The Scale and the Readiness Arguments in Integrating Global Concerns into Urban Management

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Background

• Strong linkages between cities and global concerns such as GHG emissions
• Potentials of GHG mitigation at city level
• Traditionally little attention from international research programs on city connection of global change, but is gaining momentum
• Successful initiatives at practice level, especially in Europe and USA
Exciting News

• Under the initiative of the Mayor of Seattle, 170 mayors in the US have pledged to adopt the emission reduction target set by Kyoto Protocol
• The Sundance Summit: A mayor’s Gathering on Global Warming (40 mayors, representing 28 states in the USA and 10 million citizens)
• C20 World Cities Leadership on Climate Change Summit, London
• Toronto City 20% reduction below the 1988 level by 2005 (Cities for Climate Protection)
• Wuppertal targets at a 50% reduction from the 1987 level by 2010 (Climate Alliance)
The Quest: *Can the same success be achieved at a wider scale?*

- What are the **CHALLENGES** and **OPPORTUNITIES**?
- What are the **STRATEGIES** and **LESSONS** from successful examples?
- Are they **TRANSFERABLE**?
- What are the **POLICY IMPLICATIONATIONS**?
The Challenges: I (1)

- **Scale Argument:**
  a) **Spatial Scale:** "*Not on My Turf*
   - Global framing of the issue and top-down approach of policy responses
   - Scale mismatch:
     - Local of emissions is not the local of decision
     - Actions confined by interest that lies predominantly within jurisdictional boundary

     - *But are global really global, and cities really local?*
Figure 1.2 Scale domains of climate change and consequences. Depicts the scale of actions, not necessarily the locus of decision-making. Dashed lines indicate occasional consequences or a lower level of confidence.

Figure 1 Spatial range of impact of different urban environmental issues. Poverty-related issues tend to have local impacts, production-related issues tend to have local to regional impacts, and consumption-related issues tend to have regional to global impacts.

(Source: Bai, 2001)
The “Boundary Effect- Management Pitfall”

Fig. 3-4 Soil contamination around Kunugi Mountain (the first investigation)
The Challenges: I (2)

- **Scale Argument:**
  a) **Spatial Scale:** “Not on My Turf”
  b) **Temporal Scale:** “Not in My Term”

- Typical time frame of global change:
  - change in carbon concentration: 2-300 years
  - emission scenarios analysis: 100 years
  - International negotiation: shorter, but still more than decades

- Typical time frame of concern:
  - day to day
  - Mayors term: 3-5 years, typically not more than 10 years in office
Temporal scale of a mayor’s decision making.
(a) Temporal scale of planning
b) Temporal scale of environmental impacts of decisions
The Challenges: I (3)

• Scale Argument:
  a) Spatial Scale: “Not on My Turf”
  b) Temporal Scale: “Not in My Term”
  c) Institutional Scale: “Not My Business”
    - Governmental jurisdictional scale
      - Shanghai and Beijing Mayor reaction to the request to pledge to GHG reduction at a city summit
    - Level of autonomy, both vertical and horizontal autonomy
    - Institutional power over industries
    - Two directional fusion, but slow in global->city direction
The Challenge II (1)

• Readiness Argument: A unique challenge for developing cities
  – Are the developing cities ready: “No”
    • Most pressing issues predominantly “local”
    • Human and financial capacity not sufficient

  – Typical reaction along this line: Why bother the global issue when people are dying from local environmental issues such a bad sanitation and pollution?
The Challenge II (2)

• However, they will have to do it anyway, perhaps very soon.

• **Endogenous factors:**
  – Complex nature of urban env. in Asia: multiple challenges coming together in a compressed way
  – Evidence: Rapidly increasing CO2 emissions in developing cities

• **Exogenous drivers:**
  – Increasing pressure towards the integration of developing countries into international GHG emission control regime
  – Resource constraints
Fig. 5-Conceptual illustration of a typical evolutionary trajectory of environmental problems in developed country cities, and an optimistic future projection in relation to economic development (Source:Bai and Imura, 2000)
Opportunities

- **Inter-linkages** between global and local issues
  - Not a zero sum game
    - Beijing air pollution control could result in a 10.5 million tons of CO2 reduction by 2030 (Tsinghua univ. 2000)
  - Unique opportunity to obtain financial aid to tackle local issues

- **Economic benefits**
  - In 2004, the 147 US member cities of CCP collectively reduced GHG emissions by 23 million tons through efficiency measures, with a cost savings of over $600 million (ICLEI 2005)
  - “Doing it earlier is cheaper”
  - Rizhao City case: Using solar energy
Solar energy use in Rizhao, China

The city has a total of 560,000 square meter of solar heat panels, which is equivalent to 580,000 kw of electric water heater.
## Cost Benefit Analysis

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<tr>
<th></th>
<th>Solar Water Heater</th>
<th>Electric Water Heater</th>
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<tbody>
<tr>
<td><strong>Installment:</strong></td>
<td>1500 RMB (US$190)</td>
<td>1500 RMB (US$190)</td>
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<tr>
<td><strong>Operating cost:</strong></td>
<td>None</td>
<td>730 RMB/Yr</td>
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<tr>
<td><strong>Lifespan:</strong></td>
<td>15 years</td>
<td>5 years</td>
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<tr>
<td><strong>Total Costs in 15 years:</strong></td>
<td>1,500 RMB</td>
<td>15,500 RMB</td>
</tr>
<tr>
<td><strong>Net Savings In 15 years:</strong></td>
<td>14,000 RMB</td>
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Experiences and Lessons from Developed Cities

- Importance of an *integrated approach*, both within environmental domain and cross-cutting other domains (Rayner and Malone, 1997)

- *Localizing the policy*, not the issue, by hooking it up with local agenda items (Betsill, 2001)

- Evidences show that “Thinking Locally, Act Locally” to be the most successful strategy
Will the same strategy work for developing cities?

• Still the best/only possible way
• However, it should be handled with caution
  – Presumption of the strategy: the local measure is a net gain and does not produce harm in other places
However, it is not always the case in Asian developing cities

- Too local focus can result in improved local issues without significant contribution to overall global concerns, and in some cases, can even result in a net loss.
  - Industrial relocation
  - Yellow Tag Vehicle in Beijing
- Disparity and privilege issue
Spatial range of impact

Boundary of Jurisdiction

Source location of environmental problem
Fig. 4 The common perception of environmental problems by municipalities and the rational for industrial relocation as urban environmental management strategy
Policy Implications

- Reframing the issue from global to local
- Emphasize and materialize the economic benefit
- Importance of consorted action among different governmental level
- The importance of financial mechanism and initial installation fund to get the snowball rolling
- It is even more important that the leaders in developing cities to adopt a holistic approach
- For local managers, concentrate on the daily and local business, but with an effort to look global

⇒ Exactly the essence of the classic phrase of “Think Globally, Act Locally”
Policy and Governance Tasks

- How to deliver tailor made policy that reflects the contexts of cities
- How to design policy that can provide good incentive to local government to be proactive
- How to ensure better implementation at local level, institutional aspects in particular
- How to materialize on existing leverage the central government have over local government, e.g. Urban environmental performance evaluation
- What are the potentials of and how to materialize on the synergies with other non-energy sector policies, e.g. “circular economy” promotion
Thank You!