Private- Public Partnership in Sustainable Urban Infrastructure Investments

Adolfo Guerrero– Cities Development Initiative for Asia (CDIA)
Asia’s Urban Challenge

- Between 2010 and 2020, 411 million people will be added to Asian cities (60% of the growth in the world’s urban population)
- By 2020, of the 4.2 billion urban population of the world, approximately 2.2 will be in Asia
- The estimated urban environmental infrastructure investment need in the Asia-Pacific region is about $100 billion per year
- Current urban environmental infrastructure investment is about $40 billion per year
Challenges for Urban PPPs

- Lack of National Support
- Lack of Local Public Capacity
- Lack of Local Private Capacity
- Lack of Funding
- Lack of Services to Citizens
Attractiveness
Message to cities

Money available → Formulation of project → Viability

Technical formulation of projects → Adaptation of institutional arrangements → Viability

Capacity development → Knowledge → Market rules adaptation

Feasible projects → Private sector → Better Services

- Economic Benefits
- Social Benefits
- Environmental Benefits
- Poverty Reduction
Solutions

- Flexibility in looking at projects
- Innovative approach
- Thinking out of the box
- Capacity for private sector as well as for public sector
CDIA Intervention Area

Infrastructure Investment Project

CDIA Focus Areas

Institutional Preparedness
City Development Plan/Strategy
Infrastructure Investment Programming
Pre-Feasibility Studies/Project Structuring
Feasibility Study
Financing Arrangements
Project Implementation
Operation & Maintenance

Up-stream

Down-stream
CDIA is a demand driven facility supporting medium-sized Asian cities in multiple sector urban infrastructure development.
Cochin (India) - Inclusive Urban Transport

- Poor mobility for low-income groups on the urban fringe, challenges include accessibility, flexibility and affordability.
Cochin (India) urban ferry transport project

- Shift from slow and congested land based transport to fast and economical water transport
- Ferry and terminal upgrades for five of Cochin Island’s ferry routes.
- Target daily capacity 100,000 passengers.
- Five route upgrades include a total of 15 new or improved ferry terminal facilities
- Twelve purpose-built, low wash type catamaran passenger vessels
Sustainable Infrastructures in PPP

CDIA activities for the Cochin urban ferry project

- Strategic review of Cochin’s transport sector at the request of the Cochin Corporation;
- Pre Feasibility Study, in accordance with the National Urban Transport Policy;
- Climate change analysis;
- Investment proposal institutional arrangements; and
- Preliminary CDM baseline evaluation and documentation (ongoing with the Climate Market Initiative of the ADB).
## Cochin: potential carbon finance impact

### Emissions and carbon financing

<table>
<thead>
<tr>
<th>Emissions reduction (tCO$_2$e)</th>
<th>Annual CERS</th>
<th>Overall CERS 2013-2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential revenue</td>
<td>20,000</td>
<td>200,000</td>
</tr>
<tr>
<td>$5/ton</td>
<td>$100,000</td>
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<tr>
<td>$10/ton</td>
<td>$200,000</td>
<td>$2,000,000</td>
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<tr>
<td>$15/ton</td>
<td>$300,000</td>
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<tr>
<td>$20/ton</td>
<td>$400,000</td>
<td>$4,000,000</td>
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</tbody>
</table>

### Indicative project financing plan (with pricing examples at $5/ton & $20/ton)

| Total Investment Cost          | $49,500,000 | $49,500,000 |
| Financing Sources              |             |             |
| JUNNRM subsidy (50%)           | $24,750,000 | $24,750,000 |
| State of Kerala loan (30%)     | $14,850,000 | $14,850,000 |
| Equity and/or additional loan  | $9,760,000  | $7,100,000  |
| FCF (e.g. 70% of CERs)         | $140,000    | $2,800,000  |
| Percent (FCF/Total)            | 0.28%       | 5.66%       |
| Percent (FCF/City Equity)      | 1.43%       | 39.44%      |
Cochin urban ferry project: next steps

- Detailed project design and other CDM documents required for Designated National Authority approval
- Preparation of Term Sheets for CER sales
- Identification of carbon buyers and technology providers
Potential CDM projects in the Urban Transport

- Vehicle technology improvement (4 stroke engine)
- Lowering carbon intensity of fuels (CNG)
- Reduce transport activity (road tolls)
- Switch mode of transport (road to sea/train freight)
- Public mass transport (BRTS/Metro)
- Energy efficiency (regenerative brake systems)
- Fuel switch (petrol to biodiesel)
THANK YOU!