



**apa**  
portuguese  
environment  
agency



# Challenges for the implementation of the Water Framework Directive in Portugal

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**REPÚBLICA  
PORTUGUESA**

ENVIRONMENT AND  
CLIMATE ACTION

# Water Framework Directive and National Water Law



**APA responsibilities:**

- Water
- Coast protection
- Air Quality
- Noise
- Waste management
- Chemistry products
- Climate
- Environmental Evaluation
- Environmental Licencing
- Environmental hazards
- Sustainable development
- Public participation

Water resources management:  
(5 vector of management)

- Planning
- Monitoring
- Permits
- Supervision
- Protection measures

Water resources territory:  
(5 water basin district)



Water resources shared:  
(5 international water basin )



Portugal depends on 50% of water resources from Spain

Consumptive uses in Portugal

|                       |                 |
|-----------------------|-----------------|
| 6 000 hm <sup>3</sup> | 74% Agriculture |
|                       | 14% Urban       |
|                       | 11% Industrial  |

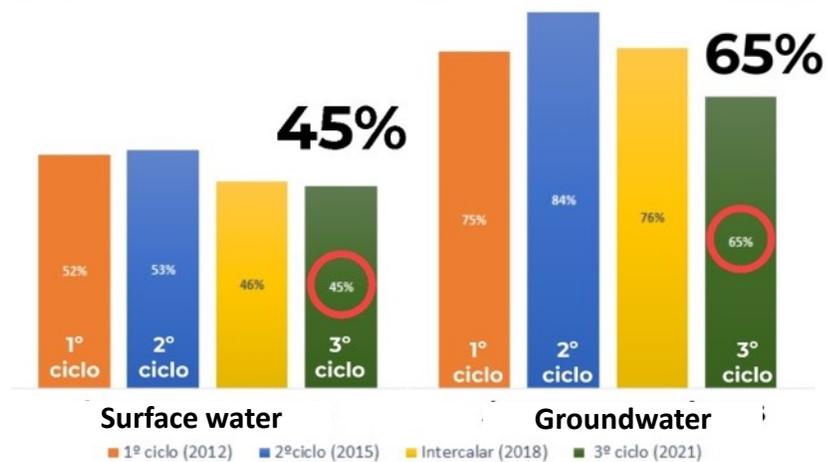


# WFD and River Basin Management Plans in Portugal (RBMPs)



## River Basin Management Plans in Portugal (the diagnosis for the 3th cycle)

Water bodies global status – Good or better



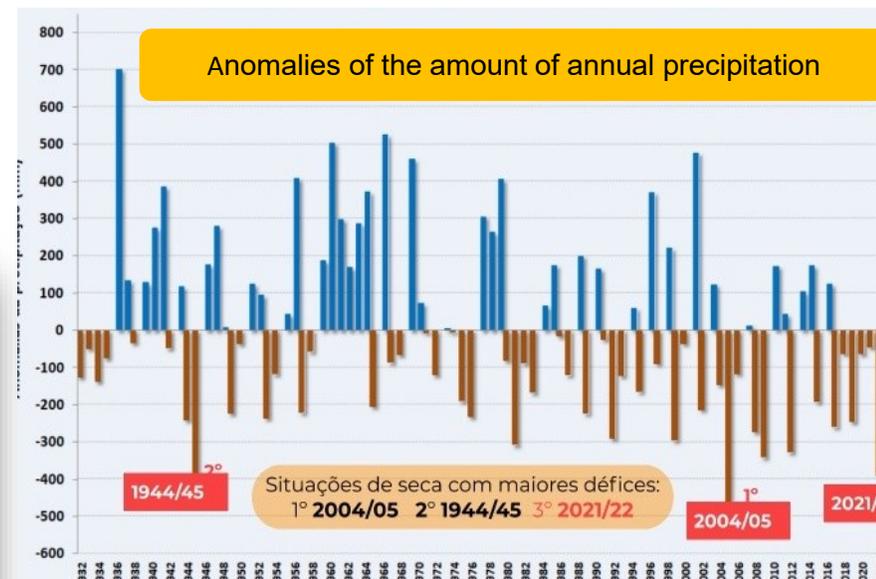
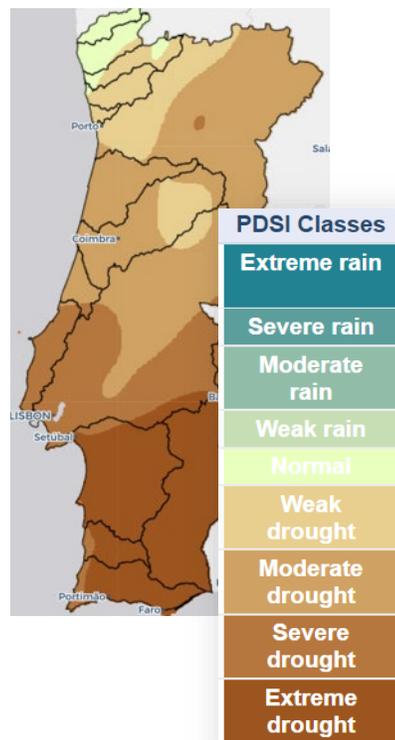
Actual climate and water resources context:

- Temperature rise
- Precipitations loss
- Water scarcity
- Increased demand



- Efficiency of water use
- Water desalination
- Water reuse

August 2023



Last 20 years  
precipitation

REDUCED  
20-30%

# RBMPs and Urban Wastewater Treatment Directive (UWWTD)



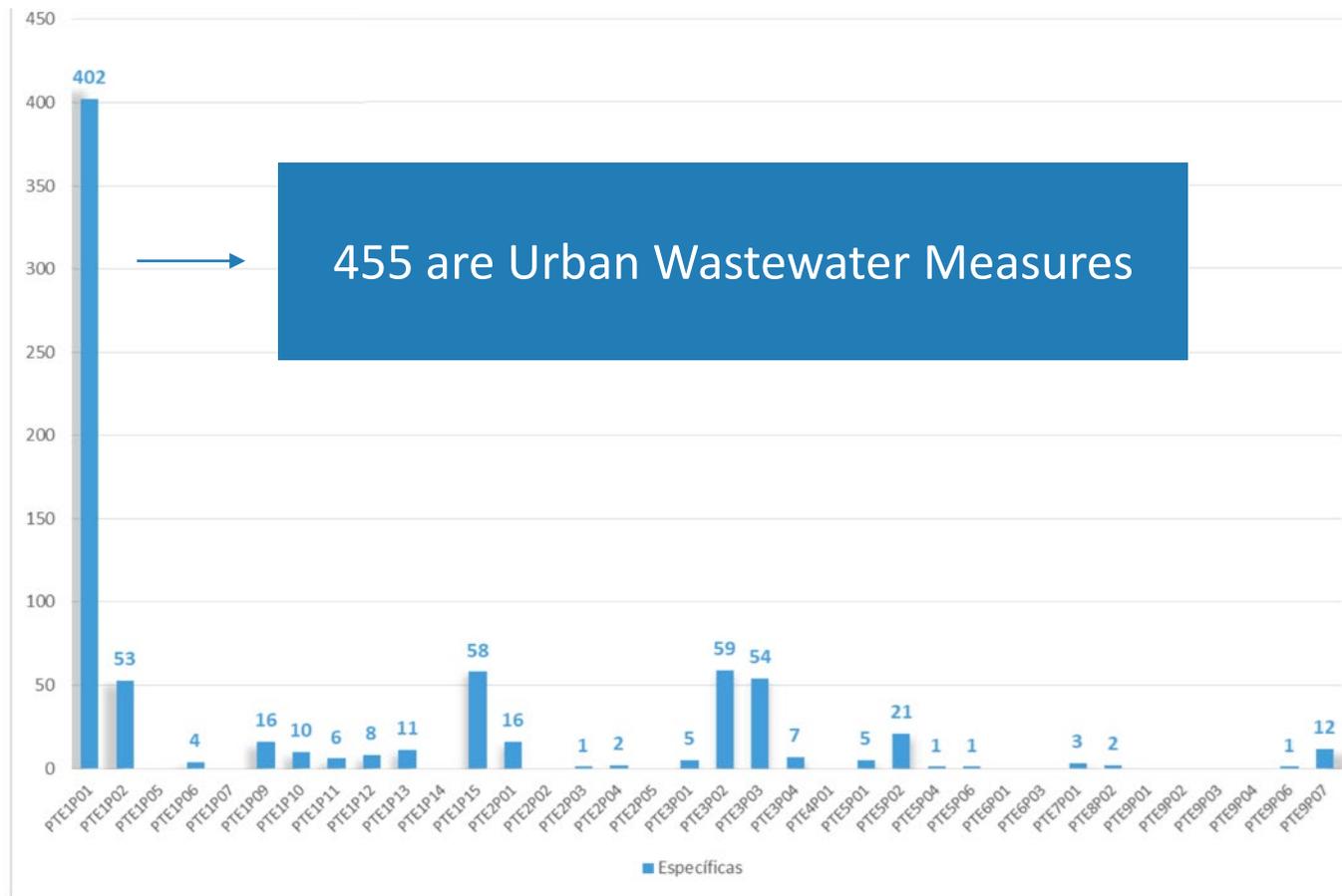
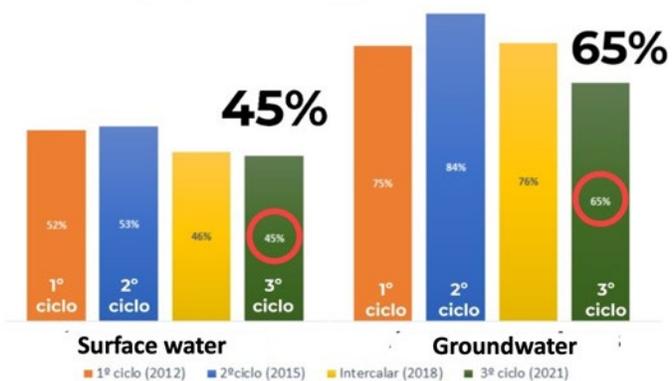
## River Basin Management Plans in Portugal (diagnostic for the 3th cycle)

Propose

825  
measures

614  
M€

Water bodies global status – Good or better



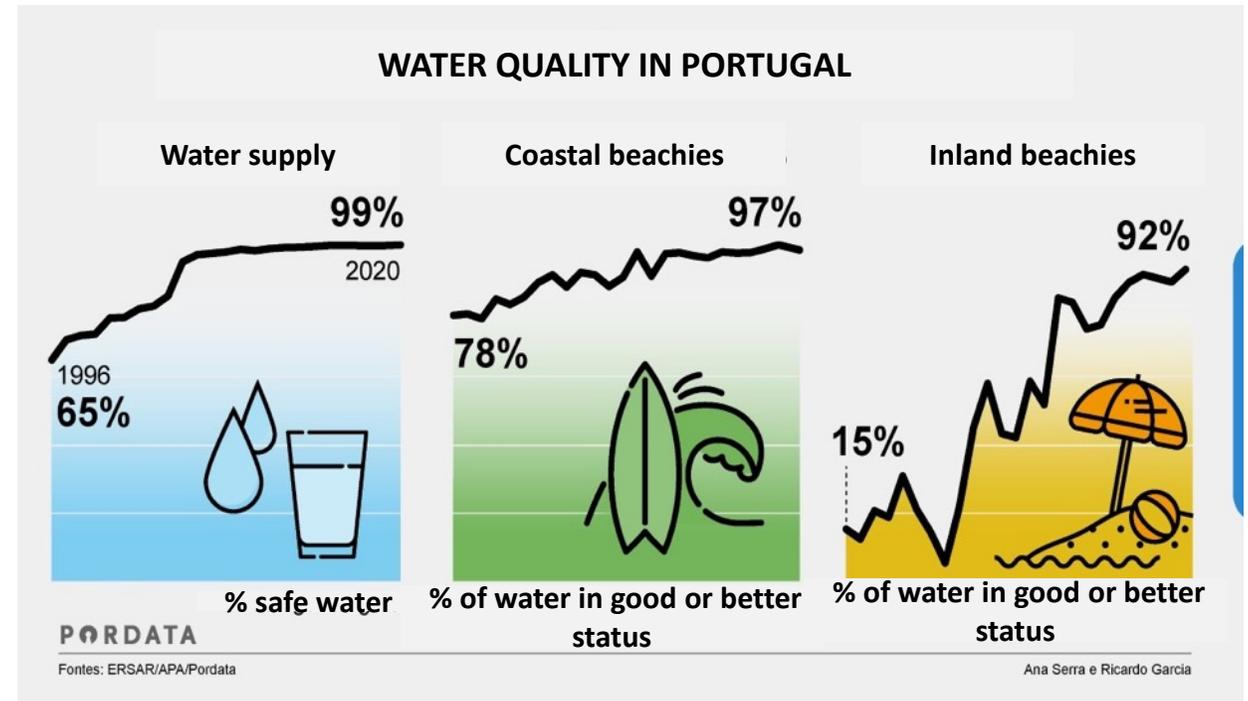
# Urban Wastewater Treatment Directive (UWWTD)

The Urban Wastewater Treatment Directive (UWWTD) (**Council Directive 91/271/EEC**). Main objectives:

- Wastewater Collection
- Wastewater Treatment
- Sensitive Areas
- Monitoring and Reporting:
- Implementation and Enforcement

The UWWTD has significantly improved the quality of water resources, with:

- Creation of the services regulator – ERSAR
- Partnership between the state and municipalities
- Restructuring of water supply and sanitation services
- Investment of 13.000€



# Other policies

## Combined approach

for the Wastewater discharges permits  
- WFD Article 10

”Fit for propose” instead “Fit-for-all”

Combined approach by establishing and implementing appropriate emission limit values (ELVs), differentiated for the dry period and the wet period of the year and also for exceptional



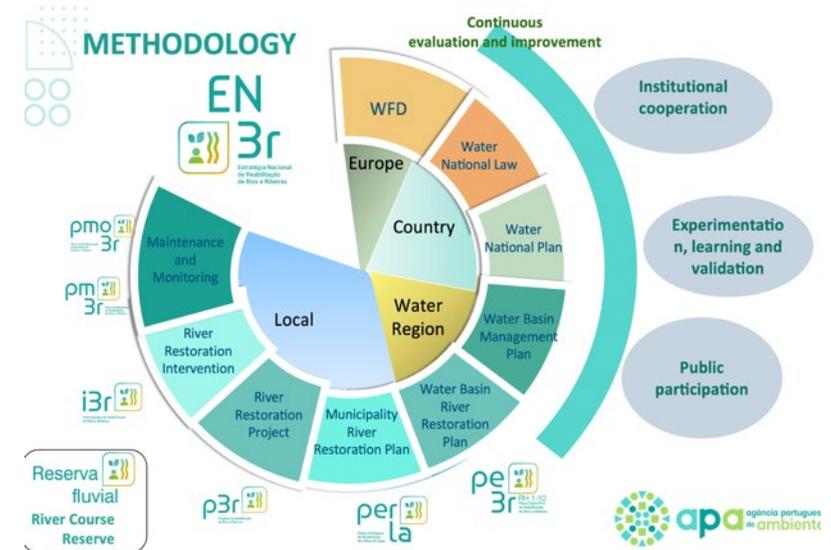
## Water Reused



The Portuguese Environment Agency developed a guideline with procedures and guidance for

- Permitting process
- Health and environmental risk assessment
- Selection of barriers and measures control
- Monitoring programs
- Signage

## River Restoration Strategy with Nature Based Solutions



From 2017

1.230 km rivers courses restored  
70 M€ invested  
120 Municipalities included



# Urban Wastewater Treatment Directive (UWWTD)

## UWWTD recast

In **October 2022**, the European Commission presented a proposal to review the UWWTD (European Council Directive 91/271/EEC of 21 May 1991)

1. Elimination of the possibility of designating less sensitive areas,
2. **Obligation** for all urban wastewater discharges from agglomerations equal to or **above 100,000 e.p.** to undergo tertiary treatment (nitrogen and phosphorus removal, with emission limit values of 6 and 0.5 mg/L, respectively) and **quaternary treatment** (micropollutant removal) by the end of **2035**.
3. The same **obligation** is imposed for agglomerations between **10,000 and 100,000 e.p.** discharging into **sensitive or eutrophication risk areas** by **2040**.

Portuguese approach (as shown by the [IMPEL - WiNE](#) study)

### Consider that:

The **expected deadline** might **impact on the sustainability of the system** and not ensure a balanced cost-benefit ratio.

Relying solely on the **wastewater load** might not be enough to improve water quality and could lead to high costs without significant benefits.

**Removing nutrients** can **cause negative environmental effects**, such as increased energy use and chemical production. Additionally, using chemical fertilizers for nutrient reuse in agriculture may be necessary.

The control of discharges under the **WFD Article 10** involves setting appropriate emission limit values (ELVs) using a **combined approach**.

### Propose:

Portugal presented a position outlining a **methodology for the risk assessment and management** of the environment and human health. They used a **multi-criteria analysis** to determine suitable treatments for urban wastewater discharge, ensuring environmental goals are met for water bodies.



# Water and financial economic management

The Water Resource Tax base is made up of the sum of its six components, namely:

$$TRH = A + E + I + O + U + S$$

**Component A** - Abstraction of water resource

**Component E** - Discharge on the water resources

**Component I** - Sediment extraction

**Component O** - Occupation of the water resource territory

**Component U** - Private use of the water subject to public planning and management

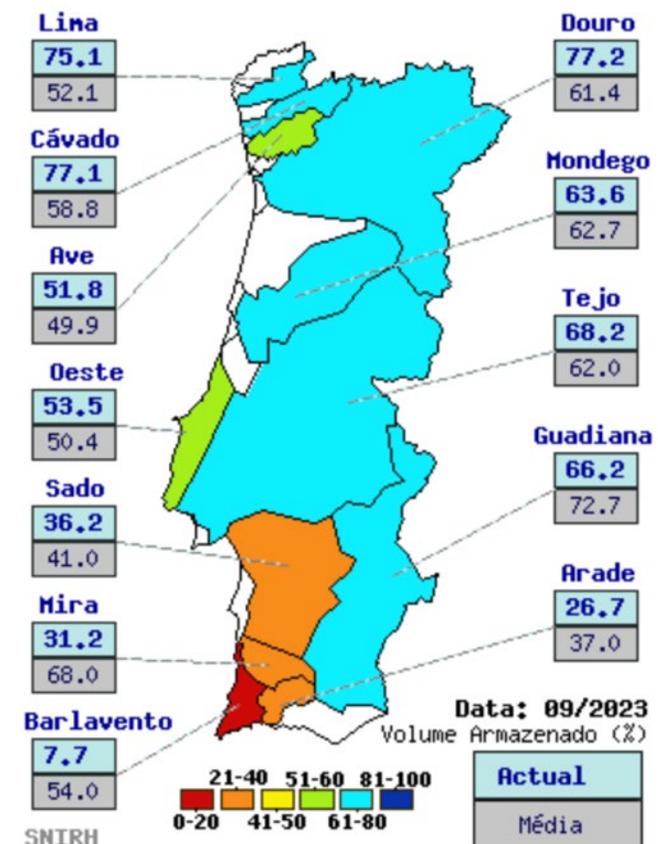
**Component S** - Private use for public water supply systems

The average tax annual is about 30M€

## UPDATES

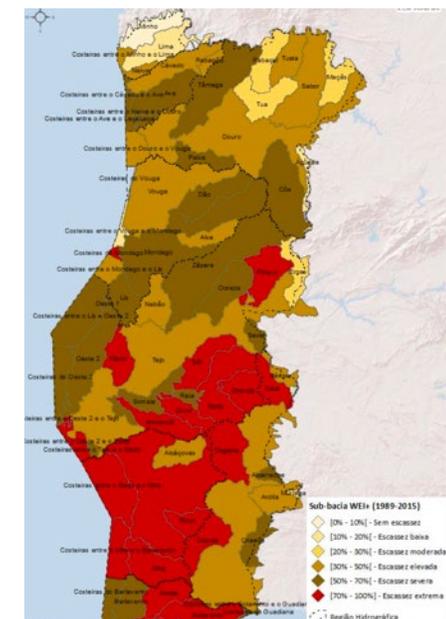
- Update scarcity coefficients based on the supply and demand balance methodology (WEI+)
- Review reductions to reward efficiency and reuse (Components A, E and U)
- Adapt basic values to National and European reality

## Reservoir accumulate level



## Scarcity coefficient

|  |
|--|
| WEI+ inferior a 10% - Sem escassez       |
| WEI+ entre 10% e 20% - Escassez baixa    |
| WEI+ entre 20% e 30% - Escassez moderada |
| WEI+ entre 30% e 50% - Escassez elevada  |
| WEI+ entre 50% e 70% - Escassez severa   |
| WEI+ superior a 70% - Escassez extrema   |



percentage of water use against renewable freshwater resources in a given time and place

# Water Management Priorities

- Increase the **number of monitored water bodies**
- Fill the gaps in **assessment methodologies** for all required **quality elements** and for all **water categories**
- **Evaluate current and future water availability**
- **Determine the Wei+ index for sub-basins in order to apply measures**
- **Approval and submission of the River Basin Management Plan (3rd Cycle)**
- **Promote the good state of water bodies**
- **Increase the Scarcity coefficient of the water resources tax considering the Wei+ index by sub-basin**
- **Promote water reuse for non potable uses**
- **Promote water efficiency in all sectors**
- **Monitoring (quality and quantity)**

**Licensing** (combined approach, for discharges and abstractions)

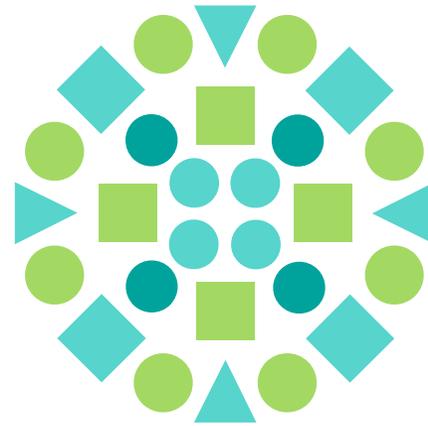
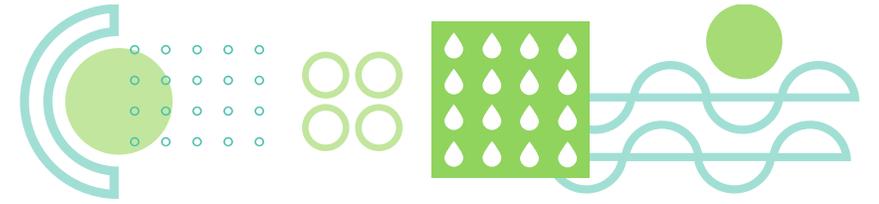
**River rehabilitation** (Nature-based solutions)

**Ecological Flows** (applied to all water bodies)

**Developed Drought and Water Scarcity Plans by Hydrographic Regions (The National Plan was approved in 2017 and water efficiency plans for the south of the country developed in 2020)**

**Increase articulation with Spain in international basins**





**THANK YOU**

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