

# Workshop Water Security in Bulgaria



Sofia, September 18<sup>th</sup>

## Water and Sanitation Sector in Portugal

Diogo Faria de Oliveira

PRESIDENT Management Support to National Water and Sanitation Strategic Plan (PENSAAR 2020)



## OBJECTIVES

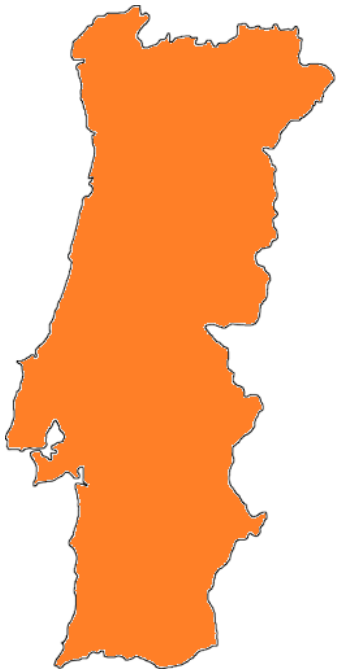
- 1 To present the water and sanitation reforms introduced since 1993**
- 2 To present the results of such reforms**
- 3 To draw lessons from the Portuguese experience**





## PORTUGAL WATER AND SANITATION SECTOR AT A GLANCE – KEY INDICATORS


In **Portugal**, public water supply is universal, covering 96,5% of all households in the country while wastewater collection covers 85% of the households.



- **Area: 92,2 thousand km<sup>2</sup>**
- **Population: 10,3 million**
- **96,5% water public network coverage**
- **99,1% safe drinking water**
- **84,9% wastewater public network coverage**
- **83,7% wastewater treatment**

Source: GAG do PENSAAR 2020

**WATER DISTRIBUTION TO CONSUMERS**




Volume: 580 million m<sup>3</sup>/year

Average Tariff to Consumers: 1,07 €/m<sup>3</sup>

**WASTEWATER COLLECTION TO CONSUMERS**



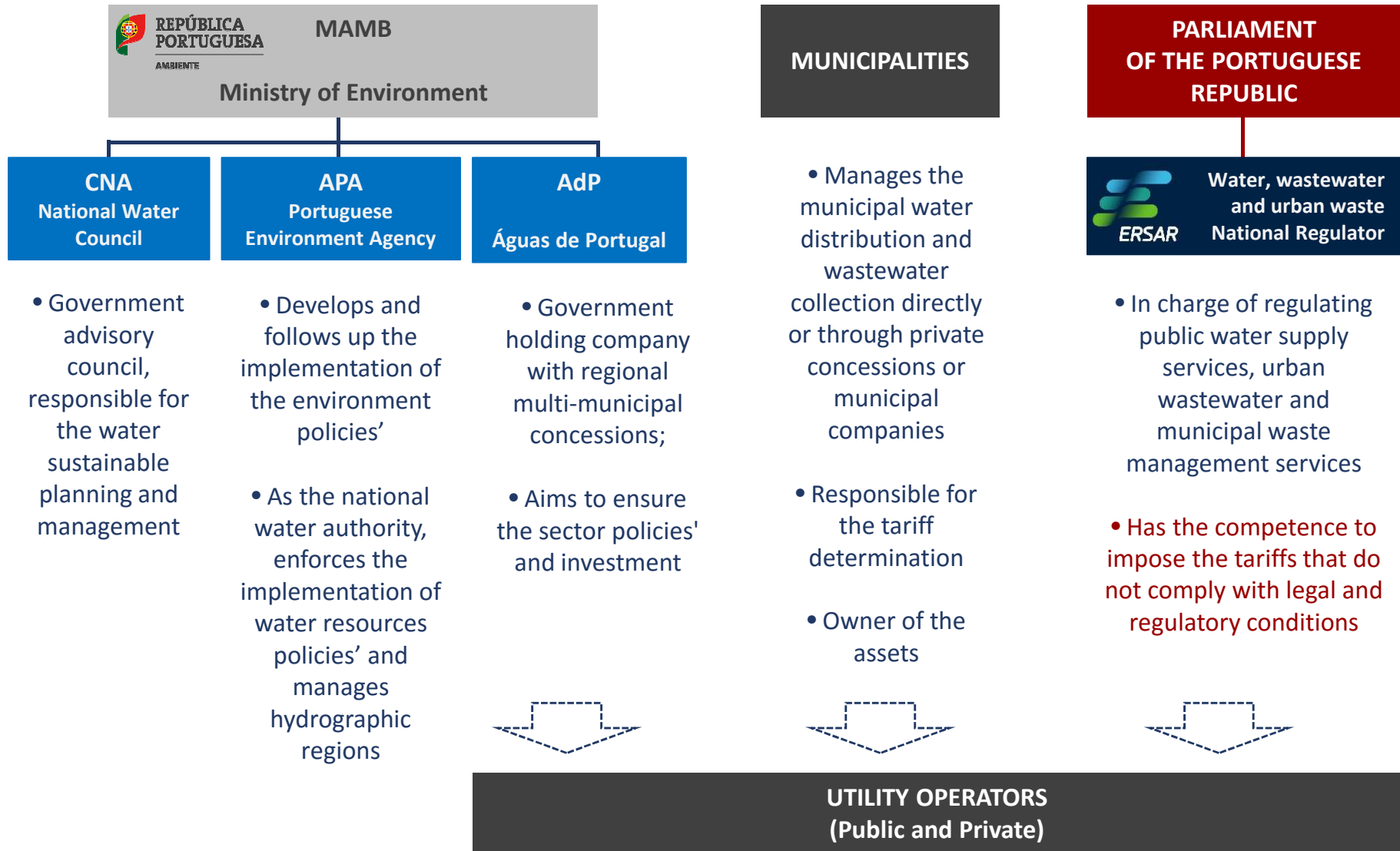
Volume: 446 million m<sup>3</sup>/year

Average Tariff to Consumers: 0,79 €/m<sup>3</sup>

Source: ERSAR, RASARP V1, 2016



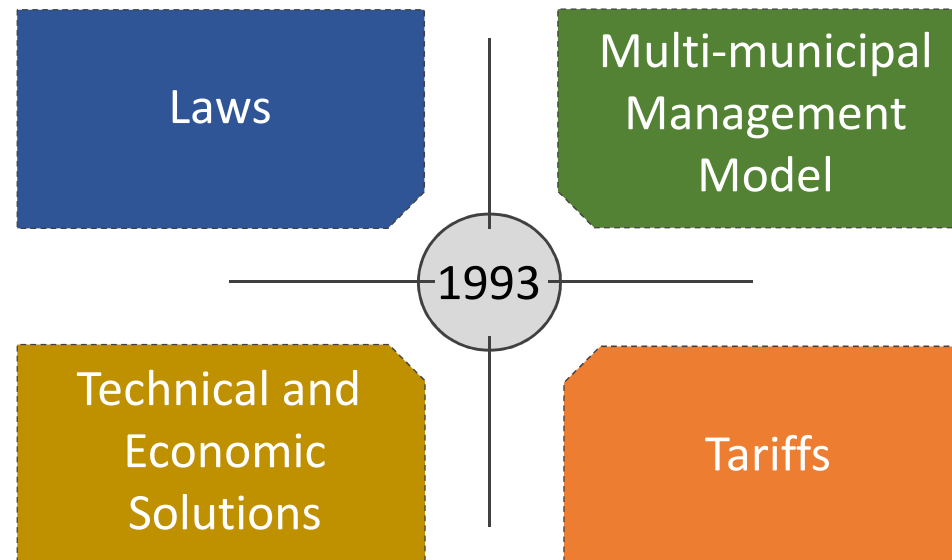
# PORTUGAL WATER AND SANITATION SECTOR AT A GLANCE - ORGANIZATION





## REFORMS INTRODUCED

1

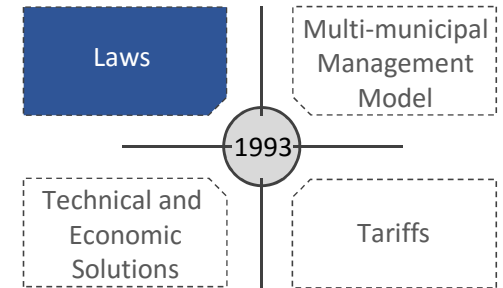




## Legal reform

1

- ❖ Until 1993 local authorities were exclusively responsible for water and sanitation systems.
- ❖ In 1993, two distinct concession models were created:
  - **Public** multi-municipal systems between Government (51%) and Municipalities (49%);
  - **Private** concessions through international public tender promoted by the municipalities.
- ❖ Legal reforms encouraged a true water industry with the required investment capacity.



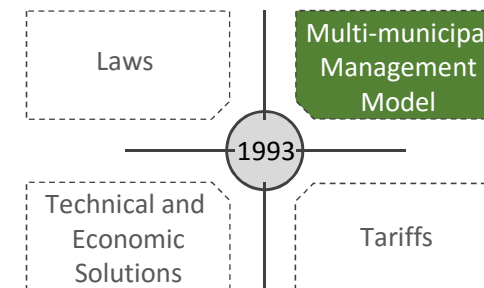
- Adequate management of water resources
- Professionalism of the water market
- Acceleration of the rate of capital investment
- Access to private capital



## Multi-municipal systems management model

1

- ❖ Large scale systems;  
100% public concessions from 20 to 50 years
- ❖ Responsible for “bulk” services:
  - Water treatment and supply to municipalities
  - Wastewater collection and treatment
- ❖ Downstream, municipalities still manage (or grant in private concession) the distribution networks to consumers and also sewerage networks (“retail” service).



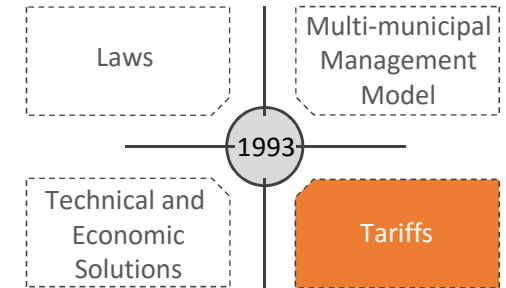
- Municipalities are simultaneously shareholders and clients of the multi-municipal companies;
- European Union “Cohesion Funds” supporting capital investment up to 85%



## Fixing Tariffs

1

- ❖ Tariff to be charged to consumer include:
  - Multi-municipal tariff
  - Water distribution and sewerage collection tariff
  
- ❖ Multi-municipal systems practice “full cost recovery”, assuring sustainability and efficient asset management;
  
- ❖ Municipal systems are responsible to fix consumer’s tariffs and may subsidize service to practice lower tariffs although “full cost recovery” is encouraged.



### TARIFFS ENSURE AFFORDABILITY

#### WATER TARIFF (€)

Average Multi-municipal Tariff	0,50
--------------------------------	------

Average Tariff to Consumers	1,07
-----------------------------	------

#### SANITATION TARIFF (€)

Average Multi-municipal Tariff	0,51
--------------------------------	------

Average Tariff to Consumers	0,79
-----------------------------	------

Source: ERSAR, RASARP V1, 2016

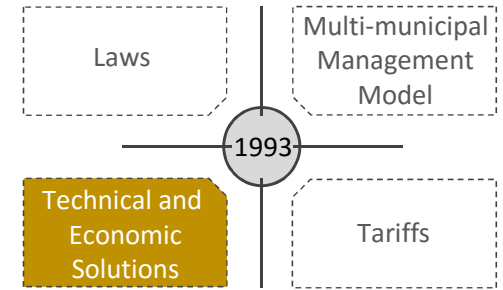




## Optimizing investment and operating costs

1

- ❖ Master Plans to large urban areas:
  - Oporto and Algarve: raw water reservoirs , WTP, strategic treated water tanks;
  - Estoril and Aveiro: Sewer main ring and WWTP.
- ❖ “Second generation” of multi-municipal systems to less populated regions;
- ❖ National Strategic Plans approved each 7 years;
- ❖ Financial support from European Union and European Investment Bank.



### CAPITAL INVESTMENT (Million €)

<b>WATER</b>	<b>7 124</b>
Multi-municipal	3 760
Municipal	3 364
<b>SANITATION</b>	<b>6 114</b>
Multi-municipal	2 848
Municipal	3 266



European Union grants

€ 6 390 Million

Sources: ERSAR; PENSAAR 2020



# EVOLUTION AND RESULTS 2



## WATER SERVICE

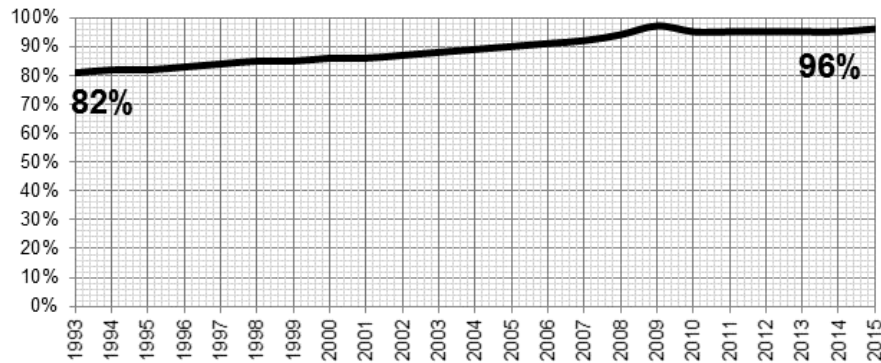


- Public network covers the entire country
- Drinking water quality is universal
- Affordability is 100% assured



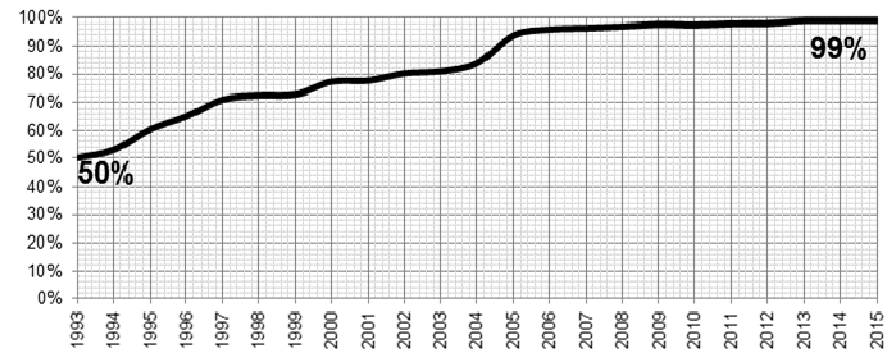
## Water network coverage

2016  
**96,5%**



## Drinking water quality

2016  
**99,1%**



Source: ERSAR



# EVOLUTION AND RESULTS 2

## SANITATION SERVICE



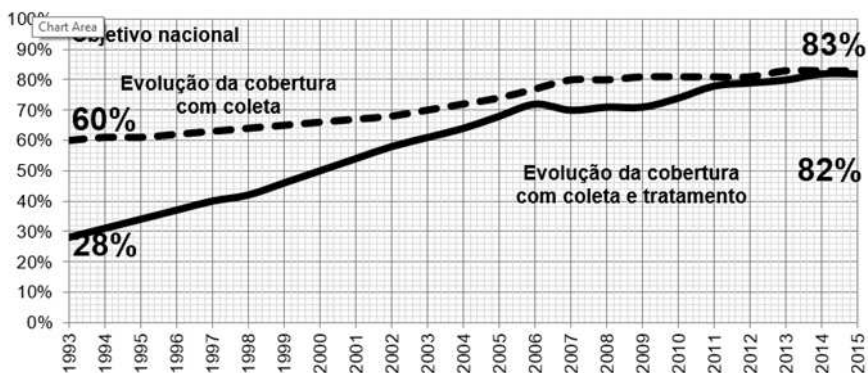
Wastewater network  
and

2016  
**84,9%**



Wastewater treatment

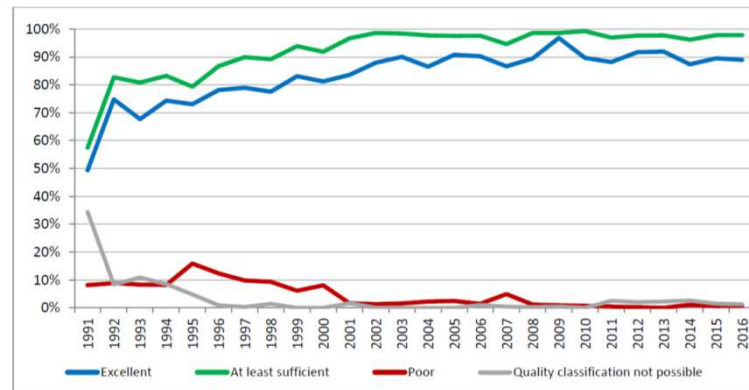
2016  
**83,7%**



Source: ERSAR

## Coastal bathing waters quality

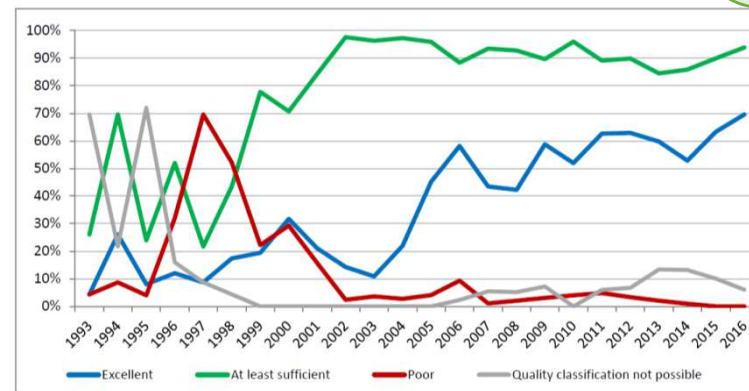
2016  
**97,8%**



Source: European Environment Agency

## Inland bathing waters quality

2016  
**93,9%**





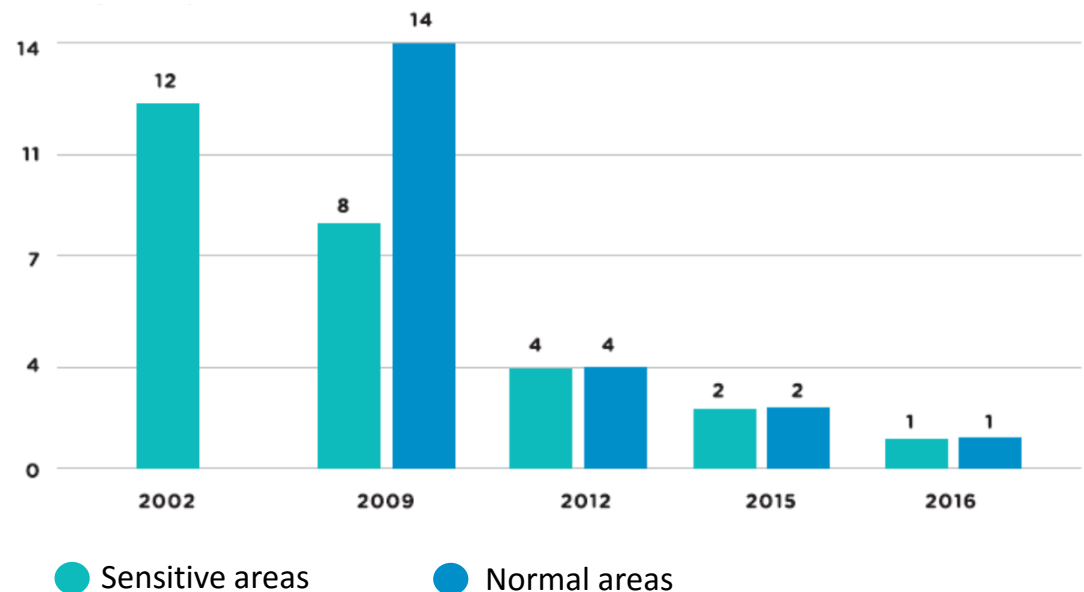
## EVOLUTION AND RESULTS

2

### COMPLIANCE WITH THE Urban Waste Water Treatment Directive

- ❖ Portugal faced significant improvement in terms of compliance with the UWWTD;
- ❖ There are only two situations to be solved regarding : (1) secondary treatment and; (2) tertiary treatment in agglomerations of more than 10.000 p.e. in sensitive areas.

n. of agglomerations with litigation



All litigation regarding 91/271/CEE UWWTD should be solved until 2019

Sources: APA, REA 2016



## LESSONS LEARNED

3

### Portugal faced impressive improvement in the last 25 years

This was possible through:

1. The existence of a 100 year old experienced company in Lisbon, EPAL, leveraging state owned company AdP – Águas de Portugal
2. The injection of significant grants from the European Union
3. The opening of the water and sanitation sector to private operators, leveraging competition and professionalism
4. The establishment of a strong, empowered Regulator - ERSAR

Portuguese water and sanitation sector is developed and mature, still...



## LESSONS LEARNED

3

### ... There is much to be done

- Although many Utilities are sustainable and practicing “full cost recovery” policy...
- ...some Utilities have operational costs above their tariff revenues.
- There is much space for efficiency improvement, hence reducing operational costs.
- Capital investment in infrastructure renewal must be performed in a higher rhythm than the present one.
- The split between “bulk” and “retail” Utilities causes technical and economic difficulties that are yet to be solved.

However...



Капка по капка – вир става  
Drop by drop – a whole lake becomes

Благодаря ви