Keynote Presentation: Eco-Efficiency Approach to Provision of Better Quality of Life in Cities

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UN Economic and Social Commission for Asia and the Pacific (ESCAP)

- Regional arm of UN providing one of the main economic and social development forums in AP region

- Environment and Sustainable Development Division (ESDD) to promote Integration of Environment into Sustainable Socio-economic Development

- “Green Growth” adopted as main approach in MCED 2005
• A 2005 United Nations report (SOE2005 of UNESCAP) warned that although one-fifth of Asians still exist on less than $1 a day, "the region is already living beyond its environmental carrying capacity"

• But Asia can't wait for the invisible hand to grow a green thumb; its problems are too intractable for that Asia's future has to become one of sustainable "green growth"
AP Region’s Challenge for SD

- 1 billion poor living under 1 dollar a day, 2/3 of world poor live in Asia & Pacific

- Its ecological footprint is already surpassing biocapacity with deficit beyond the world’s average rate (table 1)

- To continue economic growth necessary to alleviate the poverty, without compromising limited ecological carrying capacity

- Then we have to improve Ecological Efficiency of our economic growth
### Table 1  Biocapacity / Footprint by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Biocapacity (global ha/person)</th>
<th>Ecological Footprint (global ha/person)</th>
<th>Ecological Deficit (global ha/person)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia and Pacific$^1$</td>
<td>0.7</td>
<td>1.3</td>
<td>-0.6</td>
</tr>
<tr>
<td>Africa</td>
<td>1.3</td>
<td>1.1</td>
<td>+0.2</td>
</tr>
<tr>
<td>Latin America</td>
<td>5.4</td>
<td>2.0</td>
<td>+3.4</td>
</tr>
<tr>
<td>North America</td>
<td>5.7</td>
<td>9.4</td>
<td>-3.7</td>
</tr>
<tr>
<td>EU(25)$^2$</td>
<td>2.2</td>
<td>4.8</td>
<td>-2.6</td>
</tr>
<tr>
<td>World</td>
<td>1.8</td>
<td>2.2</td>
<td>-0.5</td>
</tr>
</tbody>
</table>

1. Excluding Central Asia and Caucasus
2. Excluding the latest accession countries

*Source: WWF Study, 2006*
Dynamic growth

- ESCAP countries - 4.4 \%; World - 3.5 \% (1999-2003)
- Global production centre - exports grew by 94\%
Limited carrying capacity

- Population density 1 ½ times the global average
- Freshwater available: 3,920m$^3$/cap/yr vs. South America 38,300m$^3$.cap/yr.
- Productive area available per capita: 60 % of the global average
- Arable land per capita: 80 % of the global average
Unmet basic needs... need for further economic growth

- > 670 million still living on < US$1 per day
- > 600 million without safe drinking water
- 1.9 billion without sanitation
- 800 million without electricity or access to clean energy
- Millions still susceptible to
Unmet basic needs
Major Characteristics of Asia/Pacific

- Rapid economic growth
- Most limited ecological carrying capacity
- High population density, 34% GHG emission
- 2/3 world poor in the region
- Need rapid economic growth for poverty, compatible with environmental sustainability
How can Asia/Pacific do that?

- Need to change growth “pattern” \(\rightarrow\) GREEN
- Different growth patterns: US, Japan, Europe
- Green Growth: ecologically efficient pattern
- By applying “Ecological Efficiency” concept.
- Otherwise, A/P can not continue its growth as its ecological capacity is most limited.
What is Ecological Efficiency (EE)?

- Minimizing Ecological Costs: Eco-Efficiency
- Ecological Costs = Resource Depletion + Pollution Impact
- Current paradigm: Market Cost Efficiency
- But Market Price < Ecological Price, thus
- Market Cost Efficiency ≠ Ecological Cost Efficiency
How can we maximize EE?

- **Current paradigm:** market cost efficiency, price and private sector; main driver
- **EE:** no driver,
- **Government has to drive by improving**
  1. **Price-structure:** to close gap between Market and Ecological prices
  2. **Infra-structure:** to provide a physical foundation for EE
ESCAP Green Growth Focus

- Eco-Tax Reform:
- Sustainable Infrastructure:
- Sustainable Consumption Pattern:
- Greening the Business:
- Developing EEI (Eco-Efficiency Indicator):
Challenges in Urban Context

- **Continuing Urbanization**
  - Sources of economic opportunity / vitality
  - High and increasing population
  - Growing consumption

- **Quality of Urban Life Deteriorating**
  - Air pollution, waste issues, health problems, traffic congestion, housing, etc.
  - Insufficient infrastructure (Public Transport, waste treatment, etc.)
  - Pressure exploding

- “To improve” is critical – but how?
Focus on Ecological Efficiency (EE)

- EE - New paradigm for Economic Growth
  - Maximizing Economic Benefit while Minimizing Ecological Externalities

- Indispensable for
  - Improving Quality of Life, as well as
  - Continuing Economic Growth without compromising limited ecological carrying capacity

- Ultimately to make our economic growth pattern to be compatible with limited ecological carrying capacity

- Highly applicable in National as well as Urban Contexts
Social/ Economic / Ecological Externalities

- **Ex. Urban Transportation**
  - **Traffic Congestion Cost**
    - Republic of Korea *4.4% of GDP* (mainly highway, private car)
    - Japan: 0.79%, US: 0.65%, UK: 1.25%, Bangkok: 6%
  - **Local Air Pollution**
    - Health Impacts > Life of Poor / Medical Expenditures
- **Climate Action**
  - Increasingly Compatible with Economy as Oil Price Goes up
  - Energy conservation addresses Multiple Externalities

- Altogether, constituting **Challenge for City’s Economic Livelihood / Competitiveness needing Holistic Response**
Policy Intervention critical in EE Approach to Urban Issues

- **Primary Target Areas**
  - Urban structure / planning
  - Transport
  - Housing
  - Energy
  - Water / Wastewater

- For each of these areas:
  - Demand Pressure to be Reduced
  - Carrying Capacity to be Increased

- Leading to “Building Eco-efficient City in Building high Quality of Life”
Exemplar Policy Options

• Demand-side Management
  - Guiding sustainable consumer choices
    • Congestion Fee / Road Pricing (Singapore)
    • Progressive Water Fee
    • Volume-based waste fee for households (Seoul)

• Infrastructure for Sustainability
  - providing sustainable options for consumer choices
    • Energy Efficient Urban Structure
    • Public Transport
    • Water recycling / rainwater harvesting
    • Segregated waste collection
    • Energy efficient buildings (insulation / ventilation)

• Economic Instruments
  • Pollution-based fees
  • Opening markets for Business
  • Public-Private Partnership
Agent of Change

- Money / Investment alone is not the answer. Or internalize env. costs.

- **Vision & Leadership** critical to adopt new paradigm
  >> takes **Courage** to change **Status Quo**

- **Policy Instruments** (proved and tested),
  + **Justifying Logics** to be supplied and shared

- Implementation Capacity should hence be developed
Exemplar Types of Leadership

- **London:** Congestion charge, mayor’s courage & determination,

- **New Delhi:** Fuel switching, Supreme court legal process,

- **Singapore:** Licensing of private car purchasing, long-term vision,

- **Seoul:** Replacing highway in City centre by restored river with ecological / cultural values,

- **Tokyo:** Kicking outdated diesel vehicles out,

- **NY:** Quantitative target for hybrid vehicles for taxis,
UNESCAP provides instruments

- Advocating **Green Growth** as a new strategic approach
  - **Policy dialogues** for enhancing awareness of national leaders
  - **Training provided under the Seoul Initiative**
  - **Analytical Tools**, i.e. **Eco-Efficiency Indicator**
- **Analytical and normative studies on applicable policy options**
  - **Sustainable Urban Infrastructure Development**
- **Promotion of Local Initiatives through Kitakyushu Initiative**
  - Identify, analyze and disseminate successful cases of urban environmental management
  - Promote city-to-city cooperation
  - Focus on Environmental and Socio-Economic Co-benefits
A green foundation of cold, hard cash

UN environment official works through Asian governments’ wallets

By Thomas Fuller

PEOPLE IN ASIA ARE SO OBSESSED with economic growth and money, money, money,” said Rae Kwon Chung, a top United Nations official here. “But not the environment. They don’t give a damn.”

This is hyperbole of course: Dirty air and contaminated water are rising concerns across the region. But Chung, who runs a UN environment program in Asia, is not averse to being provocative if it makes people listen.

It is no news to anyone who lives in one of Asia’s megacities that years of breakneck economic expansion have come at great cost to the environment. New Delhi and Beijing, two of the worst examples, both have levels of air pollution about three times as high as maximum levels suggested by the European Union and United States.

But rather than preach the virtues of cleaner air, says Chung, a former South Korean diplomat, it is more effective to aim for the wallet when trying to convince Asian governments of the urgency of the problem. Continued economic growth will not be possible if the environment is neglected, he tells officials.

“Our approach is not only to focus on the environment ministers but the finance ministers as well,” Chung said in an interview at his office in Bangkok.

His mantra is green growth: If Asia is profligate with oil, coal, timber and other commodities, prices will spiral out of control and the economic miracle of recent years will flop, he said.

“What he’s saying is not that radical,” said Chee Yoke Ling, a lawyer based in Beijing and who specializes in environmental issues. Referring to the concept of green growth, she added, “This was discussed more than 15 years ago.”

“But it was never translated into action,” she said.

Chee said that Chung was right to spread his message among officials from finance and development ministries because that is where the money is and it is those officials who have the power and funds to change government policies.

“Environment ministries in any country are very weak,” Chee said. “They don’t have much sway.”

With the steady rise of commodity prices in recent years, energy-saving policies are being built into the government’s overall strategies. The Chinese government in April increased to 20 percent from 8 percent a tax on cars with large engines, like sport utility vehicles. Taxes on small cars were slashed.

China’s current Five-Year Plan, its outline of economic strategy through 2010, stresses energy conservation and sustainable development.

Chung’s central message is that the citizens and leaders of the region should discard any illusion that they can adopt an American lifestyle. There are not enough resources in Asia to support it, he said. The region’s population density is 1.5 times the global average yet the Asia-Pacific region has one-tenth as much available fresh water as, say, South America, according to UN statistics.

“The region is already living beyond its means,” Chung said. “We need to move away from the ‘grow first and clean up later’ approach.”

Yet Chung is more optimistic than many of his colleagues who work on environmental issues. The world should be thankful, he said, that China is not a democracy, because a centrally planned economy can react more quickly to the challenges of the environment. “If it were a completely democratic country, it would be very difficult to control it,” he said. “I think China will be faster than any other country in improving the environment at the local level because they are centrally controlled.”

For all his diplomatic background, Chung shuns the tit-for-tat approach of some of his colleagues. He exudes zeal.

Chung spent 27 years in South Korea’s foreign service, with postings in New York, Paris and Jakarta.

He joined the United Nations two years ago because, he said, he wanted to “do something substantive and meaningful.”

His official title is director of the environment and sustainable development division of the United Nations Economic and Social Commission for Asia and the Pacific. It barely fits on his name card.

Chung said that part of his job is trying to change mentalities. Asians tend to think of railways as transport for the poor, so they favor building massive highways. Yet too many roads in densely populated countries is inefficient and bad for the environment, he said.

Chung said that his native South Korea was an example of the problems associated with big cars and wide highways: “Over the weekend, the entire country becomes a parking lot.”

Governments should change their tax systems, he said, increasing levies on gasoline and cars. Rechargeable batteries should be tax-free and disposable ones heavily taxed, he said, because batteries leak damaging chemicals into the environment when they are discarded.

So, what is Chung’s ultimate wish? It involves Angelina Jolie, he said mischievously: Asia needs a star or starlet who can champion the environment as passionately as Jolie has tackled the issue of refugees and displaced people.

Governments and UN officials can only do so much, he said.

International Herald Tribune
Vision for Asia-Pacific Green Growth

Environmentally sustainable economic growth for the improved well being of all

For more on Green Growth see SOE 2005, GG at a Glance at

www.unescap.org/esd
www.greentgrowth.org