Green economy, finance, and trade studies – an update

Bridging the implementation Gap for Rio+20 Workshop and Side Event to the HLPF
Wednesday, 2nd July, 2014, Rm6, NLB

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Structure

- Finance studies
- On-going and future work
Financing needs assessment

- Based on existing literature
- Use existing goals and targets as baselines
- Country coverage: all countries or developing countries
- Period: up to 2015, 2030, 2050 ...
- Incremental cost estimates
- Total cost estimates
- Public v.s. private funds
- Comment on the approach used (e.g. methodology)
Figure 15. Orders of magnitude of investment requirements for various sectors from the literature

Finance available to developing countries (billion EUR 2010)

- Public Domestic Finance Total: 3,317
- Tax revenue: 3,252
- Public External Borrowing: 65

Finance available to developing countries (billion EUR, 2010)

- Public International Finance Total spent: 158
- Official Development Assistance (ODA) Grants: 92
- Concessional Loans: 7
- Other official development finance: 54
- UN-sanctioned international security operations: 5

Finance available to developing countries (billion EUR, 2010)

- Private Finance – domestic and international
  Total: 3,652
- Domestic Private Investment: 2,678
- International Investments: 624
- Private External Borrowing: 70
- Remittances: 238
- Private Philanthropy: 42

Figure 7. Sources of infrastructure financing – Estimate for Developed Economies

Source: OECD; Author’s analysis based on EIB figures
<table>
<thead>
<tr>
<th>Segment</th>
<th>Research and development</th>
<th>Demonstration and pilot projects</th>
<th>Full-scale investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and food</td>
<td>++ Important role of public investment in R&amp;D Mixed with private investment</td>
<td>++ Important role of public sector investment</td>
<td>Overwhelmingly private</td>
</tr>
<tr>
<td>Buildings and housing</td>
<td>(+) Limited role of public sector financing in R&amp;D</td>
<td>++ Important role of municipalities in pilot projects including through public housing</td>
<td>+ Mostly private outside public or social housing component Important role of municipalities in city-wide programmes for energy efficiency and urban renewal</td>
</tr>
<tr>
<td>Energy systems</td>
<td>+++ Important role of public investment in R&amp;D Mixed with private investment</td>
<td>+++ Critical role of public sector</td>
<td>+++ Important role of public sector, many times in conjunction with private sector</td>
</tr>
<tr>
<td>Basic infrastructure (roads, ports, bridges, etc.)</td>
<td>(+) Limited role of public sector financing in R&amp;D</td>
<td>n.a.</td>
<td>+++ Important, sometimes exclusive role of public sector investment</td>
</tr>
<tr>
<td>Public transport systems</td>
<td>+++ Important role of public investment in R&amp;D Mixed with private investment</td>
<td>+++ Important role of public investment in pilot projects</td>
<td>+++ Important role of public investment, often in conjunction with private sector</td>
</tr>
<tr>
<td>Management of protected areas, control of land use changes</td>
<td>++ Important role of public resources</td>
<td>++ Important role of public resources</td>
<td>+++ Critical role of public resources</td>
</tr>
</tbody>
</table>
### Status of PES and market certification systems

<table>
<thead>
<tr>
<th>Ecosystem market</th>
<th>Products</th>
<th>Market value (current)</th>
<th>Market type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government-mediated PES (Watershed and Biodiversity)</strong></td>
<td>Streams, rivers and lakes meeting water quality standards, biodiversity conservation, protection of specific wildlife habitats.</td>
<td>$11.3 billion in 2012</td>
<td>Government programs; National conservation programs, Debt for Nature swaps; Voluntary agreements; credit-and-trade of pollutant reduction credits</td>
</tr>
<tr>
<td><strong>Biodiversity offset and compensation programs (compliance and voluntary)</strong></td>
<td>Acres of restored or conservation land managed/ wetlands, biodiversity conservation</td>
<td>$3 billion</td>
<td>Biodiversity offset or compensation policy; Credit-and-trade/ compliance, voluntary agreements</td>
</tr>
<tr>
<td><strong>Certified agricultural and fishery products</strong></td>
<td>Habitat, species, soil, and water protection</td>
<td>$64 billion</td>
<td>Certification/ bundled; Voluntary agreements, and Compliance</td>
</tr>
<tr>
<td><strong>Certified forest products</strong></td>
<td>Acres of sustainably managed forest</td>
<td>$54 billion</td>
<td>Certification/ voluntary and compliance</td>
</tr>
<tr>
<td><strong>Bio-prospecting contracts</strong></td>
<td>Commercially valuable genetic information</td>
<td>$35 million</td>
<td>Government-mediated: bilateral agreements between governments and firms; voluntary</td>
</tr>
</tbody>
</table>
Existing and planned carbon price mechanisms

Status of implementation
- Implemented (in force with established rules)
- Implementation scheduled (mandate agreed, start date communicated, rules in preparation)
- Under consideration*** (government gave public signal towards the development of an ETS)

Offsetting
- National
- Sub-national or regional
- CDM and JI credits
- Bilateral offsets
- Domestic offsets

Linking
- Planned link
Finance flows and green economy

**Sources**
- Official development assistance
  - Total 129bn (2010)
  - 2.3bn for environment (2007)
- Domestic budgets
- Debt relief
- Sovereign wealth funds
  - Total 4.7tn global assets (2011)
- State capital (e.g. in state controlled companies or financial institutions)
- Private capital (including institution investors)
  - Global UN Principles of Responsible Investment signatories 30tn global assets (2011)
- Philanthropy
- Remittances
  - Total 150-200bn (2011)

**Channels**
- Development banks/financial institutions (e.g. ADB, AfDB, IDB, EIB, WB)
- UN Agencies (e.g. UNDP, FAO)
- Bilateral aid agencies (e.g. AFD, KfW, JICA, USAID)
- Multilateral finance facilities (e.g. GEF, GFC)
- Export credit agencies
- Carbon market
  - Global inflows to developing country 574bn (2010)
  - FDI inflows to developing country 574bn (2010)
- Other financial institutions (local banks, building societies, national development banks in developing countries)

**Instruments**
- Policy incentives (e.g. subsidies)
- Risk management (e.g. loan guarantees, derivatives markets, insurance products)
- Carbon offsets
- Grants
- Concessional loans
- Market rate loans
- Equities (including stocks, subordinated equity)
- Debt securities (e.g. bonds)
- Other financial products (e.g. trade credits)

**Major uses**
- Clean Energy
  - Global clean energy ~260bn (2011)
- Sustainable fisheries
- Sustainable buildings
- Clean technology for industry
- Improved waste management
- Sustainable agriculture
  - 142bn (2009) developing country agriculture
- Sustainable forestry
- Low-carbon transport
- Water resources management
- MDGs such as health and education
  - Total global transport ~900bn

**Notes:**
All figures in US dollars
Figures are annual flows to developing countries unless otherwise stated.
Total refers to all investments, including ‘green’ and conventional.
Figure adapted from CPI (2011)
On-going and future work …
Green Growth Knowledge Platform (GGKP)

- The GGKP Trade and Competitiveness Research Committee has been established and recently launched a study on data collection efforts concerning the competitiveness effects of environmental policies and regulations, with a particular focus on developing countries.

- Summarize data collection needs and research gap...

- Drafting a call for proposals and supporting future data-collections efforts ...

- First draft will be ready by end of July.
All the existing finance studies presented can be downloaded at: http://sustainabledevelopment.un.org/index.php?menu=1558
or
http://sustainabledevelopment.un.org/sdissuesbriefs.html

Questions/feedback? – liuw@un.org

Thank you!