ATHENS European Week, November 19, 2010
EUROPEAN WATER AND SANITATION SERVICES
vs SUSTAINABLE DEVELOPMENT

The Case Study of Portugal
Past, Present and Future Dilemmas

Francisco Nunes Correia

Portuguese Water Partnership
The Portuguese “Model”

1. How is it now?

2. How did we get there?

3. What are the “goods” and the “bads”?

Annex: ... and now?
1. How is it now?

Evolution of the water sector in 1993-2008 and current targets:

- Percentage of the population connected to public water supply systems:
  - 1993: 80%
  - 2008: 91%
  - Current target: 95%

- Population connected to public waste water systems with adequate treatment:
  - 1993: 30%
  - 2008: 76%
  - Current target: 90%
Quality controlled water supply in accordance with national and EU standards

Evolution of the percentage of tap water that is controlled and presents good quality

A boom in service attendance !!!

“The Portuguese miracle…”
Paul Reiter, Executive Director of the International Water Association
Public-public partnership: Central State + Municipalities

“De-verticalization” unbundling?

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)

Freewill move from municipalities
government can decide arbitrary merger 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 no 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

Legend:
- Multimunicipal concessions
- Municipal concessions
- Municipal and intermunicipal companies
- Associations of municipalities
- State/municipalities partnership
- Municipalities
- 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
Annual charge for household users (with a consumption of 120 m³/year) for water supply services in 308 municipalities

Average value: 0.87€/m³
General figures for wastewater management services grouped by management model

**Entidades gestoras**
*Operators*

- **Bulk service**
  - Concessões multinacionais: 5%
  - Concessões municipais: 21%
  - Parceria Estado/municípios: 48%
  - Serviços municipais: 9%
  - Empresas municipais e intermunicipais: 10%
  - Associações de municípios: 1%

- **Retail service**
  - Concessões multinacionais: 8%
  - Concessões municipais: 7%
  - Parceria Estado/municípios: 77%
  - Serviços municipais: 3%
  - Empresas municipais e intermunicipais: 68%
  - Associações de municípios: 15%

**População abrangida**
*Population covered*

- Concessões multinacionais: 6%
- Concessões municipais: 3%
- Parceria Estado/municípios: 23%
- Serviços municipais: 9%
- Empresas municipais e intermunicipais: 22%
- Associações de municípios: 4%
Geographical distribution of urban wastewater management operators by management model
Evolution of the population served with drainage and wastewater treatment

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Population served with drainage systems</th>
<th>Population served with wastewater treatment systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>61%</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>64%</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>68%</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>73%</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>77%</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>80%</td>
<td>71%</td>
</tr>
</tbody>
</table>

Portuguese Water Partnership
Distribution of the population served with drainage and wastewater treatment, by hydrographical region
Fonte Source: INAG (INSAAR 2009 – campanha 2008)
Annual charge for household users (with a consumption of 120 m³/year) for wastewater management services in 308 municipalities

Average value: 0.36 €/m³
2. How did we get there?

SITUATION IN 1993

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

**MANAGEMENT:** Directly and exclusively under the responsibility of the 308 municipalities (in Lisbon EPAL owned by the State)

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

**OWNERSHIP:** Private companies were totally forbidden in the sector by law (no corporate or entrepreneurial attitude)

**TECHNOLOGY:** Difficult to adopt state of the art technology

**WATER SOURCES:** Many unsustainable or unreliable sources of water and very poor integration with water resources management
RESULT

Lack of infrastructure, low service quality, poor management & 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>&lt; 100 000 inhab</td>
<td>281</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>92,1%</td>
<td>5,9%</td>
<td>2,0%</td>
<td></td>
</tr>
</tbody>
</table>

**EPAL was the exception (AdP)**

- responsible for the Water Distribution network of the City of Lisbon
- responsible for the wholesale Water Supply to 23 other municipalities

**Population served by water supply systems:** 75%

**Populations served by waste water treatment:** 15%
THE PORTUGUESE MODEL

Driving Forces

- European legal framework - new trends and new requirements
- Need to “absorb” effectively significant Cohesion Funds
- Good example of EPAL, the only company with adequate scale
- Regional model proposed in 1973 was abandoned with bad consequences
- Recognition that the private sector may bring efficiency and know-how
THE PORTUGUESE MODEL

Strategic Guidelines

- “Enterprising” the water sector and upscaling it through the creation of regional systems
- Balancing between the role and political importance of municipalities and the need for a national policy
- Balancing between opening to the private sector and keeping public leadership in the structuring of the systems
- Setting up Águas de Portugal (AdP) as a national instrument for the public policy
- Targeting financial sustainability of all regional systems
- Regulation and benchmarking of all systems
THE PORTUGUESE MODEL

Core of the Model: the Multimunicipal Company with AdP Holding

DEFINITION

- Serves several municipalities and has a regional scale
- Only for regional (bulk) production of drinking water or regional (bulk) wastewater treatment
- Municipalities remain responsible for retail services and direct contact with end-users
- Majority of capital is publicly owned and municipalities are fully engaged in management
- 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  
Or creation of a municipal company  
Or a mixed company with a private partner  
Or a concession contract with a private company

Association of municipalities:  
Direct management of the entire regional system  
Concession contract with a private company
<table>
<thead>
<tr>
<th>Table: Water &amp; Wastewater Infrastructure and Population Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nº of Enterprises</strong></td>
</tr>
<tr>
<td><strong>Water for Human Consumption</strong> (millions of m³/year)</td>
</tr>
<tr>
<td><strong>Water Treatment Plants</strong></td>
</tr>
<tr>
<td><strong>Wastewater Treated</strong> (millions of m³/year)</td>
</tr>
<tr>
<td><strong>Wastewater Treatment Plants</strong></td>
</tr>
</tbody>
</table>

**Population Attended (millions of inhabitants):**
- 2007: 5.02
- 2008: 5.22
- 2009: 5.85

- Water supply
- Wastewater treatment
A quite large group in the area of environmental services
International

International Operations

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

Technical Assistance Angola and Algeria

Concession Contract (solid waste) Mozambique (Maputo)
3. What are the “goods” and the “bads”? 

The “bads”

• Private sector: small with some difficulties in stabilizing

• Financial imbalances of a few systems

• Risk of creating a public-dependent “nomenklatura”

• Some lack of coordination between regional and local systems

• Backlogs in investments needed in the “retail” systems
3. 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 giant public-public partnership involving 200 municipalities
Annex: ... and now?

Portugal has a diversified and mature fabric of private and public institutions dedicated to water.

Several of those institutions have business or have developed close links abroad.

Associated in a Portuguese Water Partnership, synergies can be developed and the potential maximized!
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Associated in a Portuguese Water Partnership, synergies can be developed and the potential maximized.
A legacy from the 5th World Water Forum (Istanbul, 2009)

Network of stakeholders present in the Portuguese Pavilion:
The Partners

Universities and R&D centers

Universities, research centres, state laboratories

Public administration

National Water Institute, River Basin Administrations, Water Services Regulator, Portuguese Institute for Cooperation, Portuguese Agency for Investment and Trade

Professional associations and civil society

Professional and technical associations, non-governmental development associations, water users associations, sectoral economic associations

Public and private companies

Design and consultancy companies, construction contractors, equipment suppliers, management and operation companies
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Portugal has acquired and developed significant expertise in:

1. Water Services and Regulation
2. Water Resources Planning and Management
3. Coastal Planning and Management
4. Water Institutions and Governance
1. Water Services and Regulation

... a medium and long-term strategy
... clarification of responsibilities
... a consistent policy for investment
... an interesting “mix” of public and private
... much attention given to regulation
... financial sustainability of water systems
... state of the art technology
... a boom in service attendance (quantity and quality)
2. Water Resources Planning and Management

... a new and forward looking Water Law
... creation of five river basin authorities
... preparation of national and river basin plans
... a new flexible but strict licensing system
... a new economic regime for water use
... an environmentally friendly hydropower plan
... launching of several river restoration projects
... improvement of river agreements with Spain
5 River Basin Administrations:
- North
- Centre
- Tagus
- Alentejo
- Algarve

Restructuring of the National Water Authority
INAG
3. Water Institutions and Governance

... river basin councils with stakeholders

... easy access to administration

... widespread e-government practices

... creation of users’ associations

... partnership between central and local authorities

... delegation to municipalities and users
Portuguese Water Partnership

With priority involvement of countries in which the water sector is going through reform and there is a demand for cooperation in the framework of sustainable development and in the context of collaborative and innovative action.

Providing an effective contribution of a think tank on the threats, challenges and opportunities of water resources management.

The action “puzzle”

Networking
With priority involvement of countries in which the water sector is going through reform and there is a demand for cooperation.

Establish a Portuguese based Water Network

Create new opportunities for the development of projects and initiatives

Opportunity seeking
In the framework of sustainable development and in the context of collaborative and innovative action.

Providing an effective contribution of a think tank on the threats, challenges and opportunities of water resources management.

Innovating

Fostering the sharing of knowledge and the exchange of experiences

Implement a forum of reflection that contributes to the discussion of the emerging challenges

Sharing
At the national and international levels, among partners and with foreign and international counterparts.
Whatever we possess gets double value when we have the opportunity of sharing it with others

JEAN-NICOLAS BOUILLY (1763-1842)
Thank you!

Portuguese Water Partnership