Water and Wastewater Services in Portugal: An Approach Based on Multilevel Governance

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EUROPEAN WATER AND SANITATION SERVICES vs SUSTAINABLE DEVELOPMENT

ATHENS European Week, Paris, November 18, 2011
SITUATION IN 1993

Lack of infrastructure, low servicing, poor management and investment dispersion!
SITUATION IN 1993

<table>
<thead>
<tr>
<th>NUMBER OF MUNICIPAL SYSTEMS</th>
<th>&lt; 100 000 inhab</th>
<th>100 000 – 200 000 inhab</th>
<th>&gt; 200 000 inhab</th>
</tr>
</thead>
<tbody>
<tr>
<td>281</td>
<td>18</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>92,1%</td>
<td>5,9%</td>
<td>2,0%</td>
<td></td>
</tr>
</tbody>
</table>

EPAL (Lisbon) was the exception
responsible for the Water Distribution network of the City of Lisbon
responsible for the wholesale Water Supply to 23 other municipalities

75% Population served by water supply systems
15% Populations served by waste water treatment
SITUATION IN 1993

INVESTMENTS: Carried out to solve local problems without seeking for integrated solutions (lack of synergies dispersion of systems)

MANAGEMENT: Directly and exclusively under the responsibility of the 308 municipalities (no corporate or entrepreneurial attitude)

REGULATION: No regulation, no benchmarking, only “loose” technical requirements

OWNERSHIP: Private companies were totally forbidden in the sector by law

TECHNOLOGY: Difficult to adopt state of the art technology

WATER SOURCES: Many unsustainable or unreliable sources of water and very poor integration in water resources management
A NEW APPROACH WAS NEEDED

Driving Forces for Change

- European legal framework - new trends and new requirements (Urban Water Directive)
- Need to “absorb” efficiently significant Cohesion Funds
- Good example of EPAL, the only company with adequate scale
- The attempt to implement a regional model was abandoned in 1974 for political reasons with bad consequences
- Municipalities were eagerly responsible but a strategic involvement of Central Government was clearly needed
- Recognition that the private sector could bring efficiency, know-how and benchmarking
A NEW MODEL WAS CONCEIVED

Strategic Guidelines

• “Enterprising” the water sector and promoting scale by the creation of regional systems
• Finding a balance between the role and political importance of municipalities and the need for a national policy
• Finding a balance between opening to the private sector and keeping public leadership in structuring the systems
• Establishing Águas de Portugal (AdP) as an instrument for the implementation of public policy
• Seeking the support and involvement of municipalities as share-holders (and users) of the new regional systems
• Seeking the financial sustainability of all regional systems
• Introducing regulation and benchmarking of all systems
THE PORTUGUESE MODEL

Six Keywords of the Change

• Concentration (geographical scale)
• Multipurpose operation (water and wastewater)
• Incorporation ("enterprising" - creation of companies)
• Segmentation (bulk vs. retail)
• Regulation (economic and quality requirements)
• Mild privatization (gradual under public control)
THE PORTUGUESE MODEL

Multimunicipal Companies and Holding AdP at the Core of the Model

DEFINITION OF MULTIMUNICIPAL COMPANIES

- Serves several municipalities and has a regional scale
- Only for regional (bulk) production of drinking water or regional (bulk) treatment of waste
- Municipalities remain responsible for retail services and direct contact with end users
- Majority of capital is public and municipalities are fully engaged in management (typically 51% State, 49% Mun.)
- Capital owned by the state is concentrated in AdP that is responsible for strategic management
ONLY SIX MULTIMUNICIPAL SYSTEMS WERE CREATED IN 1993

Cávado – Integrated solution to ensure the Porto Metropolitan water supply;

Douro e Paiva – Integrated solution to ensure the city of Porto water supply;

SIMRIA – Integrated solution to solve pollution problems mainly caused by paper industry;

EPAL – Already existing (inspiring case);

SANEST – Integrated solution to solve pollution problems in Estoril Coast and Metropolitan Lisbon

Sotavento and Barlavento – Integrated solution to solve drought problems in Algarve coast

IN 1998 THIS MODEL EXTENDED TO THE WHOLE COUNTRY ALWAYS

BASED ON THE FREE DECISION OF MUNICIPALITIES!
THE PORTUGUESE MODEL

Municipalities Kept Open Other Choices

Municipality alone:

- Direct management of the entire system
- Create a municipal company
- Create a company with a private partner
- Concession contract with a private company

Association of municipalities:

- Direct management of the entire regional system
- Concession contract with a private company
### The Leading Role of AdP

#### Population Attended

<table>
<thead>
<tr>
<th>Category</th>
<th>Value (millions of inhabitants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Attended</td>
<td>6.02, 7.05, 7.28, 8.35</td>
</tr>
</tbody>
</table>

#### Water Supply and Wastewater Treatment

<table>
<thead>
<tr>
<th>Category</th>
<th>Value (millions of m³/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nº of Enterprises</td>
<td>18</td>
</tr>
<tr>
<td>Water for Human Consumption</td>
<td>641</td>
</tr>
<tr>
<td>Water Treatment Plants</td>
<td>88</td>
</tr>
<tr>
<td>Wastewater Treated</td>
<td>393</td>
</tr>
<tr>
<td>Wastewater Treatment Plants</td>
<td>626</td>
</tr>
</tbody>
</table>
AdP Structure

42 enterprises

A quite large group in the area of environmental services
AdP Is a Global Actor

International

International Operations

Concession Contract
(water supply)
Mozambique (Maputo-Matola)

Technical Assistance
Angola and Algeria

Concession Contract
(solid waste)
Mozambique (Maputo)
What are the results of this evolution?

Evolution of the water sector in 1993-2010 and current targets:

- Percentage of the population with access to public water supply systems:
  - 1993: 80%
  - 2010: 96%
  - Current target: 95%

- Population with access to public systems for waste water disposal with adequate treatment:
  - 1993: 30%
  - 2010: 76%
  - Current target: 90%
Evolution of the percentage of tap water that is controlled and presents good quality

A boom in attendance and quality of service!!!

“The Portuguese miracle…”
Paul Reiter, Executive Director of the International Water Association

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A gigantic public - public - partnership
Central State + Municipalities

“De-verticalization”
umbundling?

Conceptual separation of “bulk” from “retail”
“high” and “low” in analogy with energy systems

Creation of regional systems with appropriate scale
water intake, “bulk” treatment and selling to “retail” distributors (municipalities)
wastewater “bulk” collection and treatment, from “retail” collectors (municipalities)

Creation of companies owned by state and municipalities
state through holding AdP – 51%, relevant municipalities – 49%
the law authorizes 49% private but it was not implemented
Appropriate scale in terms of engineering and management
Back-up support from the holding company Águas de Portugal (AdP)

Free accession from municipalities
government can decide unilaterally but it never happened

Municipalities have (many) other choices
municipality, municipal services, municipal companies,
association with other municipalities
In all cases concession contracts with private companies are allowed

Rigorous and universal regulatory system (ERSAR)
quality is controlled, tariffs are established by municipalities
but are subject to specific regulations established by ERSAR

“Letting hundred flowers blossom...”
Mao Zedong, 1956
Secretary of State, 1993
General figures for drinking water supply services, grouped by management model

Operators

Bulk service

Retail service

Population covered

M = Multimunicipal concessions
P = Municipal concessions
S&M = Municipal and intermunicipal companies
M = Municipal services
Geographical distribution of drinking water supply operators by management model

Bulk service

Retail service

- Municipalities
- Municipal services
- Associations of municipalities
- State/municipalities partnership
- Municipal and intermunicipal companies
- Municipal concessions
- Multimunicipal concessions

- Municipalities
- Municipal services
- Municipal and intermunicipal companies
- State/municipalities partnership
- Municipal concessions
- Multimunicipal concessions

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Average value in 2008: 0.87€/m³, but tendency to increase
General figures for wastewater management services grouped by management model

**Entidades gestoras**
Operators

- **Bulk service**
  - Concessões multimunicipais: 5%
  - Concessões municipais: 21%
  - Parceria Estado/municípios: 16%
  - Empresas municipais e intermunicipais: 9%
  - População abrangida: 48%

- **Retail service**
  - Concessões multimunicipais: 8%
  - Concessões municipais: 77%
  - Parceria Estado/municípios: 8%
  - Empresas municipais e intermunicipais: 0.001%

**População abrangida**
Population covered

- **Bulk service**
  - Concessões multimunicipais: 3%
  - Concessões municipais: 6%
  - Parceria Estado/municípios: 10%
  - Empresas municipais e intermunicipais: 9%
  - População abrangida: 42%

- **Retail service**
  - Concessões multimunicipais: 15%
  - Concessões municipais: 23%
  - Parceria Estado/municípios: 17%
  - Empresas municipais e intermunicipais: 0%
  - População abrangida: 42%
Evolution of the population served with drainage and wastewater treatment

Fonte Source: INAG (Inventários Nacionais de Saneamento Básico, PNA e INSAAR 2009 – campanha 2008)

- Population served with drainage systems
- Population served with wastewater treatment systems
Average value in 2008: 0.36 €/m3, but tendency to increase.
Main lessons learned from the water and wastewater resources reform:

What are the “goods” and the “bads”?

The “bads”

• Private sector with some difficulties in stabilizing

• Financial unbalances of a few systems

• Risk of creating a public dependent “nomenklatura”

• Some lack of coordination between regional and local systems

• Delays in the necessary investments in the “retail” systems
What are the “goods” and the “bads”? 

The “goods”

- Critical mass in terms of technology and management
- Freedom of choice: no “one size fits all”
- Effectiveness in investing and getting results
- Respect local authorities without compromising national policy
- Development and maturing of a private sector
- Large step forward in terms of financial sustainability
- Effective regulation and benchmarking
- A gigantic public-public partnership involving 200 municipalities
Some recent advances in water resources management:

1. National water authority with a clear mandate (INAG)
2. Creation of 5 River Basin Administrations (ARH)
3. More collaborative relationship between administration, municipalities and water users and (Users Associations)
4. New and comprehensive planning framework (beyond WFD)
5. New very strict but quite versatile licensing regime
6. New economic and financial regime, carefully adjusted to users specificities (water taxes)
Thank you!

Portuguese Water Partnership