Re-Unifying Climate Change and Sustainable Development

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Outline

• Background
  – Asia’s contribution and vulnerability to climate change
  – 4 priorities
• Proposals for Aligning Actions on Climate and Development

IGES White Paper

• IGES White Paper series
    Sustainable Asia 2005 and Beyond: In the pursuit of innovative policy”
    Climate Change Policies in the Asia-Pacific: Re-uniting Climate Change and Sustainable Development


Asia’s Contribution to Climate Change

• Asia currently accounts for 27% of the world’s energy-related GHG emissions
  □ 40% (2030)
  □ Major source of emissions
• However,
  – Cumulative emissions
  – Per capita emissions
  □ Effective int’l regime, which adequately consider these circumstances, is necessary

Cumulative CO2 emissions (1850-2000): Percent of world total

<table>
<thead>
<tr>
<th>Country</th>
<th>CO2 emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>30%</td>
</tr>
<tr>
<td>China</td>
<td>15%</td>
</tr>
<tr>
<td>Japan (JPN)</td>
<td>5%</td>
</tr>
<tr>
<td>India</td>
<td>5%</td>
</tr>
<tr>
<td>Other Asian developing countries</td>
<td>20%</td>
</tr>
</tbody>
</table>

CO2 emissions comparison (2004): Per capita and national emissions (Ex. LULUCF)
Potential for Cost-effective Action

GHG mitigation potential in 2020

How do Asian countries capitalise on their full potential?

Policy Rhetoric and Reality

- Formulation of new climate-related policies and creation of new institutes
  - China
    - National Leading Group led by Premier Wen Jiabao
    - 11th five-year plan: energy intensity improvement by 20% per unit of DGP over the 2006-2010 period
  - Renewable energy law (2005): share of RE 15% by 2015
  - India:
    - National Climate Change Committee
    - Share of RE to 10% of new power generation by 2010
  - RE targets: Thailand, Malaysia, Indonesia, the Philippines, etc

To what extent can these policies be effectively implemented?

Asia’s Vulnerability to Climate Change (2)

Key projected impacts of climate change in Asia

<table>
<thead>
<tr>
<th>Sector</th>
<th>Projected Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and Forestry</td>
<td>1. Increased risk of hunger in South Asia due to a 30% decline in cereal yields (600 million Asians may face hunger by 2080). 2. Increase in agricultural water demand by 6-13% or more for every 1°C rise in temperature. 3. Droughts in low productivity of grains and rice yield. 4. Increased cropping and demand for rainfed areas.</td>
</tr>
<tr>
<td>Water</td>
<td>1. Many tropical rivers (e.g., Brahmaputra) are expected to flood more often. 2. Disappearance of Thelon Plains glaciers by the 2040s. 3. Disappearance of freshwater wetlands by the 2050s. 4. Disappearance of Mekong Delta by the 2060s.</td>
</tr>
<tr>
<td>Health</td>
<td>1. Exacerbation of malaria in South Asia due to increases in water temperature. 2. Increased risk of dengue fever. 3. Increased risk of cholera due to increases in waterborne diseases. 4. Increase in infectious diseases for livestock.</td>
</tr>
<tr>
<td>Coastal Zones</td>
<td>1. Loss of 3,000 km² mangroves in Asia with a 1 meter sea level rise. 2. Loss of 1,000 km² coral reefs in tropical waters. 3. Loss of 1,000 km² of land due to the rise of sea levels. 4. Increased risk of flooding by 2050.</td>
</tr>
</tbody>
</table>

Asia’s Vulnerability to Climate Change (3)

Coverage of adaptation policies and measures in latest Asian National Communications

<table>
<thead>
<tr>
<th>Country</th>
<th>Total number of pages</th>
<th>Number of distinct mentions of adaptation measures</th>
<th>Delay in taking adaptation policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhutan</td>
<td>63</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Cambodia</td>
<td>79</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>China</td>
<td>171</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>India</td>
<td>266</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Indonesia</td>
<td>110</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Japan</td>
<td>33</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>97</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Malaysia</td>
<td>151</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>Maldives</td>
<td>126</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Mongolia</td>
<td>151</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Nepal</td>
<td>181</td>
<td>41</td>
<td>13</td>
</tr>
<tr>
<td>Pakistan</td>
<td>51</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>36</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>The Republic of Korea</td>
<td>134</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Singapore</td>
<td>71</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>180</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Thailand</td>
<td>181</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>The Philippines</td>
<td>161</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Vietnam</td>
<td>181</td>
<td>17</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: UNFCCC (2007)

Countermeasures against these impacts have rarely been taken. (Expect, NAPAs for LDCs)

Source: UNFCCC (2008)

Delay in taking adaptation policies
Four Priorities for Asia

- Key messages from previous slides
  - Diversity in development stage, emission profiles
  - Vulnerability to climate change
  - Huge untapped potential for low-cost mitigation
  - Still preoccupied with developmental concerns
- Four priorities
  - Building a fair, effective, and flexible post-2012 regime
  - Enhancing the region's adaptive capacity
  - Utilising market-based mechanisms more effectively
  - Exploiting development co-benefits

Proposals for Aligning Actions on Climate and Development

Priority 1: International Framework—Differentiation (1)

- Multi-stage, multi-track, all inclusive framework
- Grouping of countries, based upon the following criteria:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>Mean per capita emissions since 1992</td>
</tr>
<tr>
<td>Capacity</td>
<td>UNDP human development index (HDI)</td>
</tr>
<tr>
<td>Mitigation potential / responsibility</td>
<td>National emissions of more than 1% of world GHG emissions</td>
</tr>
<tr>
<td>Vulnerability</td>
<td>Climate vulnerability index (Oxford Centre for Water Research)</td>
</tr>
</tbody>
</table>

- Based upon threshold values of each indicator
  - Differentiation of mitigation/adaptation commitments
  - "Graduation clause"

International Framework: Differentiation (2)

1. Identify countries with per capita emissions greater than 4 tCO2e, then classify them into 3 groups based upon HDI
   - Per capita emissions (2 tCO2e)
   - National total emissions (1% of world emissions)
   - Climate vulnerability index

   - Based upon threshold values of each indicator
     - Differentiation of mitigation/adaptation commitments
     - "Graduation clause"

2. Classify remaining developing countries with HDI levels below 0.9 into 4 groups
   - Per capita emissions (2 tCO2e)
   - National total emissions (1% of world emissions)
   - Climate vulnerability index
   - Graduation level

   - Based upon threshold values of each indicator
     - Differentiation of mitigation/adaptation commitments
     - "Graduation clause"
Key Features of Framework Proposed

- **Long-term vision**
  - To promote convergence of per capita emissions around 2 tCO2e and enhance climate-resilience in all countries

- **Differentiation of developing countries**
  - Differentiate developed countries, as well as developing countries, based upon their national circumstances, responsibilities and capacities

- ** Longer commitment periods of 8 or ten years**
  - Send more credible signal to the private sector

- **Mandatory Adaptation commitments/actions for certain groups of countries (with international mandatory assistance)**
  - Adequate recognition of the most vulnerable countries’ needs

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**Priority 2: Enhancing the Adaptive Capacity**

- **Mainstreaming adaptation concerns into sectoral development policies**
- **Harnessing indigenous coping strategies**
  - More attention to the importance of local knowledge and involvement of local communities
- **Regional cooperation**
  - Transboundary sectoral approaches (e.g., integrated river basin management, forest fire management, early warning systems)
- **Broadening the funding bases for adaptation**
  - Wide gap between necessity level and available level
  - Region-wide insurance facility hosed at ADB

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**Priority 3: Utilising Market-based Mechanisms**

- **Concerns**
  - Geographic inequity
  - Cumbersome modalities and high transaction costs
  - Uncertainty about the values of CERs after 2012
  - Limited contribution to promoting sustainable development

- **Prospects for CDM reforming**
  - Using ODA and other multi-source funding approaches to cover CDM risks and underlying project finance, esp. in LDC
  - Strengthening human and institutional capacities
  - Establishing regional CDM facility to support post-2012 CERs (like World Bank “carbon market continuity” fund)
  - Promoting developmental benefits of CDM through preferentially rewarding such benefits (like China’s levy)
Priority 4: Enhancing Co-benefits

- More emphasis on non-health co-benefits of climate policy
  - Biofuels
    - Improve energy security and revitalize rural economies
    - 1st generation, controversial; 2nd generation, costly
    - Sustainability standards and certification for biofuels
  - Municipal solid waste management
    - Income by composting of waste
    - Centrallising composting of fresh market waste, as a model to start with

Concluding Remarks

- Four priorities identified
  - Building a fair, effective, and flexible post-2012 regime
  - Enhancing the region’s adaptive capacity
  - Utilising market-based mechanisms more effectively
  - Exploiting development co-benefits

- Asian countries need to be more involved in the international climate negotiations, if only to ensure that sustainable development and climate change remain as a single pathway to development, not diverging tracks.

Thank you!