

Green Growth Roadmap

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Why Low Carbon, Green Growth?

- Limited Carrying Capacity
- Mismatch: scarcity scale, price & reality
- 3 convergent crisis:
 - Economic: shaky financial system
 - Resource: oil peak
 - Ecology: climate change
- * Can we continue BAU, then what ?

Assumptions of Conventional Economics

- **Labor & Capital: scarce economic goods**
- **Environment: free abundant goods**
- **Labor: serious unemployment**
- **Capital: huge liquidity**
- **Environment: no longer free goods**

Limits of Conventional Economy

- *Justify unbridled greed of speculation →
Financial crisis*
- *Pushing maximization of production →
GDP only paradigm*
- *Uncontrolled exploitation of ecology →
Climate Change*

Asia & Pacific will suffer most

Economic Crisis:

Fast growth led by
export



Resource Crisis:

Rising Oil price



Ecological Crisis:

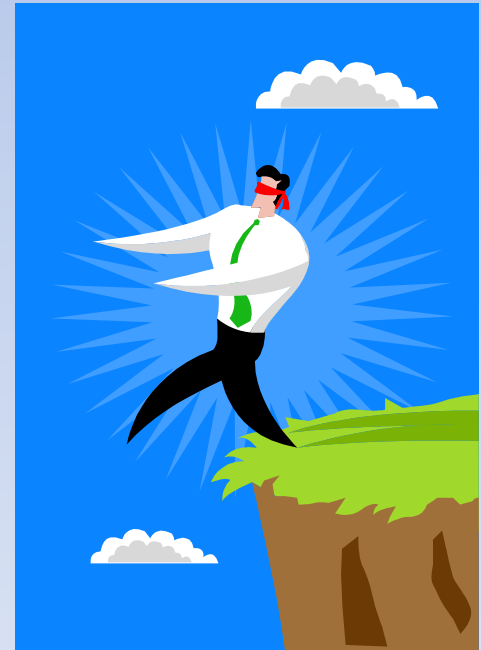
Most vulnerable to
climate change
impacts



More than 21 million becoming poor 2009/2010
Long term & fundamental impact but hard to detect
Ex) climate change

AP: New reality - risk & uncertainty

- Most vulnerable to rising oil price and impacts from climate change
- 21million re-entered poverty
- Development paradigm has to change



Green Growth

- Sustainable Development : just principles
- MDG: just list of Goals
- Green Growth:
 - Implementing Strategy of SD and MDG

Green Growth

- Turning crises into opportunities: surfing crisis
- However, GG still remain as vision, no proof, afraid of early mover risk, risk taker VS risk avoider
- We need “How” of GG : price structure change is key, ETR critical tool

ESCAP MCED5: Green Growth 2005

- UNEP: Green Economy 2008
- OECD: Green Growth Strategy 2009



MCED6: Astana Green Bridge 2010 linking Europe & AP with GG



Asia & Pacific

- **Rapid Growth**
- **2/3 of world poor**
- **1.5 times population density**
- **34% of global GHG emission**
- **Lowest ecological carrying capacity**

Unmet basic needs... need for further economic growth

- **600 million without safe drinking water**
- **1.9 billion without sanitation**
- **800 million without electricity**

: Rapid economic growth is an imperative!

A/P needs new “Growth Paradigm”

if it is to achieve

- MDG 1 (poverty reduction)
- MDG 7 (environmental sustainability)

at the same time

- MDG 1 & 7 : from trade-off to win-win synergy

Driver of GG:

Ecological Efficiency (EE)

- **Internalize Ecological Prices**
- **Maximize Resource Efficiency**
- **Minimize Pollution Impact**

Different EE Pattern of Growth

- **Japan > EU > US**

Different Patterns of Growth (global hectares per capita, 2003)

| | Biocapacity (global ha/person) | Ecological Footprint (global ha/person) | Ecological Deficit (global ha/person) |
|-------------------|--------------------------------------|--|--|
| Republic of Korea | 0.5 | 4.1 | -3.5 |
| Japan | 0.7 | 4.4 | -3.6 |
| China | 0.8 | 1.6 | -0.9 |
| DPR Korea | 0.7 | 1.4 | -0.8 |
| US | 4.7 | 9.6 | -4.8 |
| UK | 1.6 | 5.6 | -4.0 |
| France | 3.0 | 5.6 | -2.0 |

*Source: WWF Study, 2006

Examples of EE practices

- Japan: rail based transport system
- Singapore: private car control on the road
- London: congestion charge
- Norway: Road Pricing, ban shopping mall
- Failure of EE: Traffic Congestion Costs
Japan 0.79%, US 0.65%, UK 1.25%,
Bangkok 6%, Korea 2.9% (of GDP)

A/P cannot repeat the conventional growth model

Quantity of Growth,
focusing on
Maximizing GDP,
Production
& Consumption

Market Cost Efficiency

“Grow First,
Clean Up Later”

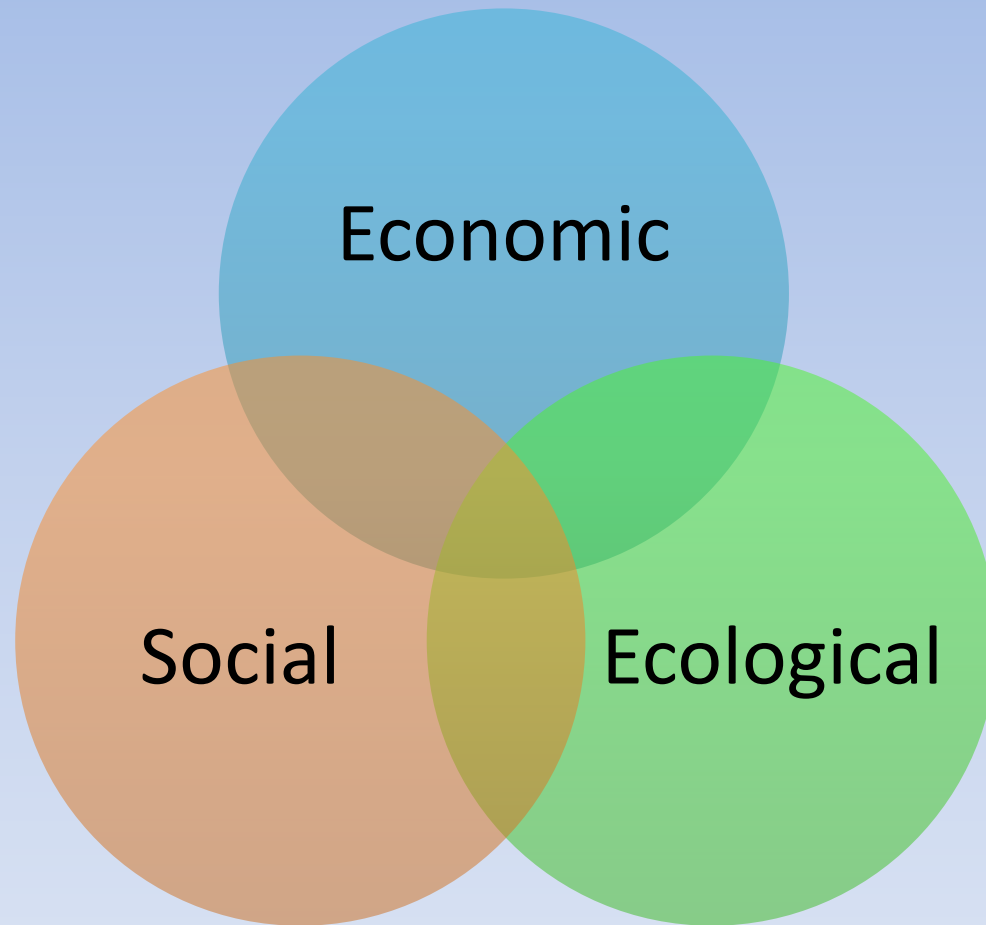
A/P needs a New Growth Paradigm



3 Qualities of Growth

- Ecological Quality
- Economic Quality
- Social Quality
- does not mean stop growing, but improving quality while growing

- Economic: employment, value-added-ness, resilience to external/financial shocks, oil price volatility, industrial relations, level of wage,
- Social: Inclusiveness, income distribution, well-being, quality of life, social protection, social engagement, human security,
- Ecological: eco-efficiency, carbon emission, vibrant eco-system, resilience to CC,



Economic

Social

Ecological

GG: Requires fundamental restructuring of Economy

1. **Invisible Infra of economy**

* Price-structure: $MCE < ECE$

* Regulation, Value, Life-style, Technology

2. **Visible Infra of economy**

* Infra-structure: Transport, Building, Land Use Planning, Urban Design

2 gaps of LCGG

- ultimate answer to climate change
- will not happen automatically
- Time gap:
 - short-term cost > long-term benefit
- Price gap:
 - market price < ecological price

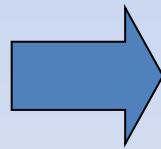
ETR: tool for closing price gap

- **Price: Core of the Problem or Solution**
- **Shifting from Market to Ecological price**
- **Critical Basis for**
GG, Low carbon, innovation,
infra/urban design, Land planning,
Climate Action, Green Business,
Quality of Growth.

How to make LCGG happen

Turning crises into opportunities
surfing waves, not drowning!

Only the Brave jumping into
the water can swim and enjoy surfing



NOT automatic process:

- Needs **government's commitment & political leadership**
- and guideline on how to do it (**LCGG roadmap**)

Need Jump-start by Government

- **Government take the lead: close 2 gaps**
- **Private Sector: grasp LCGG as an opportunity**
- **People: willing to pay for ecological price,
accept life style change,
quality of life > quantity of production**

Government leadership

1. To Minimize Short-Term Burden and to Maximize Long-Term Gains
 2. To Integrate the ecological prices into market price
- Korea, GG Committee, Basic Law, 5yr program, BAU -30%: Best Practice

GG applicable to DCs?

- **GG: not only a matter of money & technology but also policy options**
- **Easy to initiate at the early stages of development**
- **Leapfrogging to GG not repeating old paradigm**
- **The Sooner, The Better : Singapore example**

How to jump-start GG: 5 Key tracks

ESCAP developing roadmap for GG

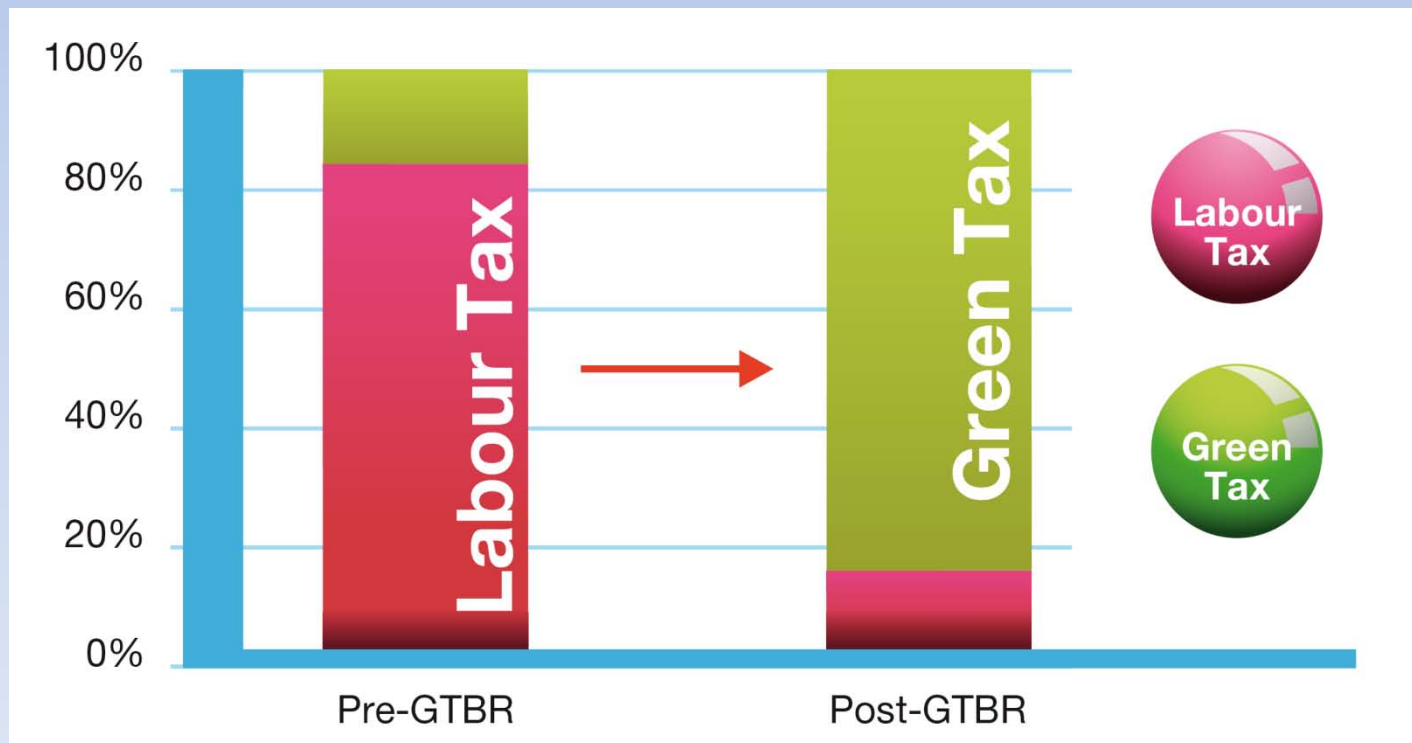
- 1. Shifting from quantity to quality of growth**
- 2. Integrating ecological price**
- 3. Promoting sustainable infrastructure**
- 4. Turning “green” into a business opportunity**
- 5. Low Carbon Economics**

Integrating ecological price: key for GG

- From Market Price to Ecological Price
- Market Price < Ecological Price
- Market Cost Efficiency (MCE) < Ecological Cost Efficiency (ECE)
- Gap (MCE<ECE) has to be closed

Ecological Tax Reform

- changing tax base from **Income** to **Carbon**
- **Revenue Neutrality**: tax revenue remains the same



Double Dividend

- **1 stone 2 birds**
 - **Reducing GHG Emissions**
 - **Promoting Growth**



Questions for ETR

- **What are the conditions for double dividend?**
- **Is it relevant for DCs?**
- **How could it be applied to DCs?**
- **How to overcome political resistance?**
- **How to engage business & people?**

Confusion to be cleared

- **Revenue Neutrality : lack of understanding**
- **Who is in charge? Env Min or Finance Min?**
- **What kind of Tax base shift? Income tax or VAT?**
- **Proof of Double Dividend?**
- **Any success story?**

Low Carbon Economics

- **Asia-Pacific: suffer 80% of the global casualties related to extreme weather events; most financial loss from water scarcity, flood, draught,**
- **AP: Highest cost for developing countries to adapt to climate change**
(US\$ 19.6 – 25.0 billion, WB, 2009)
- **Nicklaus Stern: 2% investment could save 5-20% global GDP by 2050**
- **Low Carbon Economics: 2% investment could increase global GDP by XX % by 2050**



Story of Three Myths

Climate Action (CA): Bad for Economy
Target: only way for Emission Reduction
Not Enough Money/Technology for CA

Story of Low Carbon Parad

Climate Action: Good for Economy
E R: Possible without Target
Enough Money/Technology for CA

Because We do not know yet

- Whether decoupling could happen in DCs
- Low Carbon Development: still at visionary stage
- Decoupling is happening only in some rich countries
- Korea: 1975-2006, GDP increased 7.5 times
Energy Consumption 7.4 times
- We need Low Carbon Economics:
 - that can make decoupling happen in DCs.

Questions for LCE?

- **Feasible in DCs?**
- **What are the policy options?**
- **How to garner political support?**

Eco-Tax Reform only option

- **To tax carbon without increasing tax burden**
- **Shifting tax base from Good to Bad;
ultimate solution for climate change
LCGG, improving EE, LCE**
- **Stimulating Growth& Jobs without
compromising competitiveness**
- **For Developing country: critical tool for
leapfrogging to LCGG**

Critical Mission for GCET

- **Proposing concrete roadmap to introduce ETR in DCs in partnership with ESCAP**

LOW CARBON GREEN GROWTH



Economy



**CLEAN
ENERGY**



Thank you for your attention

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