



WASTEWATER REUSE IN PORTUGAL

ECONOMIC REGULATION

ERSAR

ENTIDADE REGULADORA
DOS SERVIÇOS DE ÁGUAS E RESÍDUOS

*THE WATER AND WASTE SERVICES
REGULATION AUTHORITY*

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Vila Nova de Gaia | 2023.03.30

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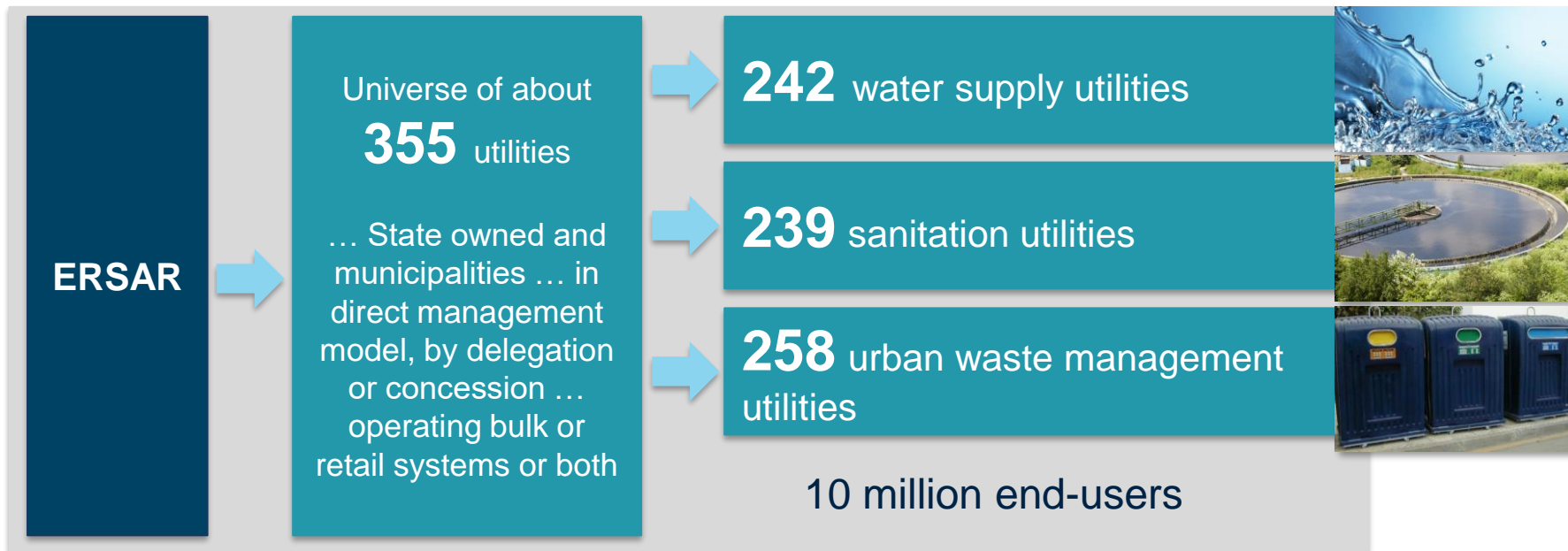
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WASTEWATER REUSE IN PORTUGAL

THE IMPORTANCE OF WATER REUSE



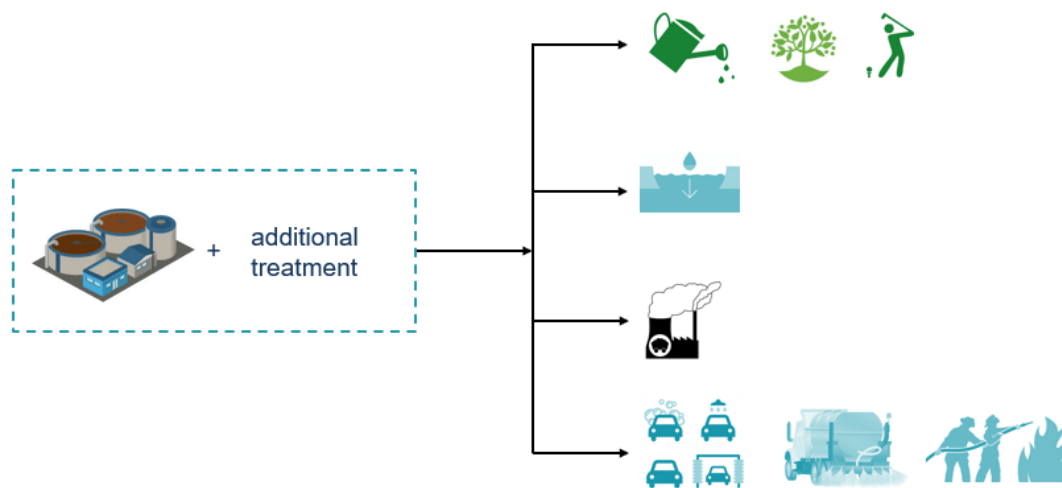
DROUGHT AND WATER SCARCITY

In Mediterranean countries, water shortages and droughts have increased significantly in recent decades, and they are likely to become more frequent and more severe in the future.

CIRCULAR ECONOMY

Wastewater reuse can be seen as an additional water source for non-potable uses.

It can also contribute to the recovery of the nutrients contained in reclaimed water.



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PRESENT SITUATION IN PORTUGAL



UTILITIES THAT PRODUCE
RECLAIMED WATER

30

VOLUME OF RECLAIMED
WATER

8.2

MILLION M3

WASTEWATER REUSE

1.2%

WASTEWATER REUSED
WITHIN THE UTILITY

87%

Source: RASARP, ERSAR, 2021

WASTEWATER REUSE IN PORTUGAL

MAIN CHALLENGES



PRICING

Water for irrigation is often free of charge.

The price of reclaimed water depends on the quality demanded, on the volume reused and if includes or not distribution costs.

The willingness to pay for this resource may become a very important obstacle and depends on the availability of cheaper sources.

DISTANCE

Distance between treated wastewater production sites and potential users can become a barrier, as may significantly increase the distribution costs.

SAFETY

The quality of treated wastewater and the practices adopted must minimize potential risks to the public health and the environment.

PUBLIC ACCEPTANCE

Policy makers must improve their communication and must provide clear and accurate information to population.

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RECOMENDAÇÃO N.º 3/2023 RECOMENDAÇÃO SOBRE ÁGUAS PARA REUTILIZAÇÃO

Considerando que:

- A. A conservação dos recursos naturais e o uso eficiente de água são objetivos nacionais com grande relevância para os serviços de abastecimento público de água e de saneamento de águas residuais urbanas reconhecidos na Lei de Água e consagrados nos sucessivos planos estratégicos do setor.
- B. O consumo crescente de água tem contribuído para o aumento da pressão sobre os recursos hídricos, situação que tem sido agravada pela frequência e intensidade das secas que têm afetado o território nacional em resultado das alterações climáticas.
- C. A utilização de água residual tratada para fins não potáveis pode contribuir para minimizar os efeitos de escassez hídrica, enquanto origem de água alternativa, em linha com os princípios da economia circular. Efetivamente, o Programa de Ação para a Adaptação às Alterações Climáticas (P-3AC) prevê a utilização de águas residuais tratadas como medida de adaptação às alterações climáticas.
- D. A utilização de águas residuais tratadas é uma das medidas tendentes a melhorar a gestão do ciclo urbano de água, permitindo a sua utilização para usos compatíveis e preservando a sustentabilidade dos recursos hídricos para usos futuros.
- E. A evolução do quadro legal tem acompanhado a importância crescente que vem sendo conferida à utilização desta origem de água alternativa. No que respeita aos sistemas municipais, o Decreto-Lei n.º 194/2009, de 30 de agosto, estabeleceu que o serviço de saneamento de águas residuais urbanas pode incluir a valorização de subprodutos resultantes das atividades de tratamento de águas residuais urbanas, nomeadamente através de disponibilização de águas residuais tratadas aptas a novas utilizações. Com a alteração do Decreto-Lei n.º 119/2016, de 21 de agosto¹, são estabelecidas regras mais simplificadas aplicáveis à utilização de águas produzidas em sistemas de produção centralizados, agora também sujeitas ao regime de comunicação prévia com prazo. Finalmente, com a publicação do Decreto-Lei n.º 16/2021, de 24 de fevereiro, foi clarificado que a atividade de produção de água para reutilização integra o serviço público de

¹ Decreto-Lei n.º 11/2023, de 10 de fevereiro, procede à reforma e simplificação dos licenciamentos ambientais.

ASSESSMENT OF THE TECHNICAL, ECONOMIC AND FINANCIAL VIABILITY OF THE PROJECT

The water utility must ensure that there will be sufficient demand to justify the investments to be made in the reclaimed water production activity.

It is recommended to **celebrate protocols** with potential users in a preliminary stage.

An **Economic and Financial Feasibility Study** must be submitted to the regulator demonstrating the feasibility and sustainability of the activity.

Recommendation ERSAR nr. 3/2023

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TARIFF STRUCTURE

A **single variable tariff** must be applied by each utility, depending on the volume delivered (€/m³).

In exceptional situations, different tariffs between users may be applied by the same producer only for special technical, economic or environmental reasons, previously assessed by ERSAR.

TARIFF RULES

Water utilities must **maintain independent accounting** of the expenses incurred with the provision of different activities.

There should be **no cross-subsidization**. The expenses incurred with the production and supply of reclaimed water should not burden other activities carried out by the water utility.

The **financial self-sustainability** of the activity must be demonstrated annually to ERSAR.

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TARIFF RULES

The tariff applied must ensure the recovery of all the expenses incurred in a scenario of productive efficiency:

- i. Investment expenses: amortization of investment assets deducted from lost fund subsidization
- ii. Operating expenses: expenses with raw materials used in the treatment, as: energy consumption, chemical reagents, maintenance and repair, personnel, administrative expenses, etc.
- iii. Financial and tax expenses
- iv. Remuneration of capital.

In order to encourage the use of reclaimed water, **the subsidization of investment and/or operation** may be justified in water scarcity regions so that the tariff is competitive.

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SERVICE CONTRACTING

Reclaimed water supply service must be supported by a **written contract**, signed by the producer and the user, that must include:

- i. Maximum daily, monthly and annual volume of reclaimed water that the producer is obliged to provide
- ii. **Minimum monthly and annual volume of reclaimed water that the user is obliged to buy** and the period of the year in which he intends to consume it
- iii. **Minimum contract duration and applicable conditions in case of early termination**
- v. Reclaimed water quality and location of the compliance points
- vi. Service suspension conditions and information obligations of the producer entity to the user
- vii. Information **on tariffs, namely how they are updated**
- viii. Reclaimed water measuring conditions
- ix. Conditions for monitoring the quality of the reclaimed water provided (sampling location and frequency)
- x. Means of payment, terms and conditions of payment.



THANK YOU FOR YOUR ATTENTION!



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