



**HIGH-LEVEL INTERNATIONAL CONFERENCE
ON INTERNATIONAL DECADE FOR ACTION
"WATER FOR SUSTAINABLE DEVELOPMENT", 2018-2028**

**Action Panel on
Financing, Investment and
Resilient Infrastructure**

DIOGO FARIA DE OLIVEIRA
PRESIDENT, International Specialist Centre of Excellence on PPP in Water and Sanitation
PRESIDENT, National Water and Sanitation Strategic Plan 2020
MANAGING DIRECTOR, Defining Future Options

DUSHANBE
TAJIKISTAN
JUNE 21, 2018



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Objectives

- **To identify the investment needs and its sources**
- **To present the requirements for "Creditworthiness"**
- **To identify the main risks and its control and mitigation**
- **To present the financing of the Portuguese water sector**

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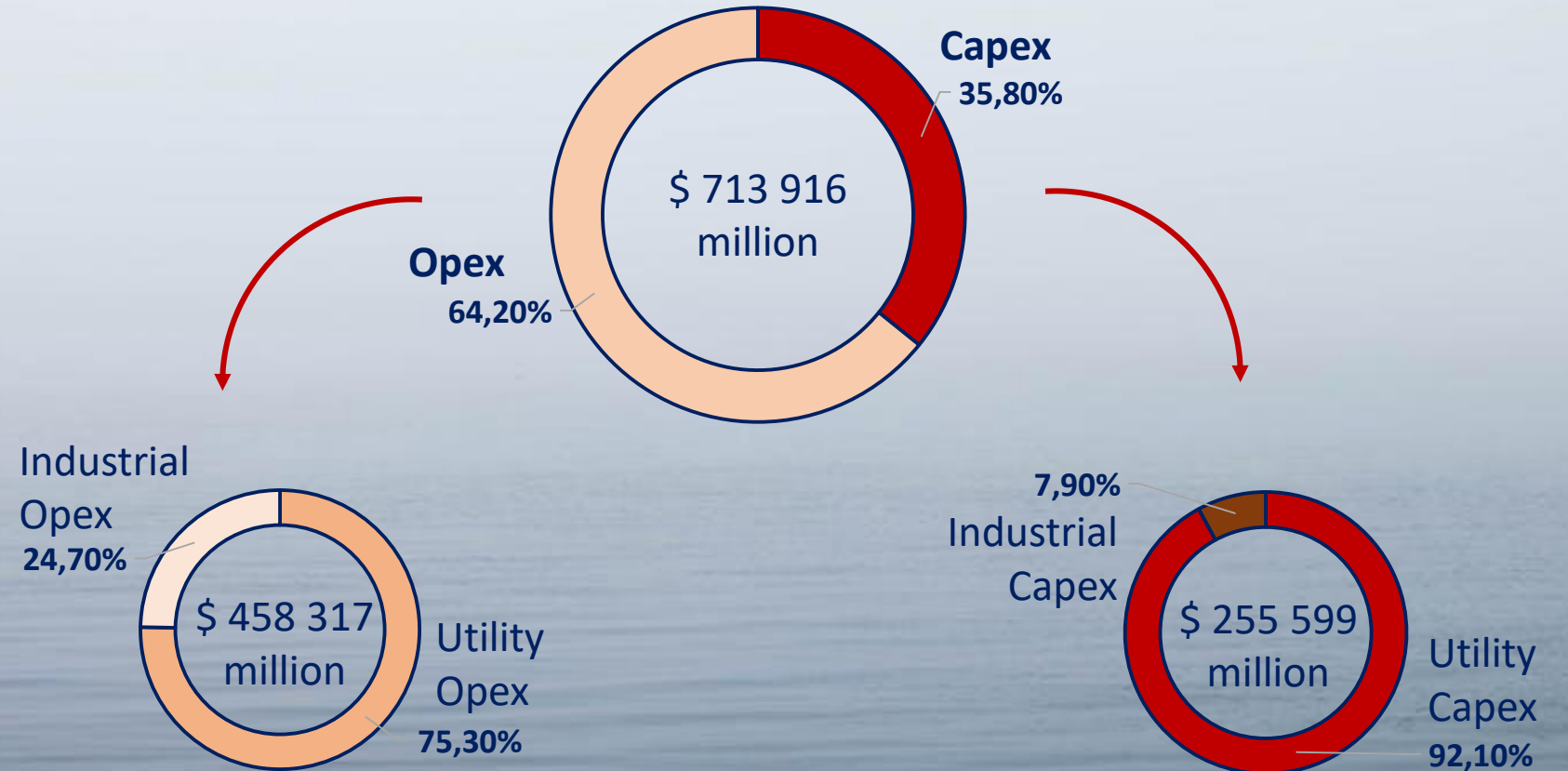
JUNE 21, 2018

Global Expenditure in 2016

“At a global scale we are not investing enough”



Utility and Industrial Expenditure, 2016



Source:
Global Water Intelligence, 2017

Global Investment needed to comply with the SDG

“We are determined to mobilize the means required to implement the Sustainable Development Goals, (...) with the participation of all countries, all stakeholders and all people.”



\$5 to \$7 TRILLION



 SUSTAINABLE
DEVELOPMENT GOALS

INFRASTRUCTURE
Projected costs for achieving
Sustainable Development Goals
annually

\$90 to \$120 TRILLION

**ESTIMATED TOTAL INVESTMENT
by 2030**

Water, agriculture, telecoms,
power, transport, buildings,
industrial and forestry sectors

*Source: United Nations'
Council for Foreign Relations*

Sources of Finance

“In a changing world (from population growth, economic dynamics, and climate change) we need flexible multi-purpose infrastructure”



3Ts & Other recurrent finance

- Tariffs
- Taxes
- Transfers from Donors
Philanthropy & NGOs
- Official Development Assistance (ODA)
- Property developers
- Farmers and industries
- House Owners

Loans and Bonds

- State-owned banks
- Commercial banks
- Sovereign Wealth Funds
- International Financial Institutions
- Public Bonds
- Project Bonds
- Green Bonds
- Institutional investors (pension funds, insurance, etc.)
- Microfinance
- Climate finance
- Foreign credits

Equity Investors

- Specialized water funds
- Private equity funds
- Venture capital (for technological innovation)
- Public-private partnerships (PPP)

Source: *Water: fit to finance?*
World Water Council, OECD

Creating the conditions to attract funding

“Misaligned incentives, poor accountability, and limited autonomy have created a low-level equilibrium endemic across many parts of the sector worldwide”



Law and Governance

- Establish a transparent, clear and stable legal framework
- Promote adequate management of water resources
- Incentive public utilities with enough scale to become efficient and practice affordable tariffs

Creating the conditions to attract funding

“A failure to consider, and provide for, Opex and Capex together will result in sub-optimal performance of services, eventually leading to higher recurrent costs and difficulties in attracting suitable finance.”



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Sector's Planning

- Setup objectives
- Compile reliable data and info
- Develop sound capital investment plans
- Approve national strategic plans
- Set up monitor and evaluation tools

Creating the conditions to attract funding

“The lack of financial and technical efficiencies, related to poor revenue collections, high levels of losses, significant operating costs, and poor management, undermine operating efficiency and constrain the Sector’s ability to access alternative sources of finance”



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Efficiency

- Attract skilled managers and professionals
- Establish performance indicators
- Establish efficiency goals
- Invest in asset management
- Approve realistic budgets

Creating the conditions to attract funding

“The challenge for all providers, public and private, is to extend access and overcome the price disadvantage faced by poor households”



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Tariffs

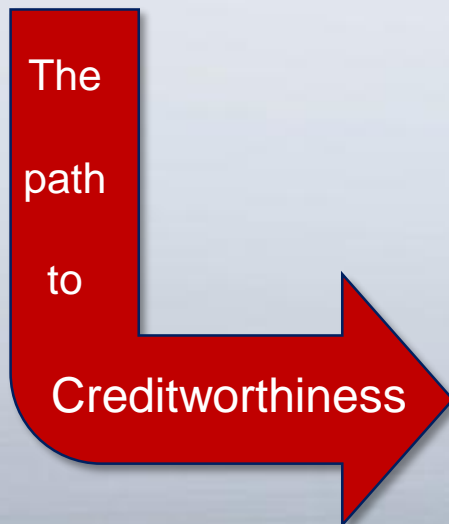
- Promote cost recovery
- Discourage waste and protect environment
- Assure affordability to ALL
- Promote utilities' sustainability and financial stability



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Project Risk: Control and mitigation

“Specific risks faced by investors in emerging markets include business model risk, technical feasibility, macroeconomic and corporate governance risks, funding shortfalls, and liquidity risk (such as the inability to refinance and/or exit).”



Very
simplified

Risk mitigation

Project risks

- Population growth
- Demand
- Design, technology and construction
- Operation & Maintenance
- Commercial (billing and collection)

Financial risks

- Availability and cost of funds
- Change of interest rate
- Change of inflation rate
- Change of foreign exchange rate
- Residual value
- Unforeseen investment

Exogenous risks

- Legislative
- Social (protest)
- Regulatory
- Environmental
- Sovereign or political

- Use of conservative forecasts
- Periodic contract reviews
- Back-to-back contracts
- Turnkey contracts

- Blend finance
- “Standby loan” and “Standby equity”
- Incorporate local currency risk
- Currency swaps
- Interest rate swaps
- Fixed rate loans

- Perform proper due-diligence
- Promote public and civil society involvement
- Public party to take some of these risks

- Insurances | Dispute resolution mechanisms



The Portuguese Case-study

Portugal water
and sanitation
sector at a
glance

KEY INDICATORS

1

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 km²**
- **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**

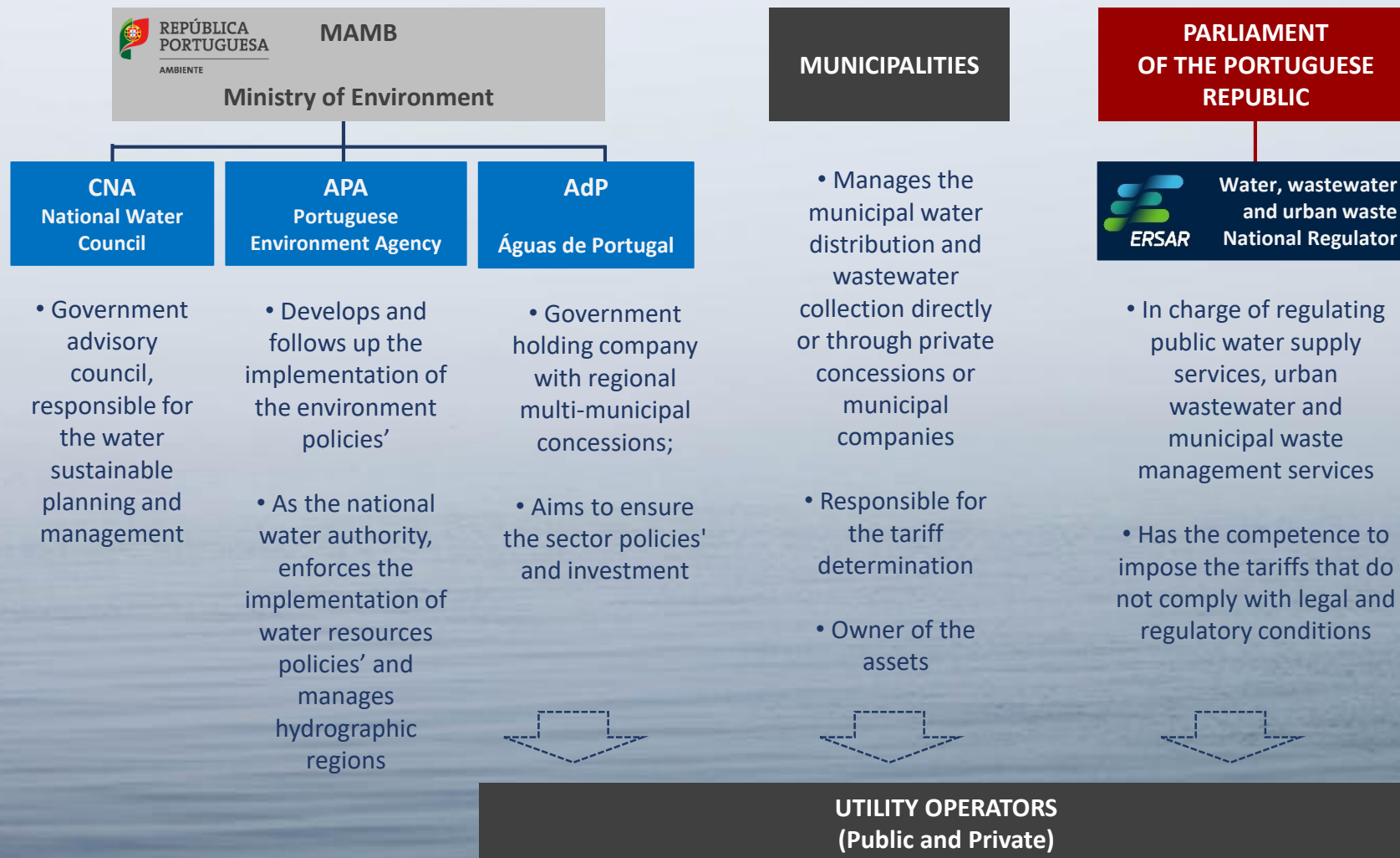
Source: GAG do PENSAAR 2020

 **The Portuguese
Case-study**

1

Portugal water
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ORGANIZATION

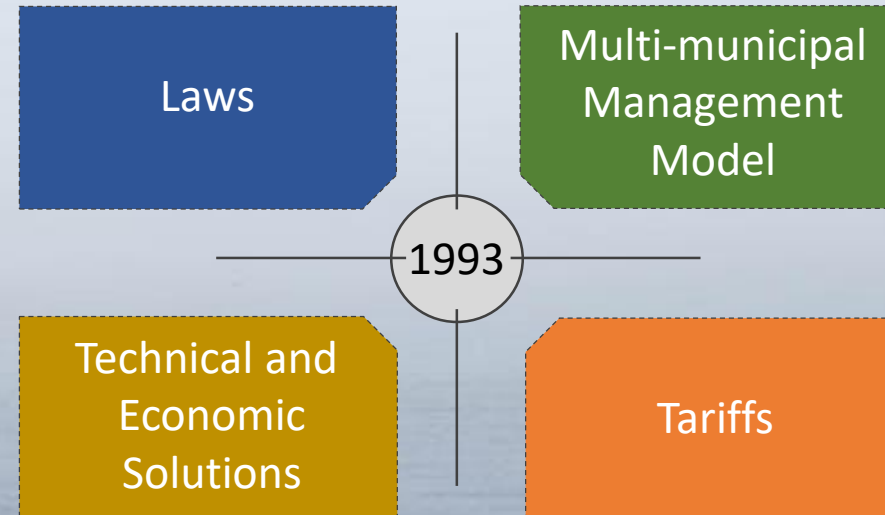




**The Portuguese
Case-study**

2

REFORMS
INTRODUCED

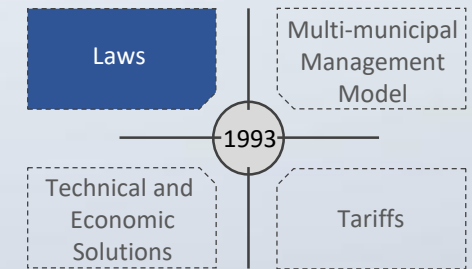


 **The Portuguese
Case-study**

2

**Legal
Reform**

- ❖ 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

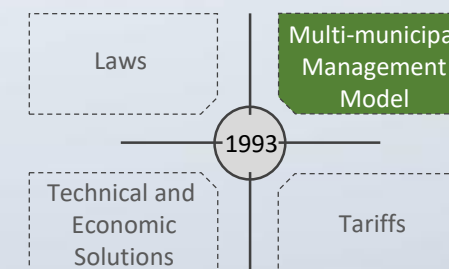


The Portuguese Case-study

Multi-municipal
systems
management
model

2

- ❖ 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%

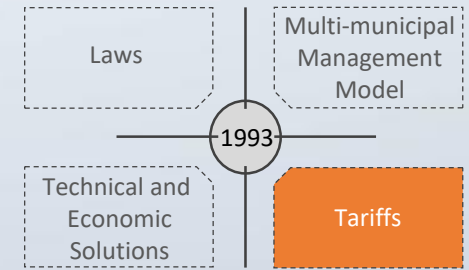
 **The Portuguese
Case-study**

**Fixing
Tariffs** 2

- ❖ 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 (€/m ³)	
Average Multi-municipal Tariff	0,50
Average Tariff to Consumers	1,07





SANITATION TARIFF (€ /m ³)	
Average Multi-municipal Tariff	0,51
Average Tariff to Consumers	0,79

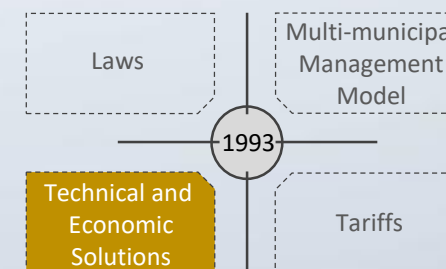
Source: ERSAR, RASARP V1, 2016

 **The Portuguese Case-study**

2
Optimizing investment and operating costs

- ❖ Master Plans to large urban areas
- ❖ “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.

	European Union grants	€ 6 390 Million
	European Investment Bank	€ 1 900 Million
	Bonds – Private Placement	€ 600 Million
	PPPs	€ 950 Million



CAPITAL INVESTMENT (Million €)	
WATER	7 124
Multi-municipal	3 760
Municipal	3 364
SANITATION	6 114
Multi-municipal	2 848
Municipal	3 266

Sources: ERSAR; PENSAAR 2020; AdP
Defining Future Options

**The Portuguese
Case-study**

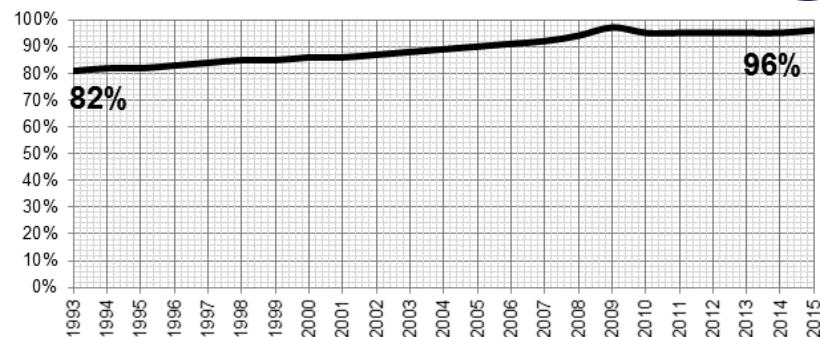
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**EVOLUTION
AND RESULTS**



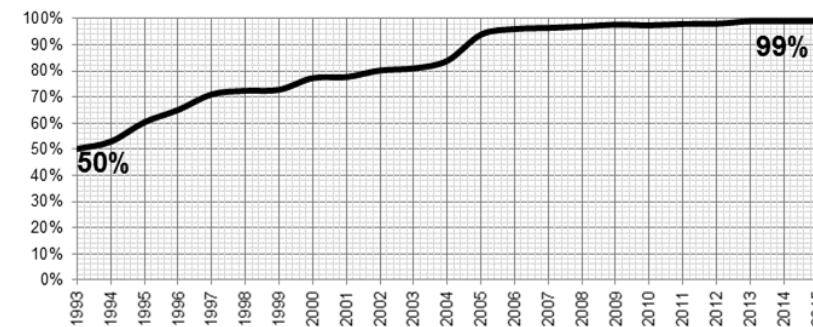
Water network coverage

2016
96,5%



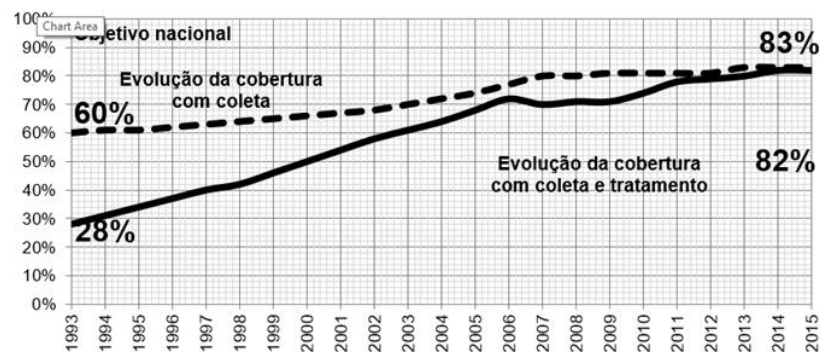
Drinking water quality

2016
99,1%



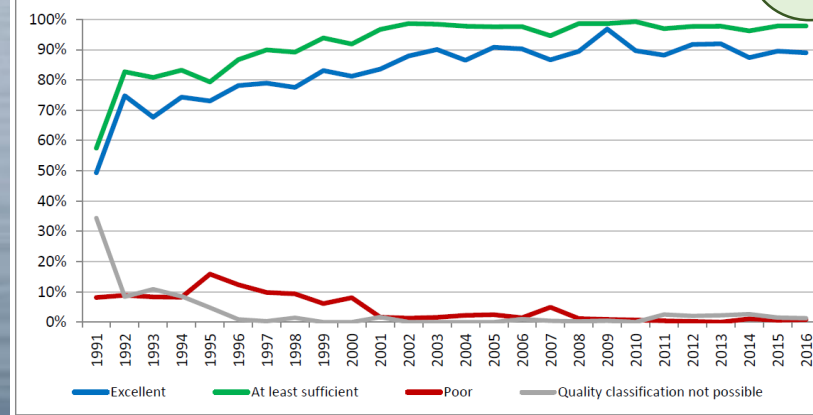
Wastewater treatment

2016
83,7%



Coastal bathing waters quality

2016
97,8%





“It is critical for achieving the 2030 Agenda to mobilize new investments in high quality infrastructure projects, especially in low and middle-income countries.”

“A further critical challenge is climate change and the need to promote investments in resilience and to address the enhanced risks to all people (...)”



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