,000</td>
<td>80,000</td>
</tr>
<tr>
<td>2002</td>
<td>45,000</td>
<td>45,000</td>
<td>90,000</td>
</tr>
<tr>
<td>2003</td>
<td>50,000</td>
<td>50,000</td>
<td>100,000</td>
</tr>
<tr>
<td>2004</td>
<td>55,000</td>
<td>55,000</td>
<td>110,000</td>
</tr>
<tr>
<td>2005</td>
<td>60,000</td>
<td>60,000</td>
<td>120,000</td>
</tr>
<tr>
<td>2006</td>
<td>65,000</td>
<td>65,000</td>
<td>130,000</td>
</tr>
</tbody>
</table>

Recent strategies for social cohesion

- Bogeumjari housing
  - 1.5 million housing provision plan by 2018
    * one million in the capital region
    * half million in local area
  - Social housing and private affordable housing
    * private affordable: 700,000
    * social housing: 800,000
  - Provided by the public sector

<Location of social & private affordable housing (Bogeumjari)>
Social Dimension

Recent strategies for social cohesion

- Green new deal project
  - to create 960,000 new jobs related to environment industry
  - to invest in green infrastructure, low carbon-high efficiency industry skills, eco-friendly life
- Internship for young people
  - about 300,000 places of internship in small-medium sized companies, government offices
- Social enterprises and social employment aiming for 125,000 jobs
  - to combine with urban regeneration

Thank you
OECD 국가의 도시정책

National Urban Policies in OECD Countries

Lamia KAMAL–CHAOUH, Unit head of urban development at Regional Competitiveness and Governance, OECD
National Urban Policies in OECD Countries

Seminar organised by KRIHS (Korea Research Institute of Human Settlement) in Seoul on 4 November 2009

Lamia Kamal-Chaoui
Head Urban Development Programme
OECD Directorate for Public Governance and Territorial Development

Population concentration:
Percent of national population which lives in the 10% of TL3 regions with the largest population

Concentration matters
Concentration is a fact of life:
• People are constantly concentrating in a few places
Concentration matters

Urbanisation:
Percentage yearly change in total population living in large urban TL3 regions in the whole country: 1995 to 2005

Korea

Concentration is a fact of life:
• Countries –even in OECD- are increasingly being urbanised
• Korean People are constantly concentrating in intermediate regions

Economic concentration:
Percent of national GDP in the 10%TL3 regions

• Economic activity is often concentrated in a few places
Cities are key engines of national economies. Most of the largest OECD metro-regions have a higher GDP per capita than their national average, a higher labour productivity level, and many of them tend to have faster growth rates than their countries.

Agglomeration economies. The concentration of jobs and firms can be beneficial: pooled labour markets, backward and forward linkages among firms, and knowledge spillovers can lead to higher productivity growth.

Benefits of Agglomeration

Higher GDP per capita... Higher Productivity... Higher Employment...

Population (2005)

Metropolitan region share of National GDP (2005)

A common OECD Definition for metro-regions based on functional areas

78 metro-regions with more than 1.5 million inhabitants

Around 50%: Budapest, Seoul, Copenhagen, Dublin, Helsinki, Brussels, (Montreal, Toronto, Vancouver in their respective provinces), etc.

One third: Oslo, Auckland, Prague, Tokyo, Stockholm, London, Paris
Challenges of Agglomeration

- Success should not be taken for granted. Diseconomies can emerge due to negative externalities including congestion, environmental degradation and social disorder (declining neighbourhoods, criminality).

Cities can falter. A group of cities systematically performs below their national averages, for almost all types of socio-economic indicators. In many cities, wealth creation does not produce enough job creation (more than one-third of the largest metro-regions have above national average unemployment rates) and activity rate is lower than other types of regions.

Cities and Disparities

In many cases intra-regional disparities are widest in large metro-regions in the OECD.
**Trends in national urban policies**

**REMEDIAL APPROACH**
- Traditional sectoral urban policies (e.g., social housing, transport infrastructure, labour market integration, distressed areas)
  - The sectoral approach prevails
  - Funding remains an issue
  - Integrated urban development is not at all integrated
  - Still top down, weak local capacity
  - Vulnerable to political cycles
  - Too many projects leads to fragmentation
  - Lack of monitoring and assessment
  - What about climate change??

**PRO-ACTIVE APPROACH**
- Competitiveness policies (e.g., clusters and regional innovation, higher education and research institutes, attractiveness, skills...)
  - Holistic and multi-sectoral approach for competitive and liveable cities
  - Integrated and participative approach (from top down to bottom up)

---

**Cities and Climate Change**

Urbanisation and Carbon Emissions

Urban population shares and CO2 emissions per capita

Cities concentrate half of the world population but responsible for 2/3 of total energy and CO2 emissions

*(IEA World Energy Outlook 2008)*
Urban Form Matters – Dealing with Urban Sprawl

Per capita carbon emissions produced by transport activities and urban density

136 Port Cities at Risk:
- As of 2005, 40 million people and 5% of global GDP are exposed
- By 2070, 150 million people and 9% of global GDP expected to be exposed

Conclusion

Towards a new paradigm in national regional/urban policy framework?
(Cross-sectoral Strategies, Equity vs Efficiency, Growth v.s. Sustainability)

Rethinking the Urban Policy Agenda
- Seek transversality at all levels – urban is a cross-cutting issue
- Streamline the definition of concepts (eg. Urban Policy, Units of Analysis, Integrated Approach, etc...)
- Develop analytical tools to allow international comparison of policy experiences
- Engage in depth dialogue with developing and emerging economies
환황해권의 초국경적 도시 협력
Cross-border Co-operation in the Pan-Yellow Sea Region

Hyuck-Jin KWON, Economist at RCG, OECD
OECD’s findings on Cross-border co-operation in the Pan Yellow Sea Region

Hyuck-Jin KWON
OECD

KRIHS-OECD Joint Seminars on Nov. 4th, 2009 in Seoul

1. Cross-border metro regions
(1) Previous studies on cross-border metro regions

a) Oresund region
b) TriRhena Regio
c) Baltic Sea Region
d) Great Lakes Region
e) San Diego – Tijuana Region

B) TriRhena

- Austria vs. Slovak Republic
- Population: 2.9 million
- The Council of the Regio TriRhena

Source: Regio TriRhena

5/25

c) Baltic Sea Region

- 11 Baltic countries
- Population: 15 million
- The Union of Baltic Cities

Source: Nordregio
d) Great Lakes Region

- Canada vs. US
- Population: 4.7 million
- The Great Lakes Commission

Source: Great Lakes Commission

e) San Diego – Tijuana

- US vs. Mexico
- Population: 4.0 million
<<Main differences between EU and North American cases>>

<table>
<thead>
<tr>
<th>Theme</th>
<th>Europe</th>
<th>North America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Identity</td>
<td>Cultural interdependency: shared values and legal frameworks</td>
<td>Economic &amp; Environmental interdependency</td>
</tr>
<tr>
<td>Initiation</td>
<td>Place-based: Active engagement of local governments, support from national and international bodies</td>
<td>Function-based: Engagement of national and state/provincial governments</td>
</tr>
<tr>
<td>Governance</td>
<td>Umbrella organizations which cover diverse issues</td>
<td>Thematic bodies which deal with specific topics</td>
</tr>
</tbody>
</table>

(2) OECD’s new study: the Pan Yellow Sea Region

Source: OECD (forthcoming)
a) Economic Size of the PYSR

- Pop. 256 mil.; GDP US$ 1.5 tril. in 2006
  - similar GDP to Spain, but 5 times of its population
- A global manufacturing engine
  - three countries (C-J-K) in PYSR produced
    - 85.2% of the world’s ships
    - 41.6% of all consumer electronics
    - 33.6% of all cars in 2007

b) Major target cities in PYSR

- 10 key port cities
  - Tianjin, Qingdao, Dalian, Yantai of China
  - Busan, Incheon, Ulsan of Korea
  - Fukuoka, Kitakyushu, Shimonoseki of Japan
- Common features of those cities
  - second tier cities, none is the capital city
  - well-established ports & industrial bases
  - closely networked via various city linkage
2. Key elements for sustainable cross-border regions

- Economic integration
- Physical infrastructure integration
- Socio-cultural integration

Good governance framework,
With a leading role for central government

(1) Economic integration in the PYSR

- Japanese exports to Korea
- Japanese exports to China
- Chinese exports to Korea
- Chinese exports to Japan
- Korean exports to China
- Korean exports to Japan

Volume of intra-regional exports in USD2007 billions

1995
2007
(1) Economic integration in the PYSR

Correlation of export structures in terms of SITC-1 level

(2) Infrastructure integration in the PYSR

Total passenger volume among three PYSR countries, 2002-2006
(2) Infrastructure integration in the PYSR

Container traffic in three PYSR countries, 1990-2004

![Graph showing container traffic in three PYSR countries, 1990-2004.](image)

(2) Infrastructure integration in the PYSR

Ranking of top global ports in container throughput, 1980-2007

<table>
<thead>
<tr>
<th>Year</th>
<th>1980</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NY/New Jersey</td>
<td>2.0</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>2</td>
<td>Rotterdam</td>
<td>1.9</td>
<td>Singapore</td>
</tr>
<tr>
<td>3</td>
<td>Hong Kong</td>
<td>1.5</td>
<td>Busan</td>
</tr>
<tr>
<td>4</td>
<td>Kobe</td>
<td>1.5</td>
<td>Shanghai</td>
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<tr>
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<td>Kaohsiung</td>
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<tr>
<td>6</td>
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<td>Saint John</td>
<td>0.9</td>
<td>Rotterdam</td>
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<tr>
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<td>0.8</td>
<td>Los Angeles</td>
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<tr>
<td>10</td>
<td>Oakland</td>
<td>0.8</td>
<td>Antwerp</td>
</tr>
</tbody>
</table>

...
(2) Infrastructure integration in the PYSR

New multi-modal transportation systems

(3) Socio-cultural network in the PYSR

* Official website of Korean Broadcasting System
(3) Socio-cultural network in the PYSR

Korea’s sister city relations with the PYSR countries, 1960-2008

Source: Korea Local Authorities Foundation for International Relations, www.klafir.or.kr

(3) Socio-cultural network in the PYSR

China’s sister city relations with the PYSR countries, 1970-2008

(3) Socio-cultural network in the PYSR

Multi-lateral city linkage programmes

- Organization of East Asia Economic Development (OEAED)
- Yellow Sea Rim Economic and Technology Conference (3 states + total 22 provinces)
- Korea-Japan Strait Coastal Region Governors’ Meeting (Japan 4 provinces + Korea 4)
- Busan-Fukuoka Economic Council

3. Recommendations

(1) Share a common vision for the PYSR
- Their community's future are not coherent
- Complementarities are not pursued
  - Duplicated investments, similar urban strategies…

→ Deepen dialogue among stakeholders
→ Joint project will be a good starting point
3. Recommendations

(2) Strengthen institutionalization
  - Simply founded on good-will exchanges
    - based on voluntary agreements
  - Subject to political change, hence fragile

→ In the long-term, could seek for legal entities to bridge discrepancies
→ Need to secure region-based financial resources like EU INTERREG program

(3) Ease and align regulations
  - Different Customs and immigrant procedures hinder regional integration
    - based on voluntary agreements
  - Incompatible transport modes, inadequate technology standardization

→ Central governments should play a leading role in adjusting regulations
3. Recommendations

(4) Facilitate horizontal dialogues among three central governments in the PYSR

- Currently, there are three different bi-lateral meetings for territorial policy
- Engagement in city linkages is weak

→ Central governments should steer local-driven linkages (like Union of Baltic Seas)
→ Trilateral ministerial meetings is needed

Thank you

hyuckjin.kwon@oecd.org
Session Ⅱ

- Chairman: Won-Yong KWON (Professor, University of Seoul)

- **Presentation** (16:20 – 17:20)
  - The effect of Green Growth Strategies on Korean Cities  
    (Kwang-ik WANG, Research Associate, KRIHS)
  - Cities and Green Growth  
    (Joaquim OLIVEIRA-MARTINS, Division head of RCG, OECD)

- **Discussion** (17:20 – 17:40)
  - Sang-Heon LEE (Professor, Hanshin University)
  - Jinkyu CHUNG (Research Fellow, KRIHS)
  - All participants from OECD
한국 도시의 녹색 성장 전략
The Effect of Green Growth Strategies on Korean Cities

왕광익 국토연구원 책임연구원
The Effect of Green Growth Strategies on Korean Cities

4th. Nov. 2009

Kwang-ik Wang (Research Associate, KRIHS)

Contents

I. National Strategies: National Land Planning
   1. Definition: Low Carbon Green Growth
   2. National Strategies for Green Growth & Five-year Plan

II. National Strategies: Urban Planning
    1. MLTM’s Green City Guidelines
    2. Status: Low Carbon Green New Towns
    3. Green City Project: Gangneung City

III. Implications
National Strategies: National Land Planning

I-1. Definition: Low Carbon Green Growth
I-2. National Strategies for Green Growth & Five-year Plan

I-1. Definition: Low Carbon Green Growth
I-1. Definition: Low Carbon Green Growth

**Low-Carbon Green Growth Statement**

A vision statement on **low-carbon green growth**

*made by president Lee (2008.08.15), followed by his attendance on G8 High-level Talks*

- “Green Growth promotes a sustainable growth..... and a new paradigm generating dynamics of growth and creating new jobs.” (15. Aug. 2009)
- “Green represents more than environment, and Growth is complement for environment”
- “For us, Low-Carbon Green Growth is not an option, but an imperative.” (29. Aug. 2009)

**Government Directions #1**

- **Low Carbon Policies for Reducing Greenhouse Gas**
  - Decouples economic growth from pollution
  - Minimizes gas emission and pollution based on the eco-efficiency

- **Economic Growth by Green Growth, based on Green Technology**
  - Encourages green technology and industry reducing greenhouse gases, improving eco-friendliness

- **Green Growth from Technological Convergence**
  - Gets globally competitive edges in green industry by converging IT, BT and NT

- **A Job Creator**
  - Addresses the issue : “growth with no job creation”
**Government Directions #2**

- **Leverages enterprises’ competitiveness**
  - Transforms manufacturing-oriented industry to knowledge-driven industry
  - Accommodates forthcoming megatrends to find momentum by technological- and industrial convergence.

- **Reforms Lands, Cities, Buildings and Transportation**
  - Deployment of Low-Carbon concept to land planning
  - Fostering green cities based on eco system
  - Investments on low-carbon and eco-friendly SOC
  - Green home and buildings using renewable energy
  - Innovative changes on living conditions and circumstances

- **Encourages Green Products and Public Access to Environmental Info.**
  - Expands financial supports and public purchase on Green Product
  - Promotes eco-friendly lifestyle: bicycle ride, energy & water saving, recycling, etc.

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**Government Directions #3**

- **Educational and Cultural Plans**
  - Socio-cultural and moral approach for comprehensive changes on living and cultural environment
  - Promotes public-led educations and movements for national consensus

- **Changes on Taxation**
  - Eco-friendly taxation to facilitate conservation, resource saving and employment

- **International Policy and Awareness**
  - Builds new “Hanryu” using “green” and “eco-friendly” concepts
  - Green Leadership by mediating between nations for climate change
I-2. National Strategies for Green Growth & Five-year Plan

Organizational Readiness #1

A cross-government association for Climate Change Protocol was founded by central government in 1998

- Association for Climate Change Protocol
  - Chaired by Prime Minister
- Board of Committee
  - Minister of PMO
- Dept. of Countermeasures
  - Chaired by Secretary Prime Minister
- Dept. of Negotiations (MofAT)
- Dept. of Reduction Management (MKE)
- Dept. of Adoption (ME)
- Dept. of Science, R&D (MOSF)
- Dept. of Finance & Fund (MOSF)
- Dept. of Cooperation (MTLM, KSF)
- Private sector advisory group
In 2009, the Presidential Committee on Green Growth started for focused low carbon green growth policies.

- **Chairman**: Prime Minister & nongovernmental delegates

- **Council for Management**

- **Appointed Members**: 28 incl. Committee Members 17

- **Committee of Green Growth and Industry**
- **Committee of Climate Change and Energy**
- **Committee of Green Life and Sustainable Development**

---

**Organizational Readiness #2**

**Regulatory Readiness #1**

- Association for Climate Change Protocol finally issued “Comprehensive Plan for Climate Changes” (Aug. 2008), after issuing four “Comprehensive Countermeasures against Climate Changes.”

- Comprehensive Plan for Climate Changes has 3 objectives and corresponding action plans for participating in global efforts to address climate changes, and realizing low carbon green society.

- For regulatory backup, Cabinet Council approved the draft of “Low Carbon Green Growth Act” (Feb. 2009).
1. National Strategies for Green Growth & Five-year Plan

**Regulatory Readiness #1**

Presidental Committee on Green Growth established “National Strategy and Five Year Plan for Green Growth” with three strategies and ten guidelines.” (July. 2009)

**VISION**

"Become 7th Competitive Green Country until 2020, and 5th in 2050”

**Strategies & Guidelines**

- **Climate Change Adaptation & Energy Independence**
  1. Reducing greenhouse gas emissions
  2. Achieving energy independence & reducing oil-dependency
  3. Climate Change Adaptation

- **Generating New Growth Dynamics**
  4. Stimulate green tech. for growth dynamics
  5. Encourage greentech applications and green industry
  6. Industrial reorganization
  7. Constructing green-economy infrastructures and frameworks

- **Improving Quality of Life & National Prestige**
  8. Greenland and transportation
  9. Innovative changes in living conditions and circumstances
  10. Becoming a model country for green industry

**Regulatory Readiness #2**

Concerning Green Land & Transportation, five strategies were developed for establishing a constituency of green growth

**Strength**

- Regulatory reorganization & R&D works are under way
- Applications & convergence of IT & green growth are in blast (U - Eco city)
- Public funding on energy saving buildings (green home)
- Promotes and supports sustainable transportation (bicycle)

**Weakness**

- Municipalities’ poor appreciation on green land and transportation
- Uncertainty of effectiveness of resources to be taken
- Inappropriate weather and natural conditions for bicycle rides
- Unproven technologies & techniques
- National consensus on the government policies: people’s willingness or sympathy towards the policies

**Opportunity**

- A s in initial stage, high effectiveness is expected when actions taken
- A s with experiences in eco-friendly newtown planning, mgmt. and operation will be expected to be highly effective (with less errors).

**Threat**

- Green transportations

**Directions**

- Low carbon green growth infrastructure for reducing greenhouse gas by reorganizing spatial structures and landscapes.
- Physial and institutional reorganization (eco spaces, programs, promotions...)
- Establishing standards for energy-effective green buildings and promoting the constructions.
- Establishing a constitution for bicycle-friendly transportation environment and system.

**Strategies**

- Green Land & City
- Enlarged Eco-Space
- Green Constructions
- Green Transportation
- Bicycle Riding Sustainable Transportation
National Strategies: Urban Planning

II-1. MLTM’s Green City Guidelines
II-2. Status: Low-Carbon, Green New Towns
II-3. Green City Project: Gangneung City
Planning Guidelines for Green Growth


- Deals with standards, evaluation, predictions and countermeasures concerning the application of low carbon green growth concepts to urban planning factors.

Overview of MLTM’s Urban Planning Guidelines for Low Carbon Green Growth

1. Institutional / regulatory foundation to deal with climate change influences on urban planning
2. Reducing greenhouse gas by figuring out the current emission volumes
3. Evaluating energy efficiency of plans on the land use unit basis

Features: 
① Time-Frame  ② Target  ③ Measurability  ④ Feasibility

Provisions

Objectives and Scopes

Provide standards and guidelines for establishing Metropolitan Plan, Urban Comprehensive Plan and Urban Management Plan, so that the plans can deal with possible affects on from climate changes and can be compatible with central government’s Low Carbon Green Growth objectives.

Forces Metropolitan Plan, Urban Comprehensive Plan and Urban Management Plan to accommodate;
- Countermeasures against greenhouse gas emission and possible affects by climate change.
- Planning factors and devices to promote low carbon and green environment in accord with central government's Low Carbon Green Growth objectives.
**Principles**

- Compatible with central government’s Low Carbon Green Growth Objectives and relevant regulations (Comprehensive Plan for Climate Changes, Comprehensive Plan for Energy)
- Suggest systematical and comprehensive countermeasures against greenhouse gas emission and climate changes in terms of spatial structure, transportation system, natural resource conservation and environment management, energy, and open spaces.
- Represent measures to reduce and effectively use traditional energy so as to reduce greenhouse gas emission and settle energy-saving development.
- Consider ways to ensure, supply and use new and renewable energy.
- Reflect locality in geographical and socio-economic terms to relevant plans.

**Natures and Attributes**

- Enforce plans to reduce greenhouse gas emission, closely linked with Comprehensive Plan for Climate Changes.
- Force resulted Metropolitan Plan, Urban Comprehensive Plan and Urban Management Plan to be mutually linked functionally with upper and lower urban plans.
- Complements existing planning guidelines for Metropolitan Plan, Urban Comprehensive Plan and Urban Management Plan so that they can handle the possible affects from climate changes.
- Appreciates the locality; allows municipalities to reflect their geographical and socio-economical characteristics to the relevant plans.
Target Plans & Requirements

**Metropolitan Plan**
- Effective countermeasures against climate change linked with growth plans of the targeted metropolitan area
- Reorganize spatial structures of the targeted area, in accord with the countermeasures
- Suggest measures to control climate change in terms of land use, transportation and distribution facility, and commercial sites and buildings.
- Applies the guidelines to subordinate plans to be established, and the municipality's guidelines for urban planning

**Urban Comprehensive Plan**
- Deploy planning factors for reducing greenhouse gas emission with forecasts basis
- Suggests comprehensive plan for using new and renewable energy fully considering the diverse physical, social and environmental conditions.
- Ensure practicality by reflecting the locality and closely linking with relevant policies of central and metropolitan government.

**Urban Management Plan**
- Executes all the planning considerations concerning climates change suggested by the superior plans
- Includes land use measures to reduce carbon emission and energy
- Planning factors for eco-friendly and energy saving; capping greenhouse gas emissions from commerce sites and buildings; reducing traditional energy consumptions; utilizing new and renewable energy
II-2. Case Study: Low-Carbon, Green New Towns

Case #1 Geomdan Newtown

Ranges over Dangha, Majeon, Bullo and Wondang dong, Incheon Metropolitan City
Area: Approx. 18.2 km²
Population: 230,000 (90,000 households)

FEATURES:
• Energy-Saving Transportation: 10 minutes transit system
• Pedestrian and bike-oriented system
• Parking lots on site fringes
• Buildings equipped with renewable energy system
• Transit malls (C-Square mall)
Case #1 Geomdan Newtown

Project Overview

- Target area is ranged over Dangha, Majeon, Bullo and Wondang dong, Incheon Metropolitan City
- Area: Approx. 18.2 km² (5.5M pyeong)
- Target population: 230,000 (90,000 households, 126/ha)
- Project term: 2008 to 2014
- Promoters: Incheon Metropolitan City Office, IUDC, LH
- Projected Cost: 16 Trillion Won

II-2. Case Study: Low-Carbon, Green New Towns

Case #1 Geomdan Newtown

Energy-Saving Planning

- 10 minute distance from subway station to transportation centers
- Pedestrian network focused on energy-saving

<table>
<thead>
<tr>
<th>Categories</th>
<th>Methods</th>
<th>Techniques</th>
<th>Adopted Techniques</th>
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<tbody>
<tr>
<td>Urban Structure</td>
<td>Formation</td>
<td>Compact City</td>
<td>Station-centric allocation</td>
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<tr>
<td></td>
<td></td>
<td>Public Transportation Oriented</td>
<td>(TOD, BOD, POD)</td>
</tr>
<tr>
<td>Site Planning</td>
<td>Pedestrian System</td>
<td>Pedestrian Network</td>
<td>In-site pedestrian/bike road network</td>
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<td></td>
<td></td>
<td>Spatially Separated Road</td>
<td>Parking lots on site fringes</td>
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<td></td>
<td>Traffic Calming</td>
<td>Traffic Calming</td>
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<tr>
<td></td>
<td>Building Allocation</td>
<td>Considers facing directions and wind path</td>
<td>Construction considering buildings’ facing directions</td>
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<td></td>
<td>Microclimate</td>
<td>Green space &amp; water place within Sites</td>
<td>Green space &amp; water place</td>
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<tr>
<td>Buildings &amp; Facilities</td>
<td>Energy</td>
<td>Buildings equipped with new &amp; renewable energy system</td>
<td>Zero-energy town</td>
</tr>
<tr>
<td></td>
<td>Water system &amp; Ventilation</td>
<td>Building system using graywater &amp; ventilation</td>
<td>Transit malls</td>
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<td>Graywater and ventilation</td>
</tr>
</tbody>
</table>
Urban Structure

- 10 minute transit by foot (POD) and by bike (BOD) to public transportation centers from anywhere within town
- Public transportation (subway) centric system (TOD)
- First urban planning based on eco-friendly transportation system

**Case #1 Geomdan Newtown**

Transportation Networks

- 10 minute distance to subway station by foot (POD) and by bicycle (BOD)
- Circular pedestrian/bicycle network for interconnecting living unit areas

Station-centric allocation

- Consists of 3 living unit areas
- Compact development on pedestrian network centered on subway station

II-2. Case Study: Low-Carbon, Green New Towns
**Case #1 Geomdan Newtown**

**Site Planning**

- **Zero Energy Town**
  - **Aims**: to control and restrict the use of traditional (fossil) energy within town
  - **Target population**: 3,000 households
  - **Facilities**: Houses, Elementary school, community facilities

- **Strategies**
  - Pedestrian/bicycle network allowing 5 minute access to anywhere incl. subway and bus station
  - Traffic Calming System to restrict internal car traffics
  - Equip buildings with renewable energy system

**Traffic Calming Methods**

- Grassed Parking Lot on Fringe
- In-Site Pedestrian Road
- Traffic Calming System to restricting car traffics within site
- Parking lots on basement or site fringes to separate cars from pedestrians
- Internal roads fit to walkers, perambulators or wheelchairs

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**Korea Research Institute for Human Settlements**
Site Planning
- Allocate buildings and control heights and spaces, considering seasonal shades
  - Buildings with low floor on southern sections and partially on northern
  - Design all buildings facing south direction but in diverse manner

Case #1 Geomdan Newtown

Site Planning
- Equips buildings with renewable or new energy system
  - Requires 25~30m² areas per household considering 250~300 kWh electric consumption per household
  - Pursues low floor houses for solar system
  - Also utilizes wind and geothermal energy and waste heat
  - Energy systems focused on the collective consumption
- Artificially forms microclimate
  - Connects green spaces and water places to create microclimate
  - Recycling system and graywater system
Geomdan Newtown

Buildings & Facilities
- Transit Mall
  - Eco-friendly vehicles’ intersection
  - Complex use: commercial & business district
  - Hosts diversified activities by connecting key in-site facilities
  - New and renewable energy system on buildings

Case #2 Pyeongtaek Sosabeol Project
- Located in Pyeongtaek city in Gyunggi Province
- Areas: Approx. 3M m²

Features
- World largest panning case based on renewable energy system
- Clean Development Mechanism (CDM) verification candidate
- Adopts new and renewable energy system to buildings and constructions
- Aims to cover up to 5% energy consumption within the town, using new and renewable energy
- Clustering with treatment facilities for energy efficiency
- Wide adoption of eco-friendly lands and water circulation system
Energy system using new & renewable energy sources

- Equip in-site buildings with renewable energy systems using solar and geothermal energy, waste heat and fuel cell
- Aims to cover up to 5% energy consumption within the town, using new and renewable energy

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<tr>
<td>Housing</td>
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<td>1,790</td>
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<td>Multi housing</td>
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<td>Public Facility</td>
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<td>Schools</td>
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<td>Gov. Buildings</td>
<td>19,720</td>
<td>622</td>
<td>483</td>
<td>18,615</td>
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<td>Parks</td>
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<td>Information Centers</td>
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<td>Total Sum</td>
<td>39,721</td>
<td>6,339</td>
<td>2,713</td>
<td>28,638</td>
<td>2,031</td>
</tr>
</tbody>
</table>

※ per year total generation up to 5.5% (4MWH) of total consumption
II-2. Case Study: Low-Carbon, Green New Towns

Case #2  Pyeongtaek Sosabeol Project

- Further Adoption of Eco System, Water Circulation System and Wind System

- **Green Space & Eco System**
  - Expansion of green places
  - Conservation, restoration, creation & enhancements

- **Water Circulation System**
  - Secures water sources
  - Maintain swampy places

- **Wind System**
  - Wind paths through green places
  - Planting considering wind paths

II-3. Green City Project : Gangneung City
Backgrounds

- **Timely Actions**
  - Requires countermeasures to deal with climate changes
  - Aligning urban plans with national management strategies

- **New Growth Dynamics**
  - Requires a new growth momentum for local economy

Objectives

- **Nation’s Representative Brand City as a World’s Most Livable Green City**
- **Leadership in urban planning for Low Carbon Green Growth strategies**

Potentials

- **Ecological Tourism Resources**
  - Gyungpo beach and Ojukheon surrounding Gyungpo lake
  - Abundant historical and cultural resources highly compatible with green growth and green tourism

- **Transportation & Connectivity**
  - Gangneung IC and JC (Youngdong Expressway) within 7Km radius
  - Gangneung Train Station and Bus Terminal within 9Km radius
  - Pedestrian/bicycle paths along seaside highway and pine forest belt

- **Energy Sources**
  - Abundant natural energy sources
  - Green R&D cluster using adjacent resources; Gangneung Science & Industry Complex, SMB complex and universities
Objectives & Strategies

Objectives

**World Class Green City**
Developing Green Technologies & Producing Renewable Energy

**Green Urban Structure**
Circulating forests, water & resources

**Green Economy & Tourism**
Strategically Nurturing Green business & Green tourism

Strategies

- Reducing greenhouse gas emission by deploying Green Transportation system
- Energy independence and generation system using new and renewable energy generation system
- New & renewable energy generation by nurturing Green technologies & encouraging Green energy generating businesses
- Establishing infrastructures of Green City & Green Growth based on water & resource circulation
- Enhancing carbon treating / absorption ability by creating & managing forest & green places
- Green Industry infra based on U-Eco City & Green technologies
- Enhancing the cross-regional appreciation on Green Growth & developing citizen-oriented Green communities for Green tourism
Basic Conception Alt. #2

- IT (Information Technology)
  - Green Transportation
  - New & Renewable Energy
  - Green Construction
- BT (Biology Technology)
  - Water Circulation
  - Eco System & Green Places
  - U-Eco City
- ET (Environment Technology)
  - Green Construction
- CT (Culture Technology)

Basic Conception Alt. #3

- Utilization
  - Carbon Zero City based on green energy & technologies
- Remobilization
  - Green City based on water circulation & Gungpo lake remobilization
- Preservation
  - Enhancing Amenity by preserving natural & cultural resources
- Management
  - Restoring low carbon water places & securing measures to treating carbon
Greenhouse Gas Emission

**Goals**
- Zero Emission City construction (until 2012)
- Green Energy City that generates green energy

**Goals by Six Key Sections**
- Transportation (IT): Bicycle, pedestrian, online electric vehicle system
- Energy (ET, BT): Green energy (renewable energy) system
- Construction (ET): Green construction system (passive housing)
- Water Resource (BT): Water & resource circulation system & waste management
- Green Place & Forests (BT): Carbon absorption/treating system, urban forests
- Green IT: U-Eco City
  - Green living: residents-centric low carbon green system

Planning Essentials

**Carbon Reduction**
- Utilizing
- Remobilizing
- Preserving

**Green Growth**
- Managing

**Zero Emission City based on Green energy and techs**
- Remodeling urban environment using green techs
- Introducing Green Transportation system

**Green City based on Water & Resource Circulation System**
- Gyungpo lake remobilization using the circulation system
- Green historical & cultural belt thru linking to surrounding resources

**Enhancing Amenity using rich natural & cultural resources**
- Preserving carbon absorbing pine forests & swampy lands
- Preserving traditional & cultural assets thru green tourism efforts

**Securing & Managing carbon absorbing systems**
- Reducing greenhouse gas thru remobilizing water places
- Managing carbon absorbing systems; pine forests & urban forests
- Managing adjacent areas for macro scale management plan

World’s Most Livable Green City
III

Implications

- Close Interactions B/W Central & Local Government
  - Leads to agreements on roles & responsibilities & required institutional aids
  - Helps central government to draw realistic & specific countermeasures & guidelines

- Foundation of an Organization for Funding & Operations
  - Leverages central & local governments businesses in financial and cooperative terms

- Developing Regulations & Programs to Reflect Localities
  - Arranges regulatory basis for active operation & leads citizens’ participation

- Long- & Short-term Measures for Carbon Emission Control
  - Forces municipalities & enterprises to set & manage carbon reduction goals in order to meet the greenhouse gas reduction goal; at least 50% reduction until 2050
  - Urges strategies capping total emission volumes
Green Technology Development & Supply
- Setting up goals to develop and commercialize Green technologies for introduction of new & renewable energies
  ☞ Imperatives; national policy goals for municipalities adoption; inter-department cooperation system for institutional/regulatory basis and financial supports

Apply to Urban Planning thru Further Studies
- R&D on application methodologies to apply the green technologies to urban planning
- Efforts on application and evaluation for successful planning
  ☞ Imperatives; fundamental & basic R&D works on cutting-edge planning & design methods for smooth reflection of locality and successful applications to existing planning systems

Conception Models

Export of Green Technologies: Green Growth
- Exporting advanced urban planning/designing techniques
- Exporting green technology concerning new & renewable energy
- Acquiring ERPA (Emission Reduction Purchase Agreement) thru CDM projects
- Thank You -
도시와 녹색 성장

Cities and Green Growth

Joaquim OLIVEIRA-MARTINS, Division head of RCG, OECD
Cities and Green Growth

Joaquim Oliveira Martins

Head of OECD Regional Competitiveness and Governance Division

What do we mean by Green Growth? Tackling the crisis and beyond

Green growth means:

- "Promoting economic growth while reducing pollution and greenhouse gas emissions, minimising waste and inefficient use of natural resources, and maintaining biodiversity."

Green growth is not just about recovery, but a new way of thinking about development

- In the OECD Green Growth Declaration, Ministers declared that they will:
  
  "...Strengthen their effort to pursue green growth strategies as part of their responses to the current crisis and beyond, acknowledging that green and growth can go hand-in-hand..."

- Korea has been inspiring with its Green Korea Agenda, that points to the need of combining short term recovery measures with more long term goals, targeting research and development of green technologies
Urbanisation and economic development are parallel processes

- Cities foster economic development because the geographical concentration of economic activities enhances productivity and consumption opportunities
- Interaction advantages: ‘Knowledge spillovers’, ‘labour market pooling’ and ‘input sharing’ explain why cities grow faster
- Cities are centers of innovation

Cities contribute to climate change

- Cities are responsible for 2/3 of total energy and CO₂ emissions (IEA World Energy Outlook 2008)
- Given urbanization trends in fast growing countries, the contribution of cities to climate change is rising

Climate change may significantly impact cities

- Coastal cities are particularly vulnerable (OECD, 2008)
- Urban specific climate impact (hot spots)
- Possible distributive implications (urban poor more heavily exposed)
A strategy for the green growth of cities

- As envisaged by the Green Korean vision, a strategy for green growth of cities must be effective at creating new jobs in the short term and set the basis for sustained, self-sustaining growth.

- This vision should also apply to cities and regional governments’ economic strategies, that can generate low-carbon economic development by:
  1. Facilitating job creation in the green economy, through:
     - investments in greener infrastructure,
     - integrated urban energy management strategies, including technical support to start-ups in the renewable sector and energy conservation measures in the industry,
     - education and information dissemination programmes for greening consumers’ preferences
  2. Fostering innovation and co-operation in green Research and Development (R&D).

Creating employment: investments in infrastructure

- An effective urban infrastructure allows agglomeration economies to materialise, while reducing congestion costs

Objectives:

- Ensure that the new funds from the stimulus packages are allocated to infrastructural projects using improved materials and performance-based design
- Integrate sustainability concerns in the purchasing policies of cities and regional governments

Where to invest?

- A large-scale building retrofit programme is the most obvious option for a shovel-ready, local green investment to create new jobs
- Creating industrial capacities in the waste management and recycling can leverage massive private investments
- Investments in sustainable transportation networks have large market and long term social returns
Creating employment: integrated management of energy

- Objectives:
  - Maximize the positive employment effects of investments in energy efficiencies, and
  - Minimise possible adjustment costs due to regulations in energy use

- How?
  - Renewable energy is attractive as an employment generator because it is more labour intensive than fossil fuel-based energy generation
  - Energy efficiency generates large local multiplier effects through expenditure shifting
  - Tax incentives encourage residents and corporations to use renewable energy or adopt energy efficiency systems. Similar for feed-in tariffs
  - Cities can provide services which decrease the costs of energy conservation and pollution reduction measures

Creating employment: greening consumers’ preferences

- Objectives:
  - Stimulate green industries by increasing customers’ willingness to pay a premium for green products and technologies

- How:
  - Adopt consumers’ education programmes, promoting use of standards/eco-labelling, demonstration sites to highlight best practices
  - Take advantage of consumers’ heterogeneity, by financing local investments in renewable energy through voluntary contributions (utility green pricing programs)
  - Invest in information and communication technologies (ICT) to lower the information asymmetries (e.g. green meters), and provide financing arrangements for distributed energy technologies
Fostering growth: cities and innovation

- Green growth can be sustained only if innovation lowers prices of green technologies.
- Most of the innovation in green technologies is taking place in urban areas and is concentrated in few areas.

**Number of patents in wind and solar technologies, by region (2004-2006)**

<table>
<thead>
<tr>
<th></th>
<th>Wind</th>
<th>Solar</th>
</tr>
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<td>1</td>
<td>Ost-Friesland (DE)</td>
<td>San Jose-San Francisco-Oakland (US)</td>
</tr>
<tr>
<td>2</td>
<td>Los Angeles-Long Beach-Riverside (US)</td>
<td>Los Angeles-Long Beach-Riverside (US)</td>
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<td>3</td>
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<td>Tokyo (JP)</td>
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<td>4</td>
<td>Navarra (ES)</td>
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<td>Manches (DE)</td>
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<td>Kyoto (JP)</td>
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Source: Own calculation on OECD REGPAT data

Fostering growth: eco-innovation

- Why bear the costs of inventions instead of free-riding?
  - Geographical and historical differences are important for innovation
  - Local spill-overs and “diffused” applications of new technologies
  - Many constraints limit technology transfer and deployment

- What are the pillars of a local green innovation strategy?
  - Widen access to knowledge through public-private partnerships and networking platform for eco-innovation
  - Invest in pilot R&D project that can be replicated and scaled-up
  - Stimulate greater involvement of universities
  - Speed up the move of environmental technologies from the laboratory to the market
The way forward

- An urban strategy for green growth should be evaluated on the ground for its:
  1. Effectiveness at curbing emissions and increase resilience to climate change
  2. Sustained capacity of creating employment
  3. Fiscal sustainability

- Effective action requires:
  1. Search for complementarities in urban policies
  2. Improve financial capacities at the local level
  3. Improve collaboration between different levels of government
  4. Improve monitoring capacities and technical knowledge

Next steps

- Cities, Multi-level governance and Climate Change (Joint OECD GOV/ENV)
- Forthcoming publication: *Competitive Cities and Climate Change* (end 2009)
- Cities and Climate Change: A specific section/chapter in OECD metropolitan reviews (e.g. Guangdong, Venice)
- Working paper on cities and climate change in China
- Further work on Innovation Clusters
- Adapting existing national regional/urban policy frameworks by incorporating climate change issues (e.g. National OECD Territorial Reviews)
- OECD Roundtable of Mayors and Ministers on Cities and the Green Growth Strategy (June 2010)