BALKAN FORUM
THESSALONIKI
25-26/9/2020

The energy – water nexus: A key factor towards sustainability

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Chairman of the Board, EYATH S.A.

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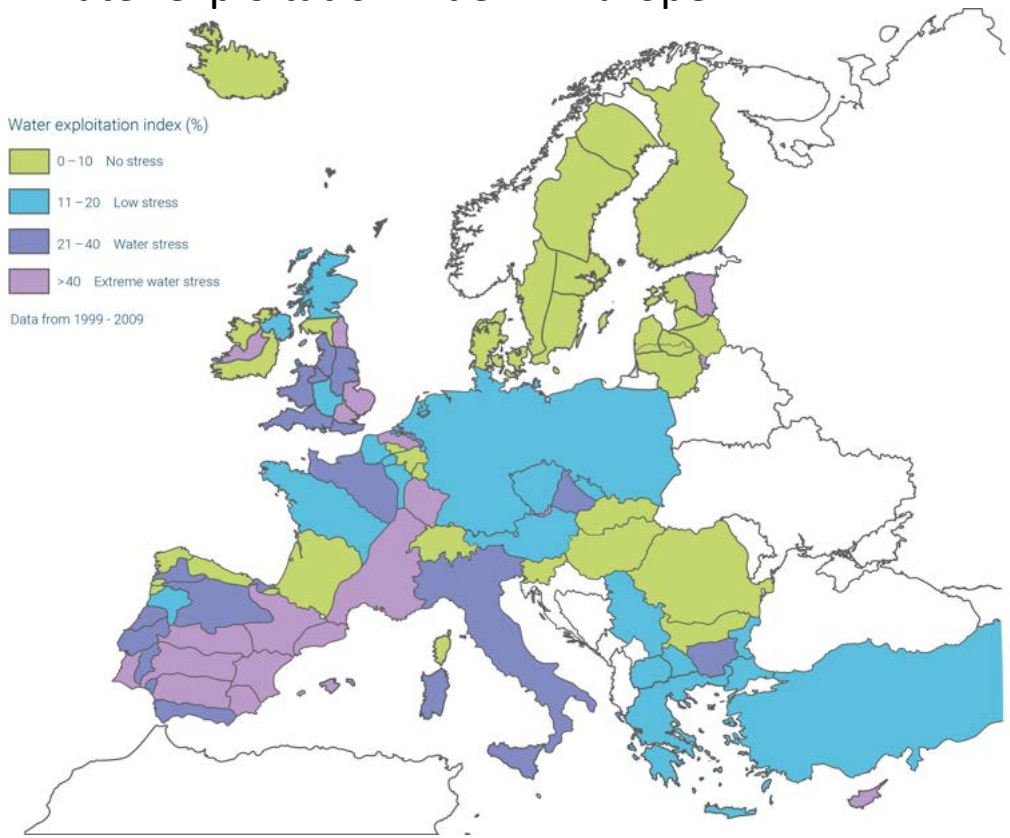
Energy and water: a complex nexus

Water exploitation index in Europe



Water:
An energy-intensive precious commodity in short supply

[EEA,2020]

Energy and water:
An intensive relationship

500 million people in the EU enjoy public water services. At a consumption of 245 litres per person per day, this means around 50 billion m3 of yearly water abstractions [Eurostat 2018, GWI 2019].

Table 1. Breakdown of volume treated and energy requirements for each stage of the water sector in 2017. (Source: water volumes: [Eurostat 2018], [GWI 2018], analysis: JRC)

Domain	Volume (billion m^3)	Energy (GWh)	Energy (share)	Share of EU electricity
Drinking water supply	49.5	35 000	43.5 %	1.13 %
Desalination for municipal use	2.1	20 695	25.7 %	0.67 %
Wastewater treatment	47.9	24 747	30.8 %	0.80 %
Total	99.5	80 442	100 %	2.60 %

[JRC, 2019]

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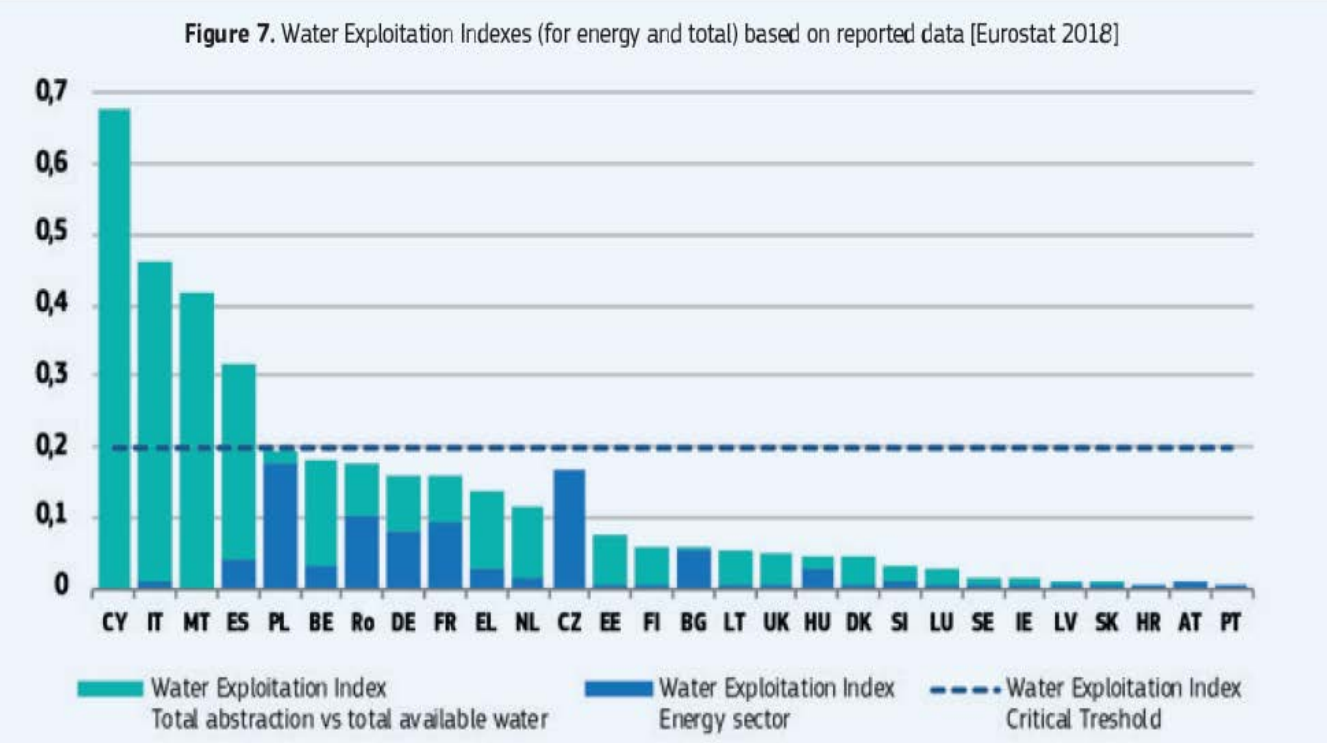
Energy and water: a complex nexus

The energy sector Water exploitation index in Europe



Energy:
A water-intensive precious commodity in short supply

[Eurostat, 2018]

water: to Use and reuse

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EU Water Reuse Regulation in force since 26 June 2020

Following political negotiation and adoption by European Parliament and Council (cf earlier editions of EWA News), the Regulation has been published in the Official Journal on 5 June 2020.

Consequently, it has entered into force on 26 June 2020 and will apply from 26 June 2023. The Regulation shall be binding in its entirety and directly applicable in all Member States.

(Photo: European Commission)

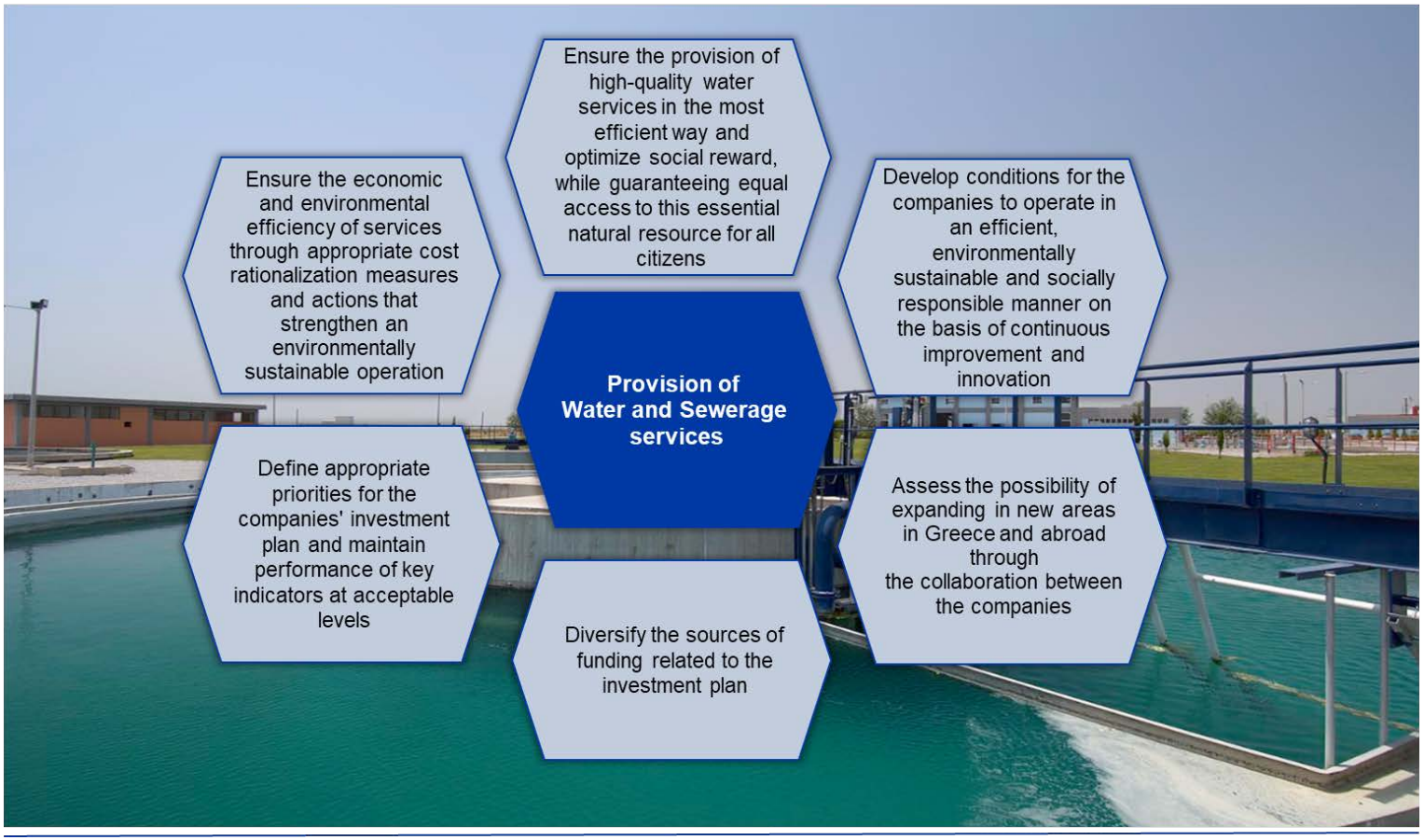
water: TO use and reuse

The new regulation sets out:

- Harmonised minimum water quality requirements for the safe reuse of treated urban wastewaters in agricultural irrigation;
- Harmonised minimum monitoring requirements, notably the frequency of monitoring for each quality parameter, and validation monitoring requirements;
- Risk management provisions to assess and address potential additional health risks and possible environmental risks;
- Permitting requirements;
- Provisions on transparency, whereby key information about any water reuse project is made available to the public.

The new rules are to be situated in the context of the new Circular Economy Action Plan adopted in 2020, which includes the implementation of the new Regulation amongst Europe's priorities for the circular economy.

THE ROLE of water utilities



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EYATH S.A. in figures

Background

- Thessaloniki Water Supply & Sewerage Company S.A. (EYATH) was established in 1998 (by virtue of law 2651/1998) as a result of the merger of the Thessaloniki Water Supply Organization and the Thessaloniki Sewerage Organization.
- EYATH S.A. has the exclusive right to provide water and sanitation services to the Thessaloniki area until 2031.
- EYATH S.A. operates and maintains the water supply and sewerage assets, the assets belong to EYATH Pagion, which is a public entity.
- EYATH was listed in the stock exchange in 2001
-

Group Activities

Served population ~ 1,000,000

Geographical area of jurisdiction

The wider Thessaloniki area and the Industrial Area of Thessaloniki

Water Services

- Network length: **2,340 km**
- Active water meters: **505,000**
- Invoiced consumption: **57 mln. m3**

Sewerage Services

- Pipes: **27 km**
- Sewerage area: **9,000 hectares**
- Transfer capacity: **170–230 km3/day**

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working towards a sustainable future

Wastewater treatment plant:

- Improve energy efficiency
- Install 1 MW PVs
- Install 5 MW CHP plant

Utilize wastewater for irrigation

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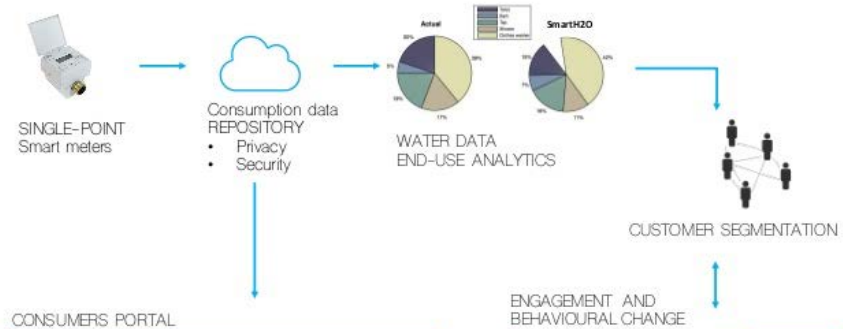
EYATH S.A.:
working towards a sustainable future



Distribution network and pumping stations:

- Improve energy efficiency
- Reduce water losses
- Provide new services

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EYATH S.A.:
working towards a sustainable future

Deep renovation of our Headquarters' building:

- Structural reinforcement
- Nearly Zero Energy Building
- Highest indoor environmental quality standards

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Real-t-S
REAL TIME SEWERAGE OVERFLOW

GABARDINE

CC-WARE

POWERSTEP
YOUR FLUSH, OUR ENERGY

CC-WaterS

aqua3S

Applied Research:

- Active participation in research projects with universities, associations and other utilities
- Sponsoring of postgraduate and PhD students
- Dissemination of data and results

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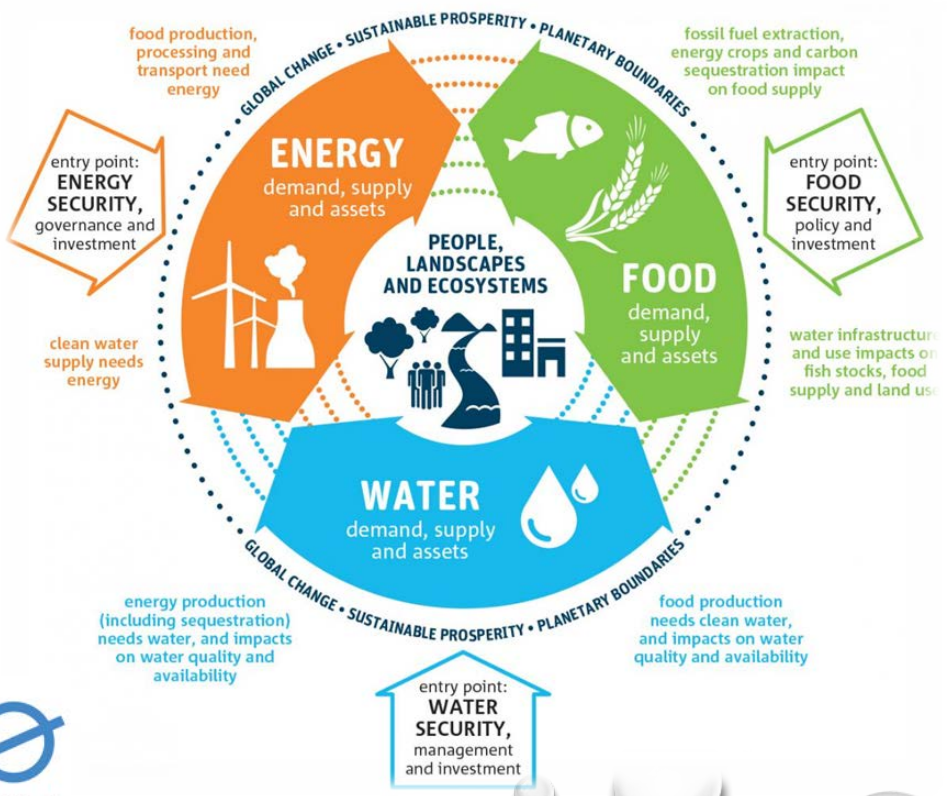
EYATH S.A.:
working towards a sustainable future

Our goals: To reduce non-revenue water and our carbon footprint by 50% by 2030
To reduce our water footprint by 20% by 2030



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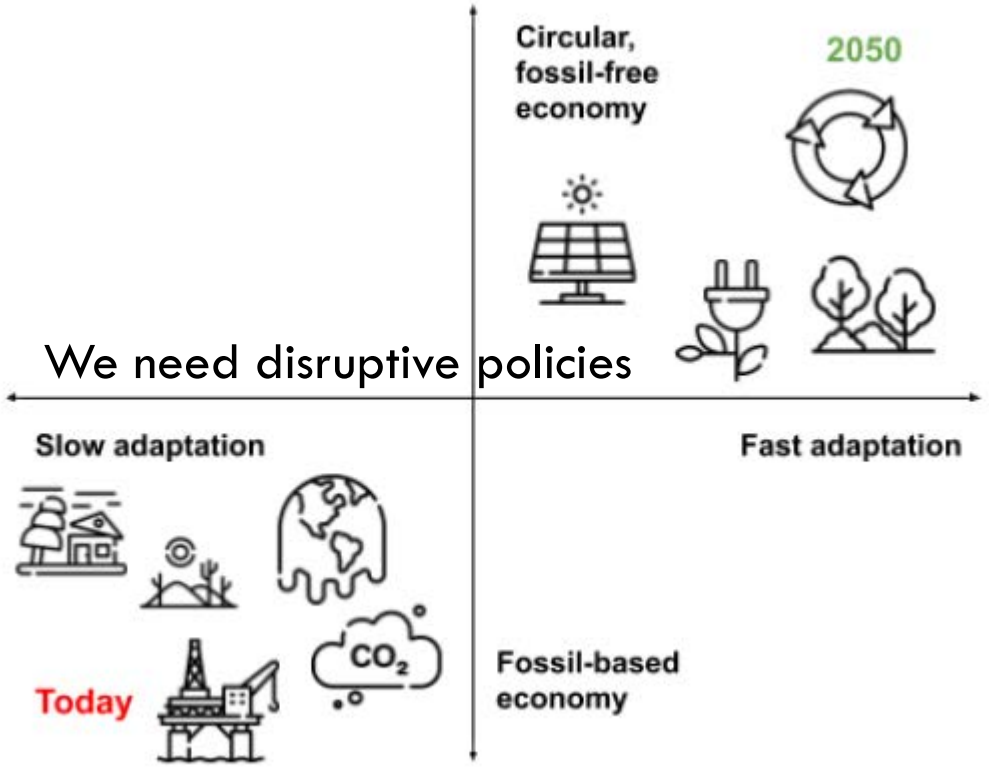
Concluding thoughts

What will the world look like in 2050?



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