



CONSULATE GENERAL  
OF DENMARK

WQCC

*Introduction to Denmark*

Sacramento

Michael - October 27, 2022



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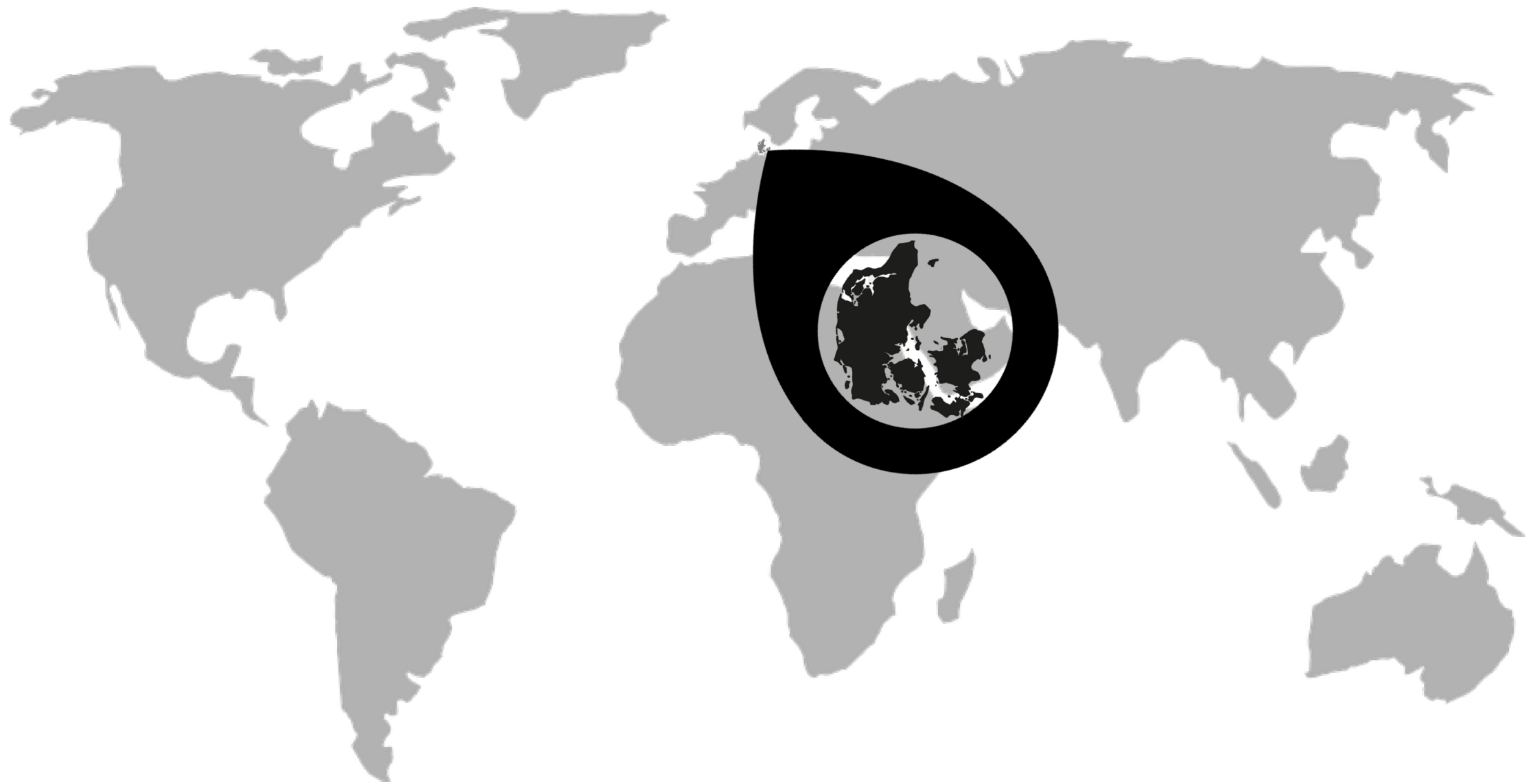
## **Jesper Christensen**

Head of Distribution Planning  
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## **Henrik Dissing**

Program Manager, Business and  
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# Denmark in numbers

**Population:** 5.88 million

**Area:** 16,580 square miles

**Coastline:** 4,536 miles - Islands: 443 (76 habitable)

**Land use:** 2/3 agriculture land (~28M pigs)

**Precipitation:** Avg. annual 31 in.

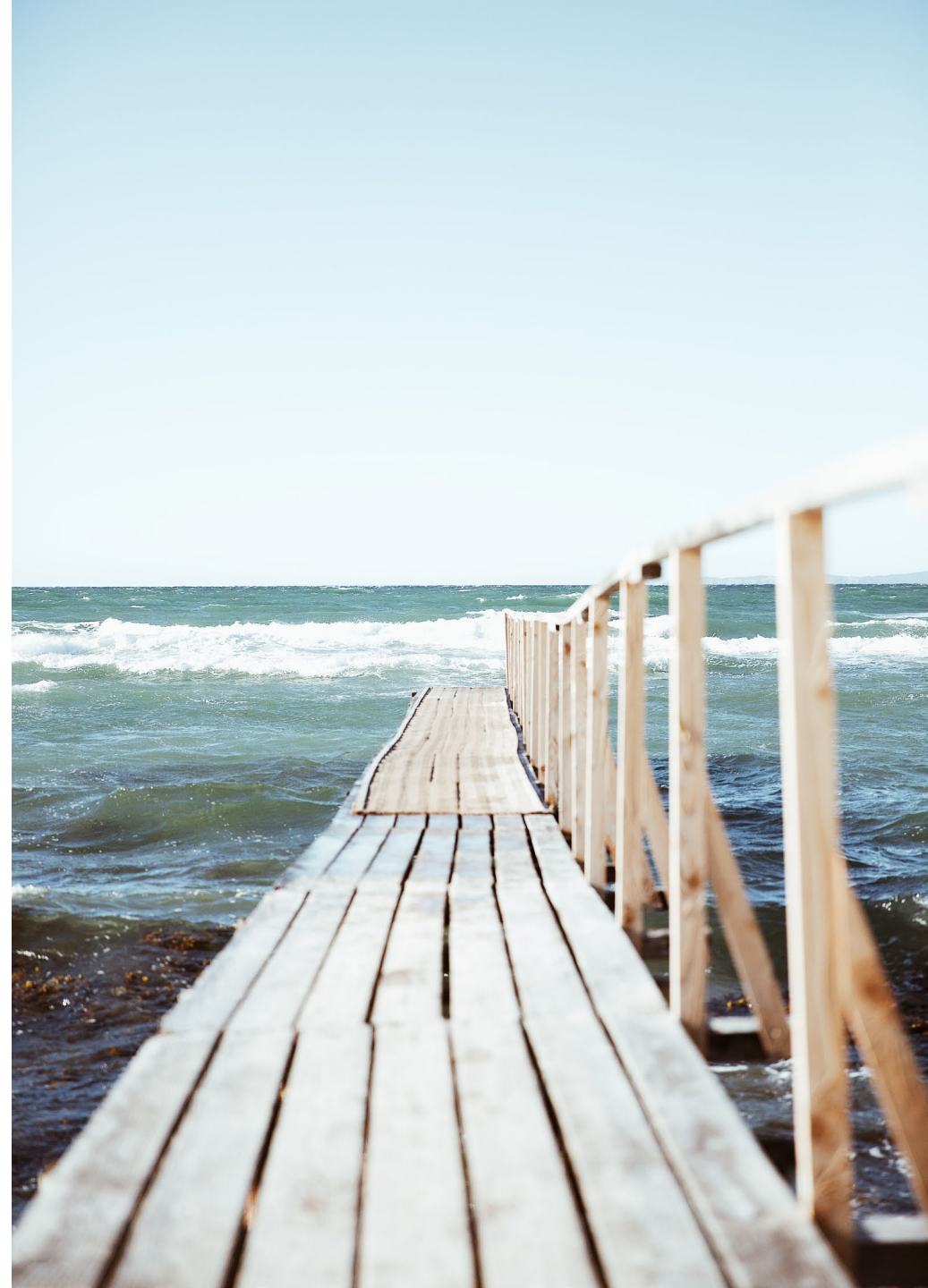
**Water Source:** 100% groundwater

**Water Consumption:** 26 gal./p./d.

**Government:** Constitutional monarchy. Democratic Government.

**GDP** per capita (2020): 60,908.84 USD

The world's **happiest** nation several times according to UN, OECD, etc



# Water Technology Alliance

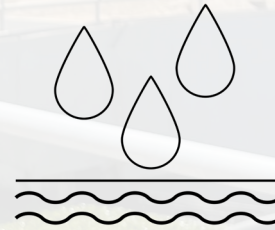
National knowledge exchange program on water

Denmark's water vision: ***We want to be the world leader in delivering intelligent, sustainable and efficient water solutions***

**Energy and climate neutrality** by 2030

- Danish water utilities will contribute to Denmark's goal of 70% CO2 reduction by 2030 through **energy recovery** and significant **reduction of energy consumption**

Groundwater management



Water distribution



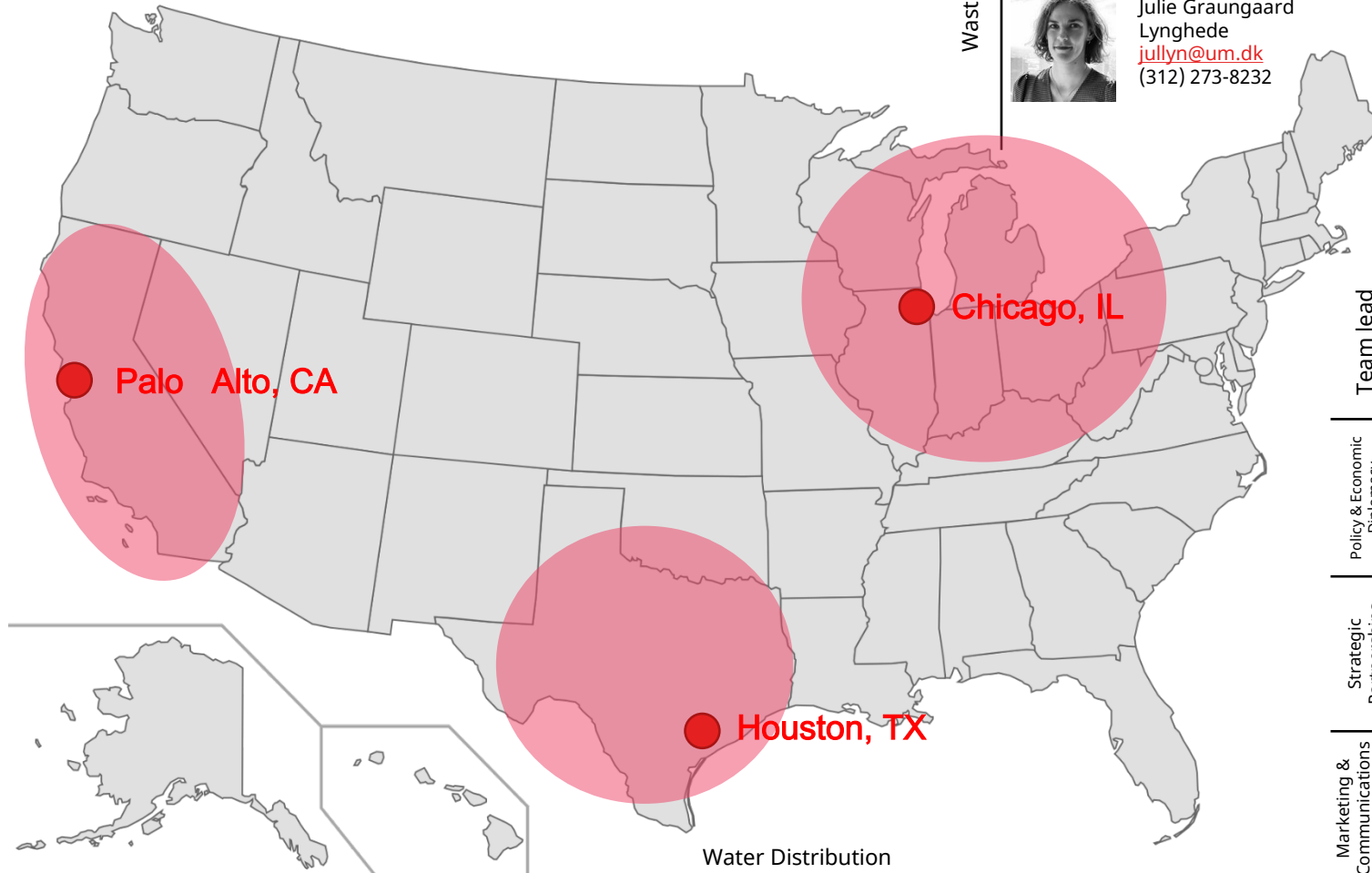
Sewer systems and resiliency



Wastewater



# Advisor Territories



Water Distribution



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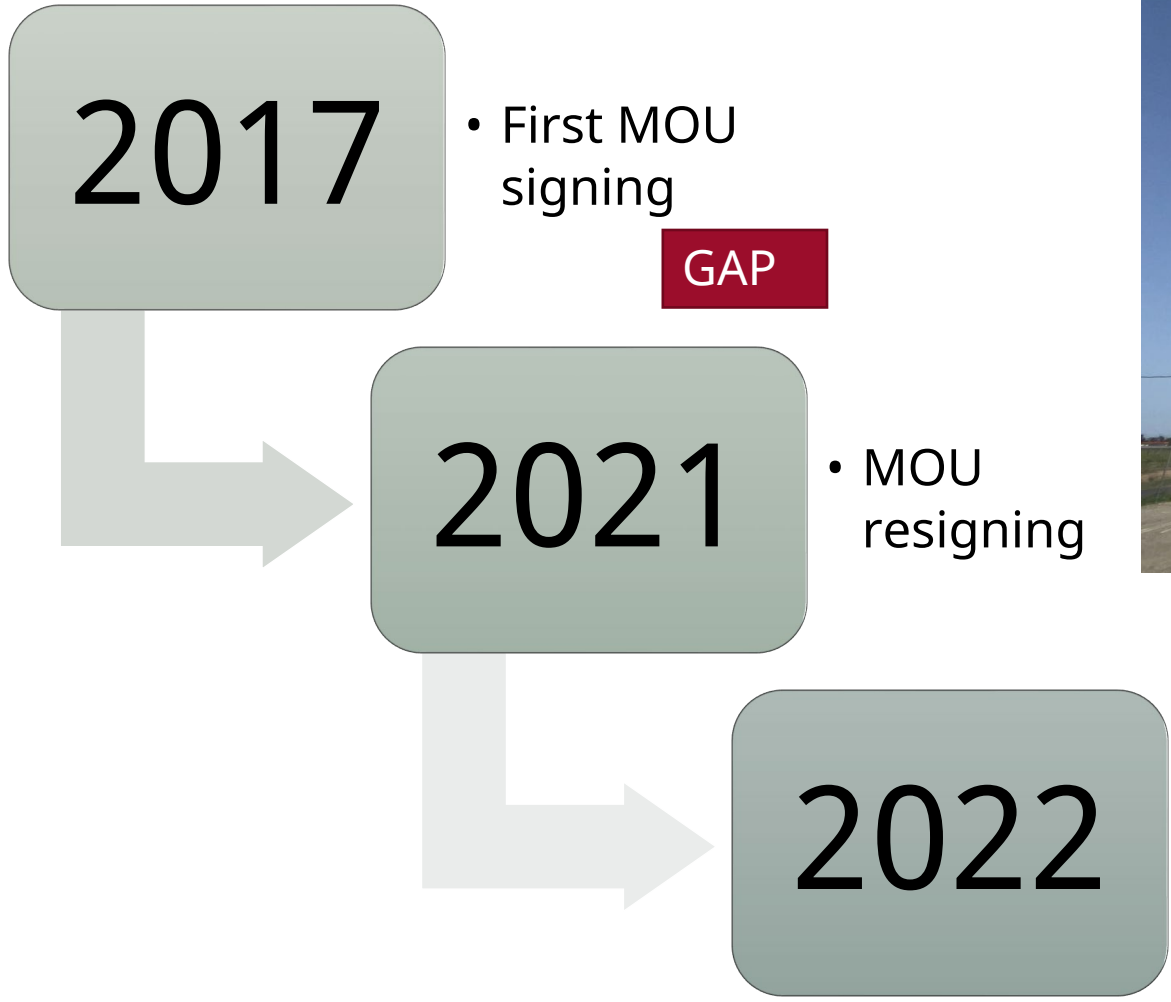


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Water Distribution

# Background and status on collaboration



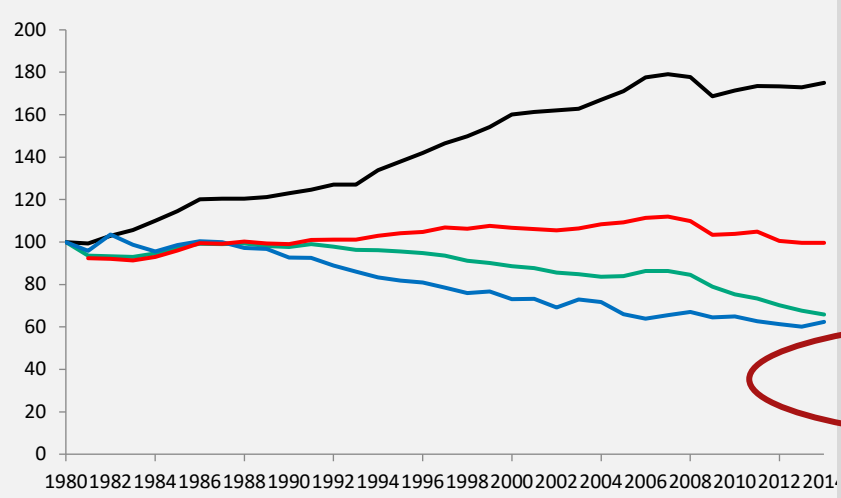




# Two main elements in the Danish way of thinking

- “Water is a limited resource – it deserves to be used with care”
- Drinking Water 100% from groundwater, without advanced treatment or any disinfection at all





Economic growth 70 %

Energy consumption steady

CO<sub>2</sub> emissions reduced

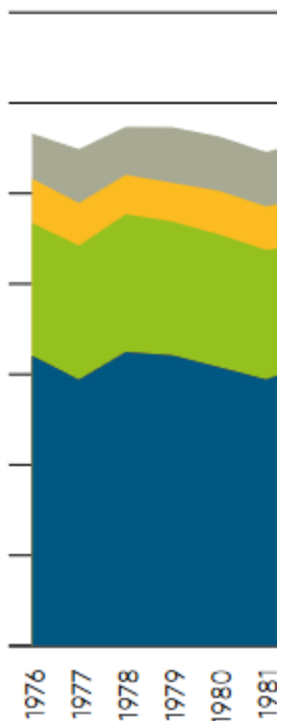
Water consumption reduced by 40%  
(26 gallons per capita pr. day in 2019)



# Benchmark

## CONSUMPTION

### M<sup>3</sup>/PERSON/YEAR

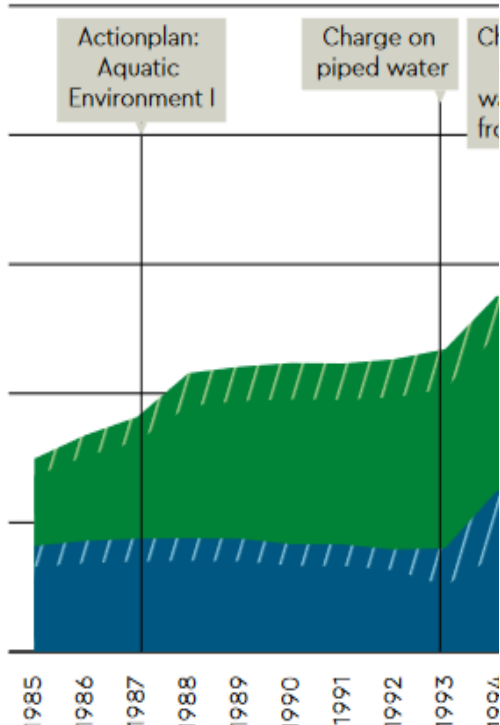


■ Households ■ Share for drinking water company ■ VAT

Since 2014, a new category has been added to the chart: Contribution to the protection of drinking water (green). Data for 1976–1998: Master plan for water supply 1999–2021: Data from the statement for 2021.

## AVERAGE HOUSEHOLD CONSUMPTION

### €/YEAR (2021 PRICES)



■ Households ■ Share for drinking water company ■ VAT

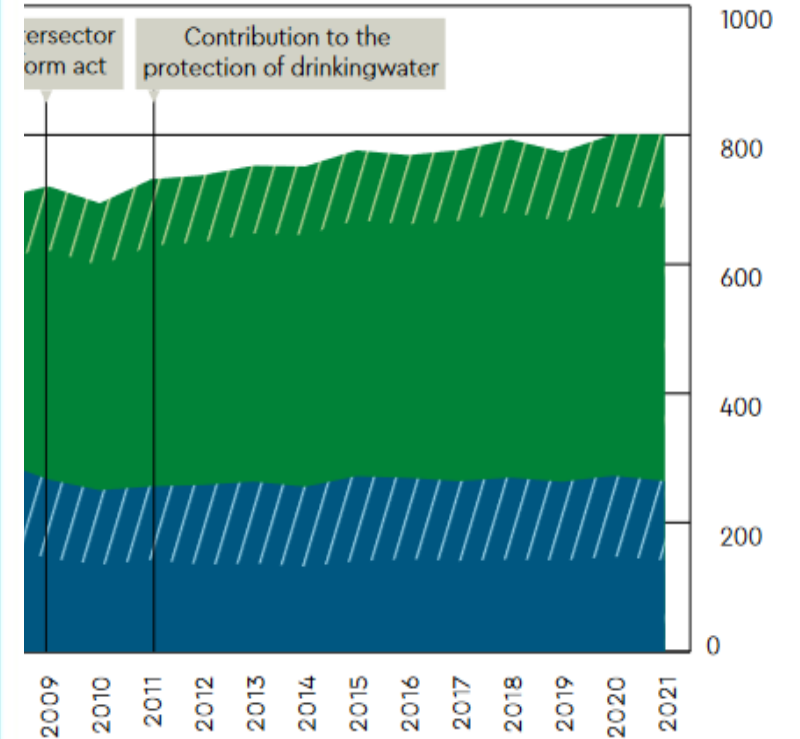
An average family's household water consumption in 2021 is 100 m<sup>3</sup>. Data for 1985 to 2008 is based on 32–50 municipalities. Changes are evident on the graph for 1987 and 1993.

## A HOUSEHOLD'S ANNUAL LIVING EXPENSES — SELECTED CATEGORIES

Share of a family's consumption:

Dental services	0.82%
Waste disposal	0.88%
Fastfood/takeaway	1.37%
<b>Drinking water and wastewater</b>	<b>1.41%</b>
Telephony and Internet	1.78%
Petrol and diesel	1.85%
Electricity	2.06%
Clothing	3.58%
District heating	3.16%
Insurance	4.99%

Data from statistikbanken.dk/FU02 — data for 2020. The example covers an average family with a consumption of € 42,836.



■ Households ■ Share for drinking water company ■ VAT

Annual individual water price and consumption. Data for 2009–2021 is based on 60–97 wastewater companies.