



ERSAR

ENTIDADE REGULADORA
DOS SERVIÇOS DE ÁGUAS E RESÍDUOS
*THE WATER AND WASTE SERVICES
REGULATION AUTHORITY*

DATA PROCESSING AND PUBLICATION

Data processing and publication: what for?
ERSAR Perspective

Conference with OECD-NER - Club des
régulateurs

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4th November 2019

AGENDA



1. Drivers for Data Collection and Treatment

- Public Policies
- The Role Of Regulation
- International Obligations

2. Data Collection Mechanisms: Regulation Cycles

3. Data Management: KPI's Evolution

4. Data Presentation: RASARP

5. Data Quality: Next Steps

WATER SECTOR REFORM AND PUBLIC POLICIES REQUIREMENTS



- In 1993 (and the following years) there was a strong political commitment for water sector reform
- The main improvements happened with the definition of global, integrated and stable public policies. The main components are:
 - Definition of a clear strategy for the sector (Strategic Plans)
 - Creation of a legal framework
 - Definition of the institutional framework (including regulation)
 - Promotion of a territorial reorganisation of the services (economies of scale)
 - Definition of new management models
 - Development of the business sector and introduction of competition
 - Focus on full-cost recovery
 - Definition of quality of service goals and improvement of drinking water quality
 - Protection and raising awareness of users
 - Making information available / International obligations

WHY REGULATION?

GOALS OF REGULATION



Consumer protection

Protection of user's interests (access to the service, quality of service and pricing)

- Contribute to the **universal access to water and waste services** with a **good quality and affordable prices**
- Protect users (complaint analysis, infractions proceedings, etc.)
- Limit the market power of monopolies
- Disclose **accessible information** to consumers and operators

Water operator protection

Contribution to the economic sustainability of the operators and their interests

- Set incentives to share efficiency gains with consumers
- Contribute to the **economic efficiency** and **sustainability** of the operators
- Contribute to a **stable and predictable environment** that enables investment in infrastructure
- Avoid risks of operators failure to provide the services

Environmental protection

Contribution to the environmental sustainability (impacts on water, air and land)

- Protect the environment, avoiding negative impacts
- Prevent long-term scarcity of water resources

INTERNATIONAL OBLIGATIONS



1999 – Portugal adheres to Protocol on Water and Health

Sustainable Development Objectives (ODS) AGENDA 2030

 **OBJETIVOS DE DESARROLLO SOSTENIBLE**

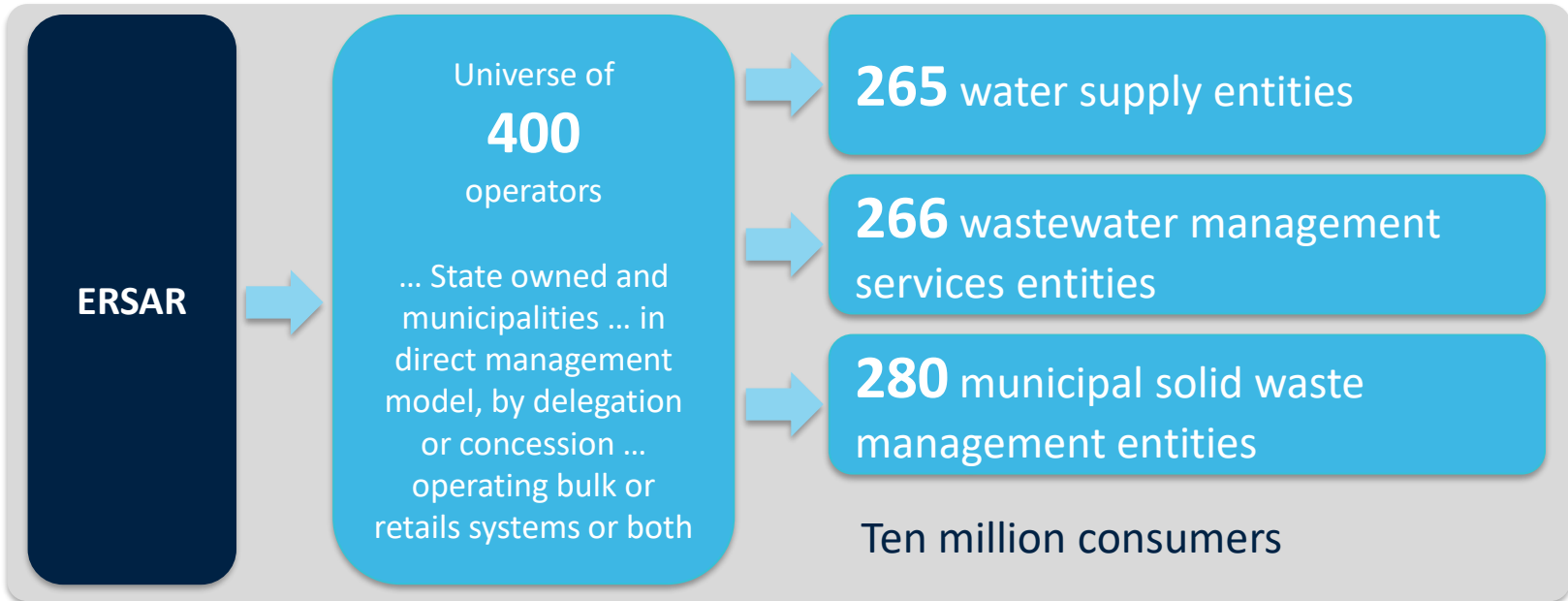


REGULATED SECTORS

SECTOR ORGANIZATION



The size and diversity of the regulated operators are vast, spanning state owned companies and numerous municipalities



REGULATORY MODEL

Regulatory model

Regulation of utility behaviour

Legal and contractual monitoring

Economic regulation

Quality of service regulation

Drinking water quality regulation

Consumer complaint assessment

Structural regulation

Organisation of the sectors

Legislation of the sectors

Information of the sectors

Capacity building of the sectors

LEGAL AND CONTRACTUAL MONITORING OF THE UTILITIES



Regulation cycle

ERSAR intervenes in all key moments of an operator lifecycle

- **Creation / Modification / Termination / Conflicts**

Control of operators' compliance with applicable law and contracts throughout their lifecycle

- Analysis of tender procedures (concession) and contract modifications – non-binding opinions published on ERSAR's website
- Monitoring of contract execution – audits
- Imposition of fines in case of breach of law

Soft-law instruments

Hard-law instruments

ECONOMIC REGULATION

Regulation cycle

Annual assessment of the economic performance for each utility



Annual benchmarking between utilities regarding the economic performance

2.1.1 Águas do Algarve, S.A.

Caracterização geral Outubro 2008

Designação do sistema: Sistema multimunicipal de abastecimento de água do Algarve
 Data de início e período da concessão: 07-Fev-2005 (20 anos) Albarim: existentes (000): 235
 Capital social (€): principal acionista: 29.025.000 AIP (54,44%) Área abastecida (km²): 4.935 (71 x 71)

Trajectoria tarifária (€/m³) - Abastecimento de água

Trajectoria tarifária (€/m³) - Águas residuais

Evolução económico-financeira	2002	2003	2004	2005	2006	2007	2008
Indicadores de actividade							
Nível de actividade (m³/haem³)*	55.434	60.609	63.075	61.462	64.694	68.113	107.248
N.º médio de trabalhadores	97	101	120	139	175	181	177
Produção de água por trabalho (m³/haem³ / Trabalhador)	571,5	606,1	525,6	442,2	484,0	542,1	605,9
Principais rácios da demonstração de resultados							
Volume de negócios	17.354	19.500	21.595	22.726	34.881	46.441	46.294
Investimentos e serviços externos	4.890	6.379	7.176	9.773	16.228	17.345	20.752
Gastos com o pessoal	2.816	3.104	3.340	4.525	5.361	5.767	5.750
Resultados da exploração	8.245	8.209	8.531	6.369	10.036	13.664	16.440
Amortizações	8.730	9.829	9.794	10.189	14.938	12.340	14.010
Resultados líquidos	2.385	1.888	2.082	938	-117	1.085	2.055
Principais rácios do balanço							
Dívida de utilizadores	6.133	7.532	6.846	6.350	8.477	11.939	13.561
Activo líquido	176.038	176.314	204.052	260.029	312.798	383.259	435.869
Capital próprio	45.848	46.469	68.755	120.074	145.468	164.003	236.882
Capital disponível	14.529	16.417	18.490	19.494	38.820	38.705	38.950
Capital próprio	44.281	41.534	54.107	106.323	163.159	181.033	225.693

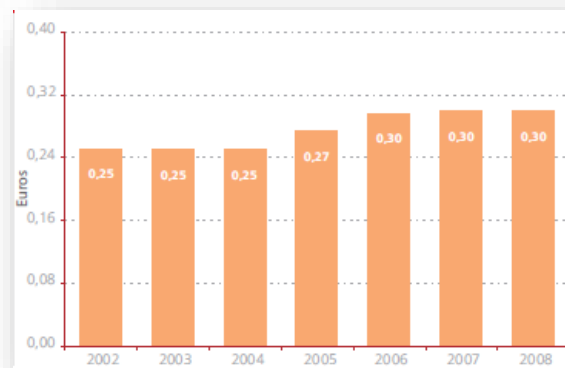
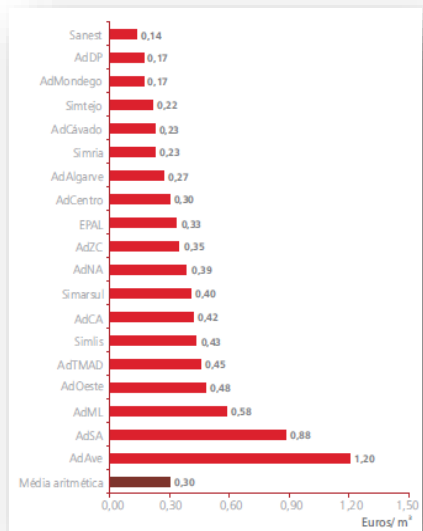
Unidade: milhões de euros (excepto quando indicado)
 * Os valores reportam-se aos anos de 2002 e 2003 reportam-se aos volumes constantes nos Relatórios e Contas.

Análise de robustez financeira	04-08	Apreciação	2004	2005	2006	2007	2008
Margem de exploração (%)	39%	●	40%	28%	29%	34%	36%
Cobertura de custos permanentes (%)	9%	●	16%	6%	6%	8%	7%
Solidez (%)	29%	●	27%	16%	20%	24%	29%
Grau de "captação" (%)	130%	●	130%	130%	123%	130%	131%
Pontos médios de recuperação (difer)	94	●	114	99	74	88	96

Legenda: ○ Frágil / ● Intermediário / ● Robusto

Aspectos relevantes e apreciação global

A Águas do Algarve apresenta uma boa robustez financeira, registando um grau de capitalização elevado que servirá para mitigar o aumento de custos através de investimentos associados à diversificação da rede de distribuição. O elevado nível de recuperação tem vindo a registar um aumento significativo desde 2006, reportando em 2008 cerca de 3 meses de facturação. O desajustamento com os contratos de concessão de água face aos compromissos assumidos em termos de produção e custos operacionais registou um aumento. A integração na concessão de um contrato referente à Barragem de Orléans e actualização do contrato de concessão de água, bem como a conclusão de um contrato de concessão de água em um único contrato, tem em presente a revisão e a renovação do contrato de concessão de água.



Assessment of the evolution for the economic performance

QUALITY OF SERVICE REGULATION - Regulation cycle



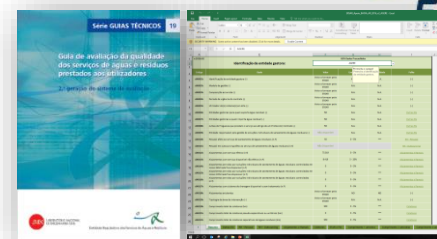
Annual report



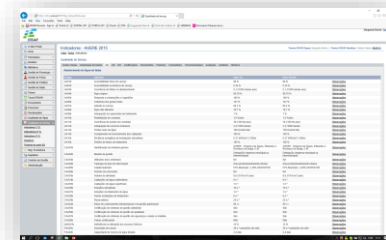
Website



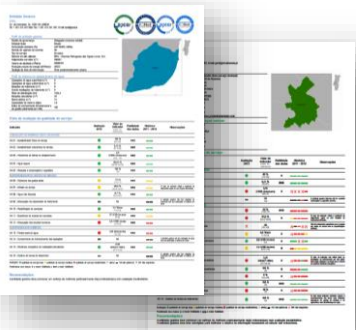
App ERSAR



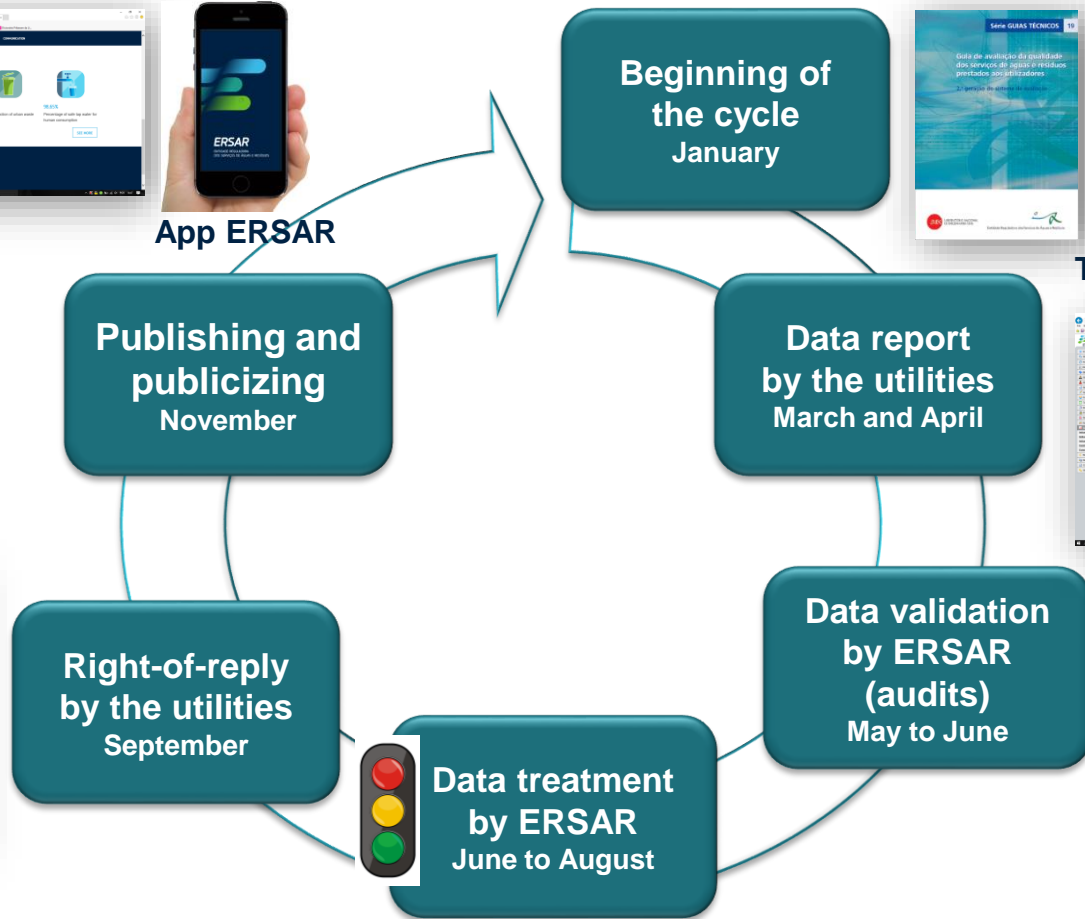
Technical guide and files



Portal ERSAR



Individual file



DRINKING WATER SUPPLY PERFORMANCE INDICATORS



3rd Generation of KPIs

DRINKING WATER SUPPLY INDICATORS

Protection of user interests

Accessibility of service for users

- AA01 – Service coverage
- AA02 – Affordability of the service

Quality of service provided to users

- AA03 – Service interruptions
- AA04 – Safe water
- AA05 – Response to complaints and suggestions

Operator sustainability

Economic sustainability

- AA06 – Cost recovery ratio
- AA07 – Connection to the service
- AA08 – Non-revenue water

Infrastructural sustainability

- AA09 – Mains rehabilitation
- AA10 – Mains failures

Physical productivity of human resources

- AA11 – Adequacy of human resources

Environmental sustainability

Efficient use of environmental resources

- AA12 – Real water losses
- AA13 – Standardised energy consumption

Efficiency in pollution prevention

- AA14 – Proper sludge disposal

Fed by
86 data

INDICATORS PROCESSING

Reference Values



- Each indicator - definition of realistic goals to be achieved by operators through **reference values**, which are national objectives for the entire sector
- **Service quality assessment** – "traffic light" symbology:
 - **Good** service quality (*e.g.* service coverage (%) – RU01a [95; 100])
 - **Average** service quality (*e.g.* service coverage (%) – RU01a [80; 95[)
 - **Unsatisfactory** service quality (*e.g.* service coverage (%) – RU01a [0; 80[)

DRINKING WATER QUALITY REGULATION

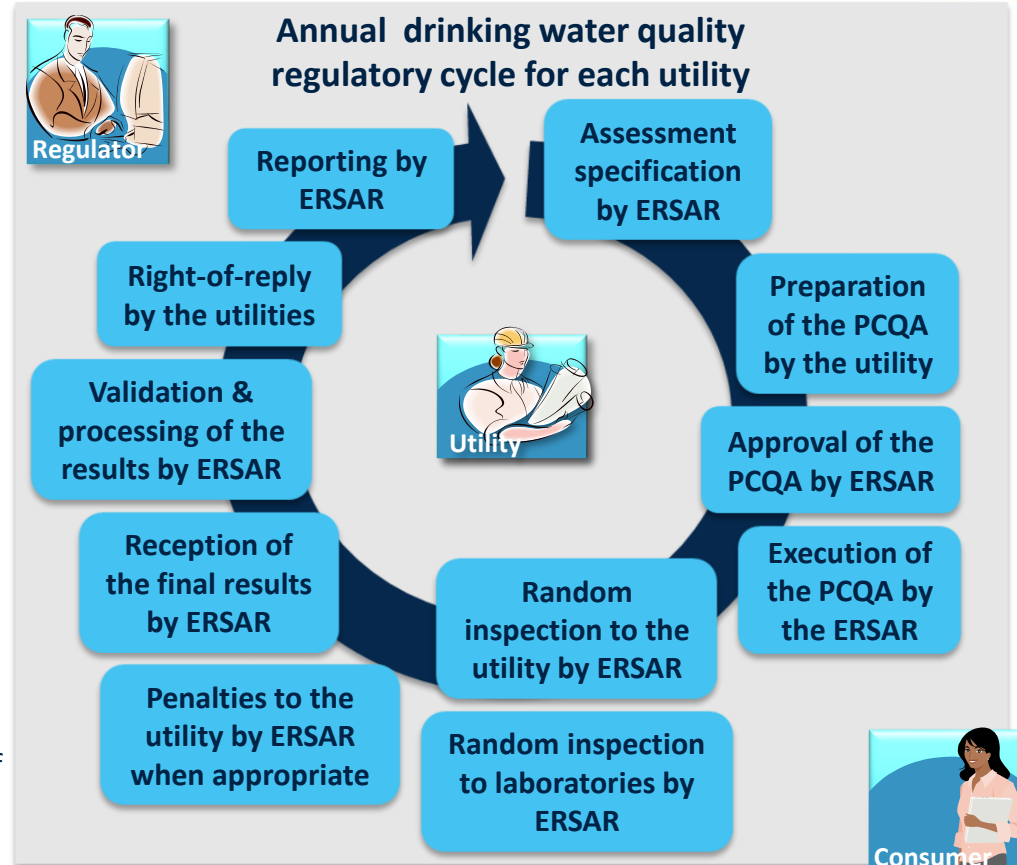
Regulation cycle

Goals:

- **Promotion** of improved water quality to the consumers based on European standards
- **Assessment** of water quality delivered by each utility
- **Benchmarking** between utilities, promoting water quality
- **Monitoring** of the non compliance events of water quality on real time (together with health authorities)

Legal framework:

- Decree-Law no. 306/2007, of 27 August; transposition of the Directive 98/83/CE
- Decree-Law no. 23/2016, of 3 June, transposition of Directive EURATOM (radioactive substances)



DRINKING WATER QUALITY REGULATION

Regulation cycle

Annual assessment of drinking water quality for each utility

Drinking Water Directive:
ERSAR fulfills reporting obligations to the EU

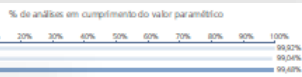
Benchmarking between utilities and assessment of the evolution for drinking water quality

LISBOA 22

Quadro 6

Dados gerais do conselho

População residente:	549.766
População servida:	520.000
N.º de zonas de abastecimento:	1
Volumen de água distribuída (m³/dia):	230.000
% água superficial própria:	85,74%
% água subterránea própria:	14,26%
% água comprada:	0,00%
N.º análises regulamentares:	14.536
N.º análises realizadas:	16.003



Quadro 6

Número de zonas de abastecimento, por classes de população

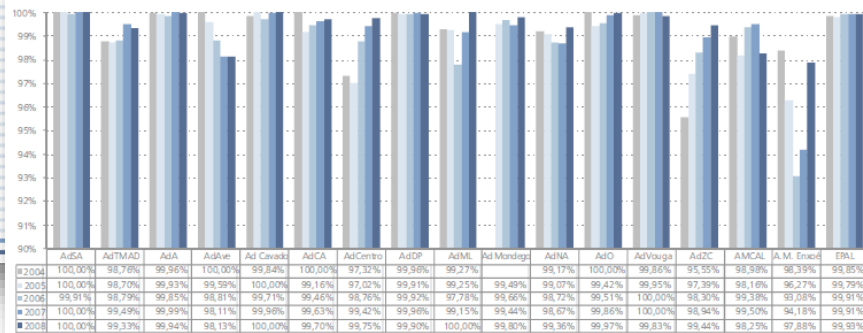
Classes de população (hab.)	N.º de zonas de abastecimento	População servida (hab.)
0-500		
501-5.000		
5.001-20.000		
20.001-50.000		
50.001-100.000		
> 100.000	1	520.000

Quadro 70

Porcentagem de cumprimento por tipo de controlo

	Controlo de rotina 1	Controlo de rotina 2	Controlo de inspeção	Total
Porcentagem de análises realizadas	100,00%	100,00%	100,00%	100,00%
Porcentagem de análises em cumprimento dos valores paramétricos	99,48%	99,99%	99,72%	99,87%

Porcentagem de análises em cumprimento do valor paramétrico, por entidade gestora, de 2004 a 2008

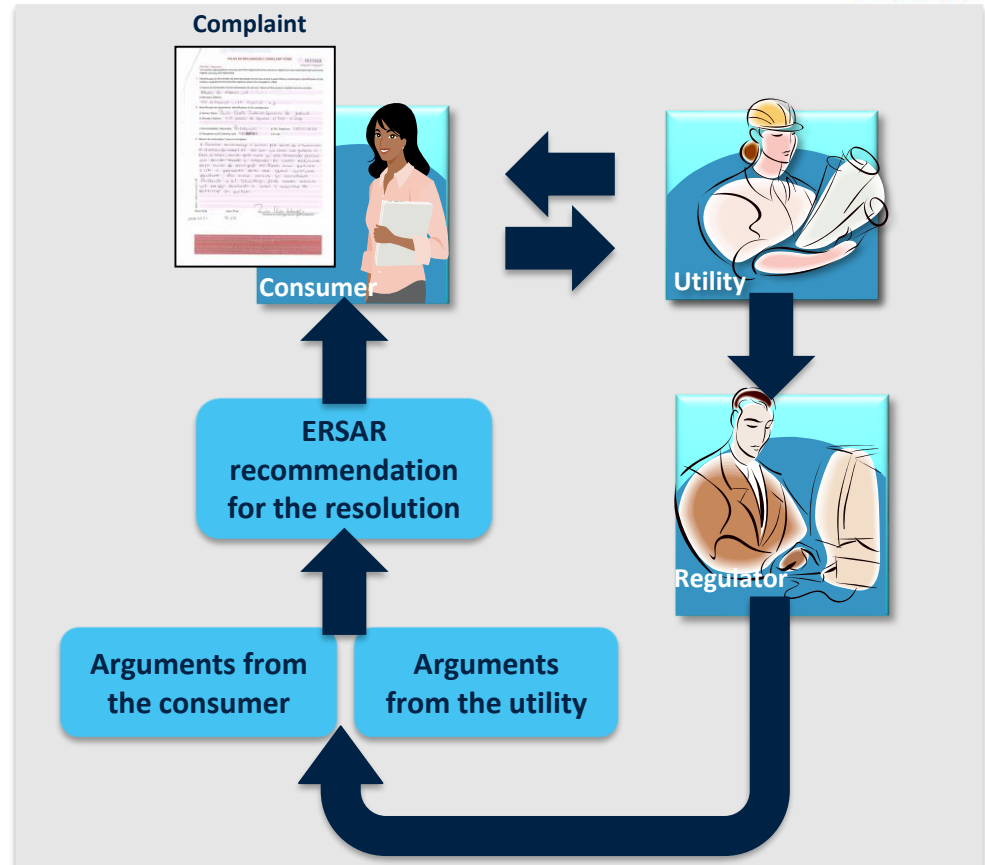


CONSUMER COMPLAINT ASSESSMENT

Regulation cycle

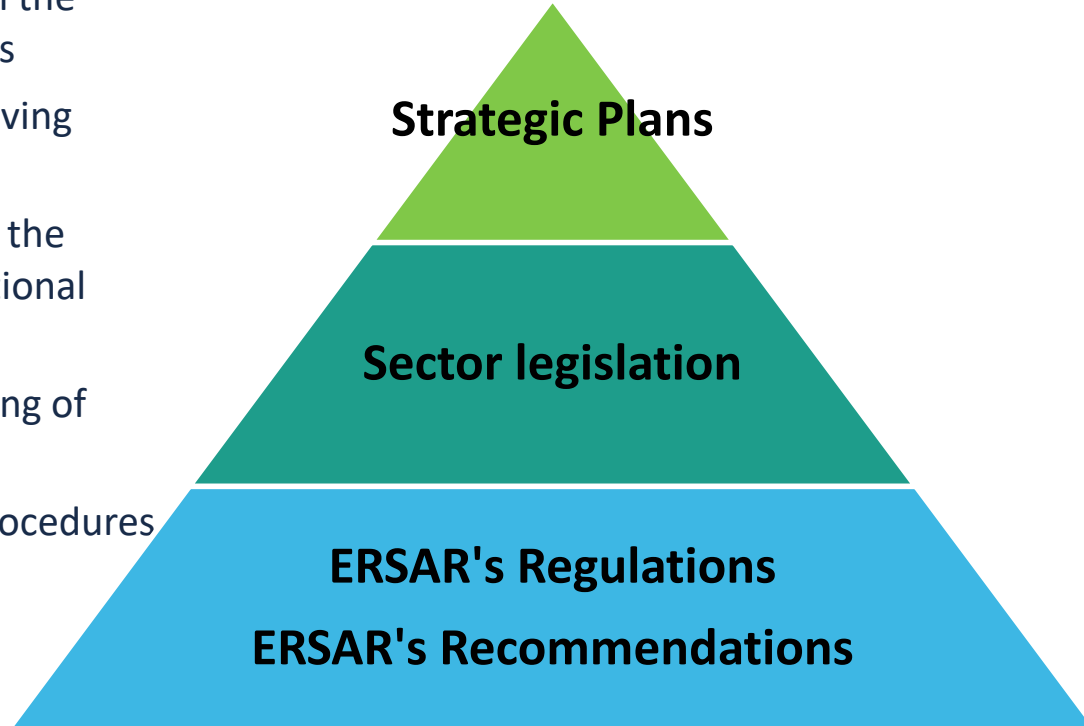
Assessment of consumer complaints:

- **Monitoring complaints and their resolution** between utilities and consumers and contributing (when necessary) for their better resolution
- Periodic statistic report (public)
- **Access via Internet to status information on complaint**



STRUCTURAL REGULATION

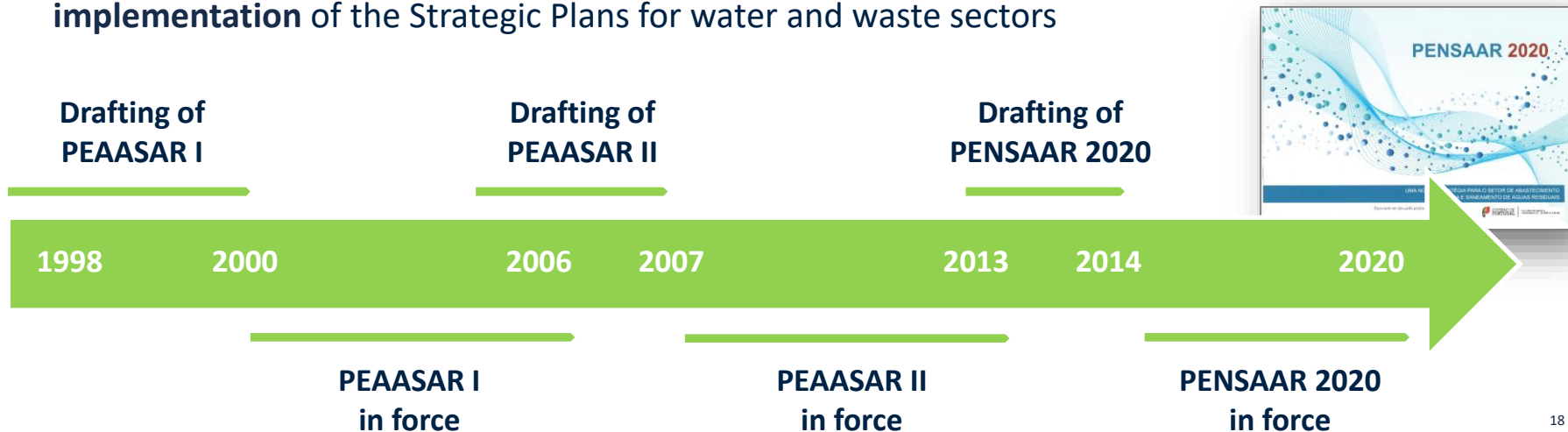
- Cooperation with the Government in the formulation of the national strategies
- Proposal of measures targeted at solving dysfunctions
- Monitoring and regular reporting on the degree of implementation of the national strategy
- Proposing new legislation or upgrading of legislation
- Approving regulations (regulatory procedures tariffs, commercial relations, ...)
- Issuing recommendations



STRATEGIC PLANS



- **Six-year strategic plans** guided the implementation of the country's public policy.
- The plans follow a stable structure, usually involving the characterisation and analysis of the current situation, defining the gaps and intended goals, evaluating the corresponding investment needs, identifying the measures needed, implementing strategies and specifying the monitoring instruments and intermediate reviews .
- The Portuguese Environment Agency (APA) and ERSAR are the bodies responsible for **adopting adequate measures, coordinating the follow-up and monitoring of the implementation** of the Strategic Plans for water and waste sectors

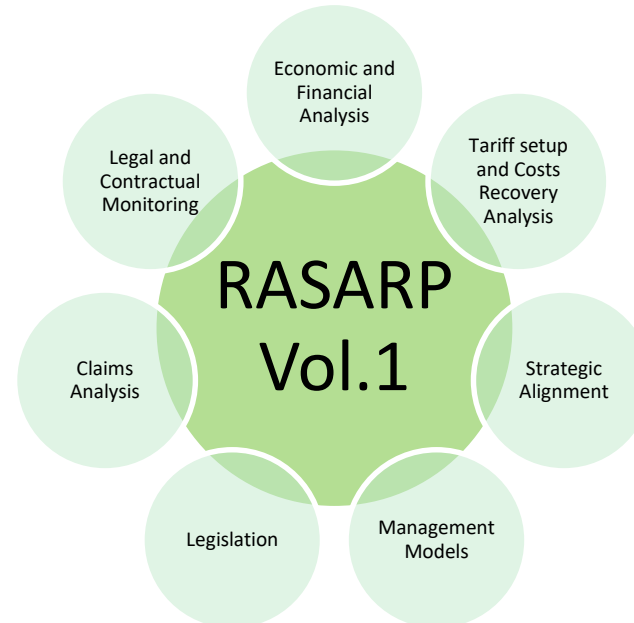
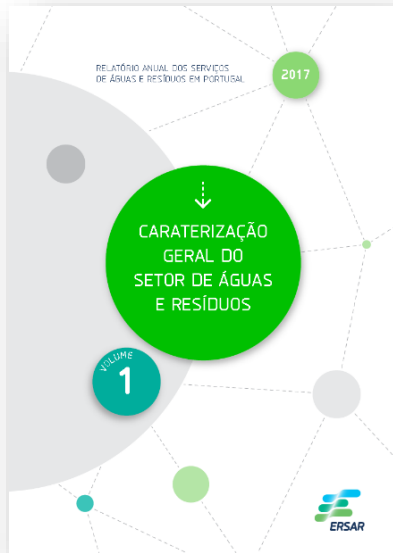


AUXILIARY REGULATORY ACTIVITIES

Data Presentation



The **Annual Report on Water and Waste Services in Portugal (RASARP)** annually discloses all relevant information about the water and waste sectors based on an economic , quality of service and drinking water quality assessment



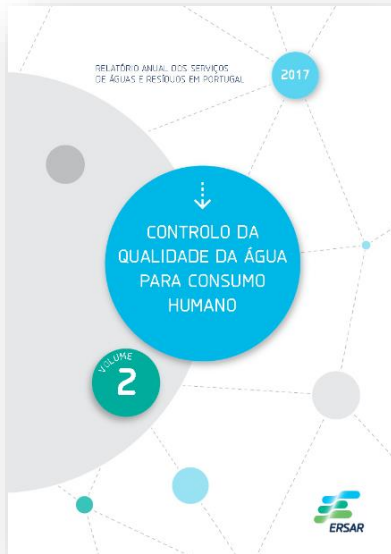
WATER and WASTE Report

AUXILIARY REGULATORY ACTIVITIES

Data Presentation



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WATER Quality

AUXILIARY REGULATORY ACTIVITIES



ERSAR's Water and Waste Service Quality Awards

- Quality Awards for the good quality of operators performance in:
- Drinking Water Quality
- Water Supply Service
- Urban Wastewater Management Service
- Municipal Waste Management Service
- Efficient Use of Water

ERSAR's Water and Waste Service Excellence Prizes

The best performing operators receive excellence prizes



This initiative rewards best practices and good behavior of operators towards ERSAR and the consumer allowing to:

- Improve consumer awareness of service quality
- Increase public recognition of ERSAR



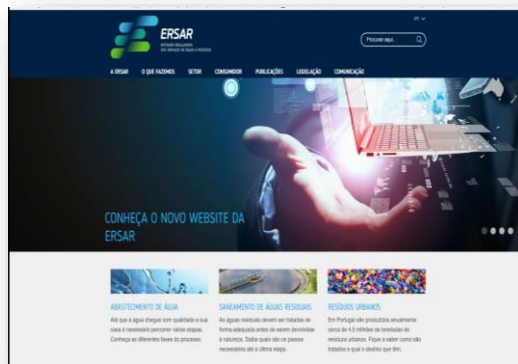
AUXILIARY REGULATORY ACTIVITIES

Public information

All information is publicly available both after analysis and as raw data, so that it can be used by researchers and consumers:



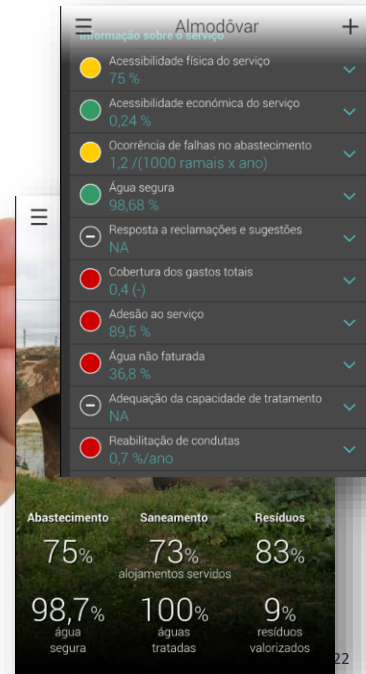
Consumer information booklets



ERSAR's website



Smartphone app



REQUIREMENTS TO SUCCEED WITH DATA PROCESSING

Lessons Learnt

Strong Change Management

- address motivation
- address resistance to change

Continuous Process Reengineering

- Enterprise Architecture approach
- Technological Support

Lessons to be Learned (work in progress)



AGILE Teams

AGILE Project Management approach



Less Formal Communication

More Technological Collaboration

Process Simplification and Virtualization

RegTech

New technologies to support the regulation process

REQUIREMENTS TO SUCEED WITH DATA PROCESSING



- Nearly thirteen years after the implementation of the 1st generation of the quality of service assessment system, this system remains a key tool for regulation, recognized by the Portuguese water and waste services' stakeholders.
- It helps utilities to monitor their performance, comparing between the expected and the real performance results and between current and past performance results, allowing to identify and prioritize improvement opportunities.
- The information reported on the scope of the quality of service assessment allows Portugal to respond with reliable information about the water and waste sector whenever requested.



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Thank you!

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