Delegating W&S Services to Autonomous Operators
Lessons from PRAGUAS - Ecuador

Maria Angelica Sotomayor
LCSFW – World Bank
Institutional Changes in the Sector

- Independent - PSP
- National Monopoly
- Decentralization

Municipality (Direct provision)

- Not a true separation of functions (lack of incentives to set adequate tariffs)
- Difficult to know the costs and set tariffs
- Without account separation is difficult to measure efficiency
- No specialization of service provision
- High fiscal costs
- Low coverage and low quality services
- Service politically run with perverse incentives
- Low user participation
Ecuador

- **Population:**
  12.09 million (2000)

- **Income:**
  GNI per capita US$ 1,490
  Lower middle income*

- **Area:**
  284,000 km²

- **Distribution:**
  61% urban
  39% rural

* World Development Indicators, 2004. World Bank
Main W&S Sector Issues

- Low Service Coverage:
  - Water: 82% urban, 39% rural areas
  - Sanitation: 73% urban, 29% rural areas

- Poor service quality:
  - inefficient supply
  - limited cost recovery through tariffs
  - high reliance on central government and municipal transfers to bridge financial gaps.

- Inability of Central Government to change/control sector performance and introduce institutional reform under decentralized environment
Service Provision in Ecuador

<table>
<thead>
<tr>
<th>Population Size (000)</th>
<th>No. of Municipalities</th>
<th>Type of ES</th>
<th>Population (millions)</th>
<th>Population Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 1,000</td>
<td>Guayaquil (1.7 m)</td>
<td>30 year concession with Interagua</td>
<td>3.35</td>
<td>+2.3%</td>
</tr>
<tr>
<td></td>
<td>Quito (1.6 m)</td>
<td>Public W&amp;S utility (EMAAP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 to 300</td>
<td>12</td>
<td>11 public utilities + 1 municipal department (Loja)</td>
<td>1.92</td>
<td>+7.8%</td>
</tr>
<tr>
<td>30 to 100</td>
<td>37</td>
<td>8 public utilities + 29 municipal departments</td>
<td>0.80</td>
<td>-2.2%</td>
</tr>
<tr>
<td>Less than 30</td>
<td>169</td>
<td>Municipal departments*</td>
<td>1.30</td>
<td>+3.5%</td>
</tr>
<tr>
<td>Rural areas</td>
<td></td>
<td>Approx. 2,000 Water user assoc.</td>
<td>4.72</td>
<td>+0.9%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>220</td>
<td></td>
<td>12.09</td>
<td>+2.1%</td>
</tr>
</tbody>
</table>

* 8 with Delegation Completed (PRAGUAS); 43 in TA Phase
Alternatives to Direct Provision

- Municipal Company
  - Municipal Board
  - Civil society participation in the Board
- Cooperative / Community Association
- Mixed Capital Company
- PSP:
  - Outsourcing
  - Management / Operation Contracts
  - BOTs
  - Concessions

There’s a local private sector interested in small towns!
Incentives for DELEGATION of Services to an experienced provider
Separation from direct municipal provision.
TA phase to select Delegation Model
Incentive (subsidy) amount based on performance and delegation model
Incentive for investment only
Assigned as a matching grant
After 2 years re-eligible for incentive based on results (independent audit report)
Incentive calculation

Based on transparent formula

\[ Z = I \times (T + M) \]

\[ Z: \] Maximum value of incentive
\[ I: \] Maximum incentive based on number of household connections
\[ T: \] Operating factor (weight 30%)
\[ M: \] Degree of delegation in planned model (weight 70%)
Maximum Incentive (I)
### Operating Factor (T)

<table>
<thead>
<tr>
<th>Co</th>
<th>Co &lt;0.50</th>
<th>0.50&lt;=Co&lt;1</th>
<th>1.0&lt;=Co&lt;1.2</th>
<th>Co &gt;1.20</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>Only TA</td>
<td>0.00</td>
<td>0.15</td>
<td>0.30</td>
</tr>
</tbody>
</table>

\[
Co = \frac{\text{Revenue from Operations}}{\text{Administration} + \text{O & M}}
\]

Revenues from operations collected through billing only. The initial estimate of Co for a new service provider is based on consultants’ estimates and the tariff published by the municipal government in the official register. Following incentives based on independent audit reports.
### Delegation Factor (M)

<table>
<thead>
<tr>
<th>LEGAL ORGANIZATION</th>
<th>Degree of private sector participation in service provision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct Provision</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>MUNICIPAL GOVERNMENT</td>
<td>0.00</td>
</tr>
<tr>
<td>MUNICIPAL ENTERPRISE (Municipal majority in the board of directors)</td>
<td>0.35</td>
</tr>
<tr>
<td>MUNICIPAL ENTERPRISE (Community majority in the board of directors)</td>
<td>0.40</td>
</tr>
<tr>
<td>MIXED OWNERSHIP COMPANY</td>
<td>0.70</td>
</tr>
<tr>
<td>COMMUNITY ENTERPRISE</td>
<td>0.70</td>
</tr>
</tbody>
</table>

If M=0 or Co<0.5, the municipality is eligible only for technical assistance (no payment)

i = No commercial risk

ii = Commercial risk

iii = Commercial and investment risk

iv = Minimum 5 year contract

v = Minimum 10 year contract
Stakeholders and their roles

- **Municipalities** retain overall responsibility for water and sanitation services, oversees delegation agreement to operators. As necessary, municipalities contribute to financing water and sanitation investments.

- **Communities** pay tariffs that cover costs for quality services.

- **Specialized Operators** provide services in line with well-defined quality, quantity, continuity, coverage and efficiency targets.
Initial Results:

- 43 municipalities in initial TA phase
- 8 with delegation complete (investment phase or ready to receive the incentive)
- With local government change, in one case the new utility was not sufficiently “ring fenced”, despite incentive
## Cayambe: Initial Results

<table>
<thead>
<tr>
<th>Potable water service</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management scheme</td>
<td>Municipal department</td>
<td>Municipal enterprise with municipal majority in the board of directors</td>
</tr>
<tr>
<td>Number of household connections</td>
<td>3,503</td>
<td>4,561</td>
</tr>
<tr>
<td>Coverage</td>
<td>65%</td>
<td>98%</td>
</tr>
<tr>
<td>Tariffs (residential)</td>
<td>0,034 ($/m³)</td>
<td>0,10 ($/m³)</td>
</tr>
</tbody>
</table>

**PRAGUAS Incentive Payment:** US$ 220,000  
**Population:** 34,000 inhabitants
Cayambe, Pichincha
**Pedro Moncayo, Pichincha**

<table>
<thead>
<tr>
<th>Potable water service</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management scheme</td>
<td>Water Resources Directorate of the Municipal government</td>
<td>Municipal enterprise with a community majority in the board of directors</td>
</tr>
<tr>
<td>Number of household connections</td>
<td>1800</td>
<td>2100</td>
</tr>
<tr>
<td>Coverage</td>
<td>77%</td>
<td>90%</td>
</tr>
<tr>
<td>Rates (residential)</td>
<td>0.014($/m³)</td>
<td>0.14 ($/m³)</td>
</tr>
</tbody>
</table>

**PRAGUAS Incentive Payment: US$ 129,000**

**Population: 12,000 inhabitants**
Pedro Moncayo, Pichincha
### Caluma, Bolivar

<table>
<thead>
<tr>
<th>Potable water service</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management scheme</td>
<td>Potable Water Department</td>
<td><strong>Mixed- capital company</strong></td>
</tr>
<tr>
<td>Number of household connections</td>
<td>1,320</td>
<td>1,600</td>
</tr>
<tr>
<td>Coverage</td>
<td>78 %</td>
<td>95%</td>
</tr>
<tr>
<td>Rates (residential)</td>
<td>$0.50 average monthly fixed rate</td>
<td><strong>Fixed charge: $1 + 0.06 $/m³ + 10% for sewage</strong></td>
</tr>
</tbody>
</table>

**PRAGUAS Incentive Payment:** US$ 104,000  
**Population:** 12,000 inhabitants
# Echeandia, Bolivar

<table>
<thead>
<tr>
<th>Potable water service</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management scheme</td>
<td>Potable water department</td>
<td>Cooperative</td>
</tr>
<tr>
<td>Number of household connections</td>
<td>1,100</td>
<td>1,500</td>
</tr>
<tr>
<td>Coverage</td>
<td>72%</td>
<td>98 %</td>
</tr>
<tr>
<td>Rates (residential)</td>
<td>Fixed charge: US$0.5 monthly</td>
<td>0.09 $/m³</td>
</tr>
</tbody>
</table>

**PRAGUAS Incentive Payment:** US$ 139,000  
**Population:** 11,000 inhabitants
Lessons learned from delegation process

- Combining TA and Financial Incentives to adopt improved management models and cost-recovery tariffs is key.
- Tariff increase can be implemented successfully where service quality improves visibly.
- Tariffs can be increased in the short term to cost recovery levels if communities understand the need for the increase: Community participation
Lessons learned from delegation process (Cont.)

- Appropriate financial mechanisms are needed to recoup the expenses from municipalities that fail to implement models.
- Forcing municipalities to adopt any one model (whether private or public) is likely to engender resistance by municipal governments and communities.
- For this reason, PRAGUAS offers municipalities a menu of models, both public and private.
Impact on Ecuador

- PER highlighted the need to use better criteria for allocating resources to the sector.
- With decentralization financial policy is the instrument to promote improved performance.
- Central government transfers (tel. taxes) to be allocated based on PRAGUAS Model.
Conclusion

- The use of financial incentives for improving performance and institutional reform is a good instrument under a decentralized environment.
- Matching grant approach, municipal funds are allocated under the same principle.
- The need to report performance, use of external audits, brings accountability and transparency.