

Forumul Regional al Apei  
Dunăre - Europa de Est

Conferința Tehnico-Științifică internațională

**“Finanțarea sustenabilă  
din tariful a costurilor  
apei potabile și apele uzate  
- o provocare!”**

11 iunie | Complex Lux Divina, Brașov



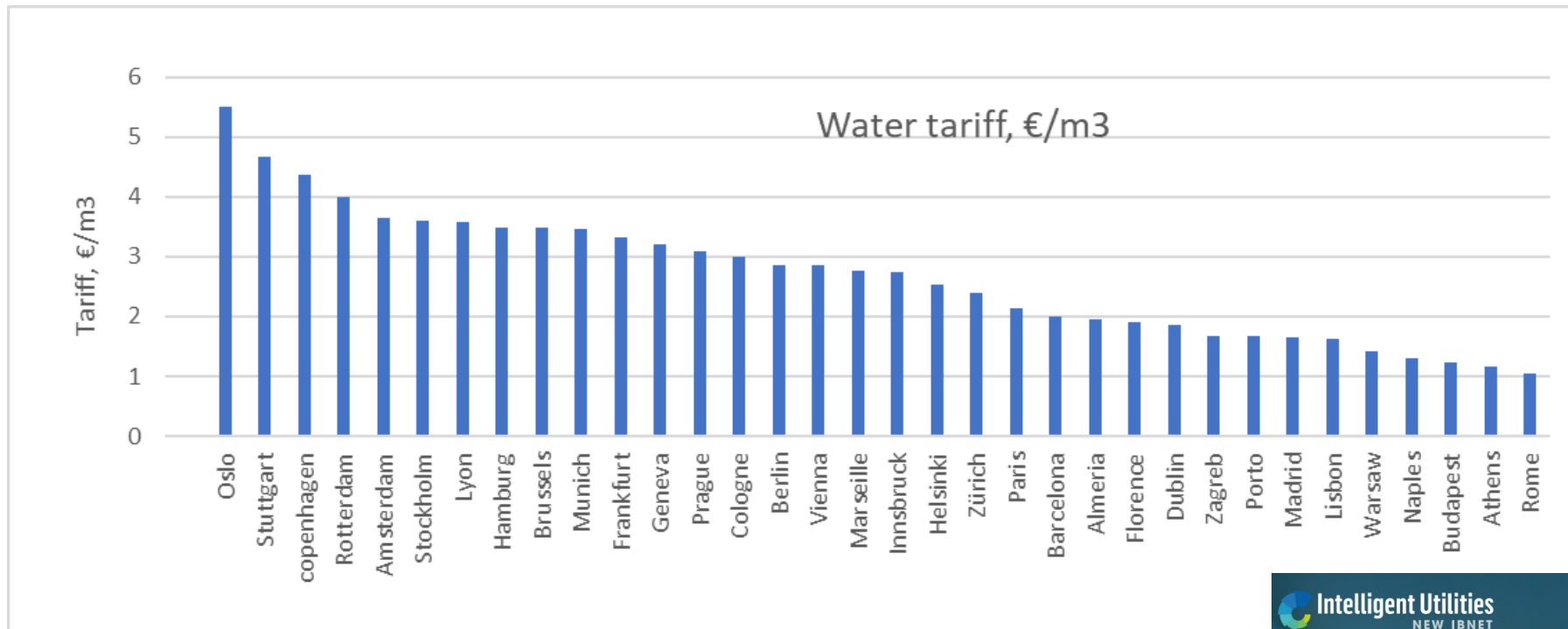
**Harsha Ratnaweera**

Professor in Water and Wastewater Technology  
Vice President, European Water Association

**Scandinavian Water Tariff System**

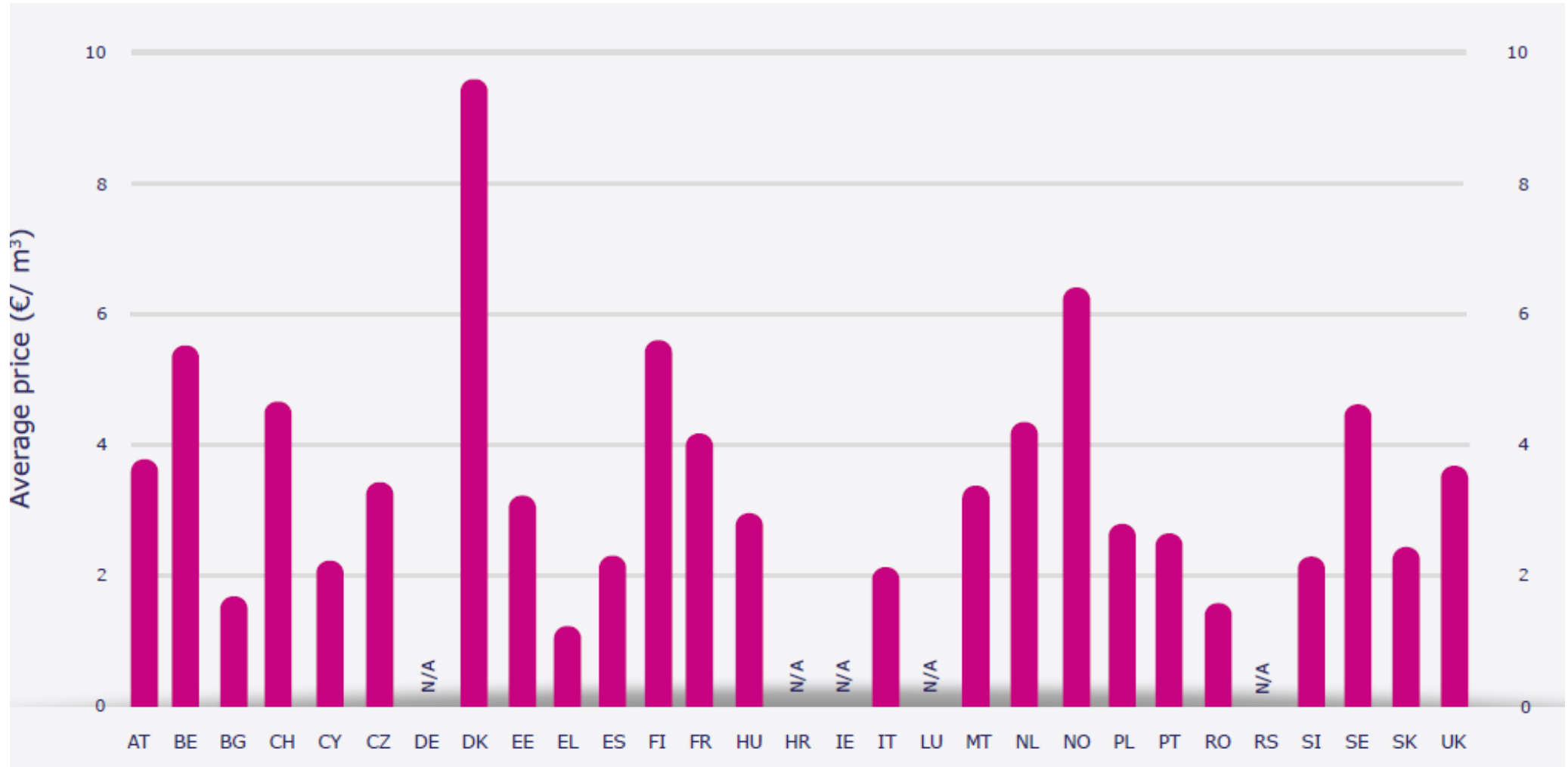
**Norwegian University of Life Science - NMBU**

# Huge differences in water tariffs – are they fair and sustainable

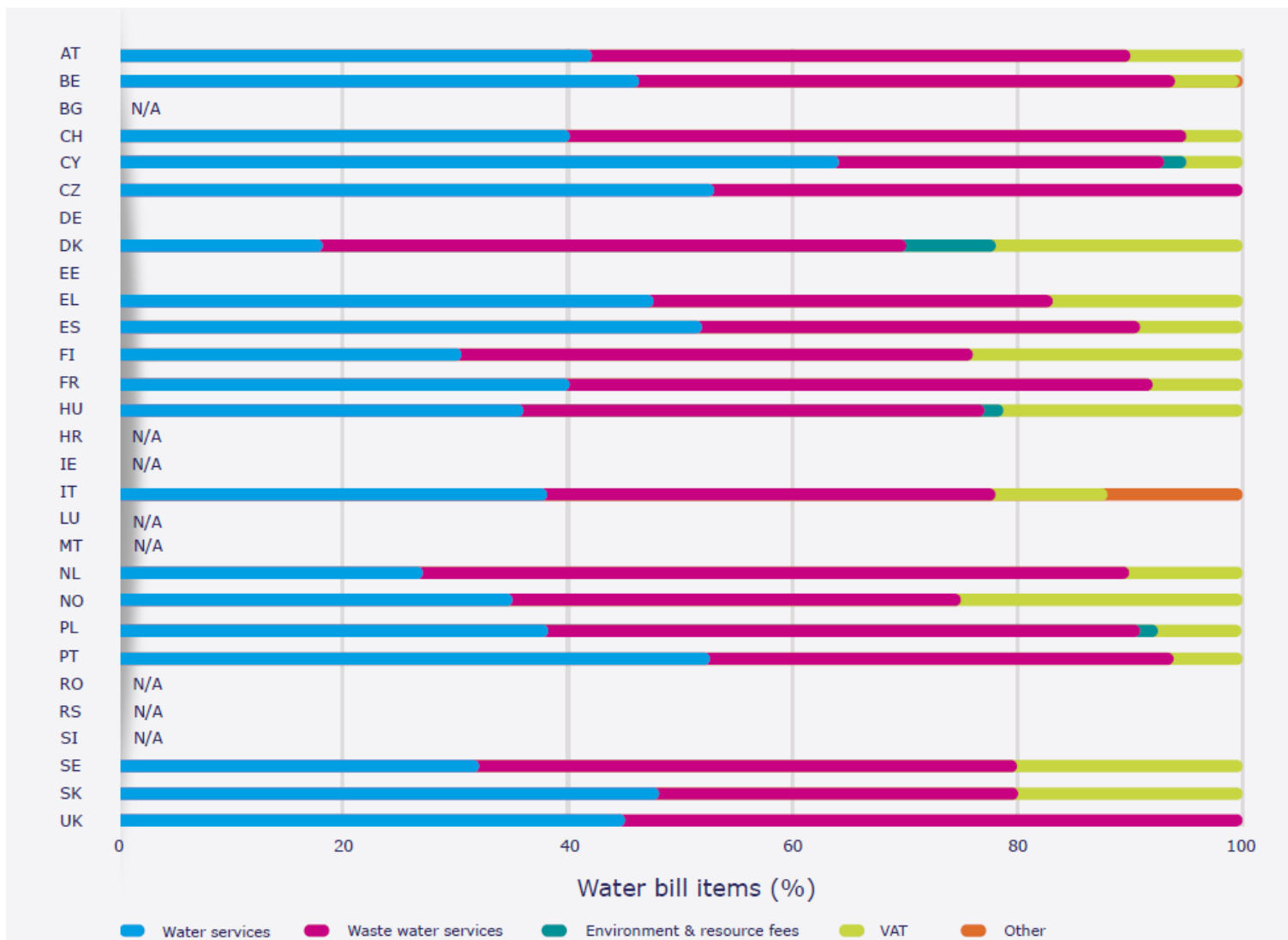


- Includes water and wastewater tariffs, and VAT (in some cases);
- Principles vary – self-cost and with profit.

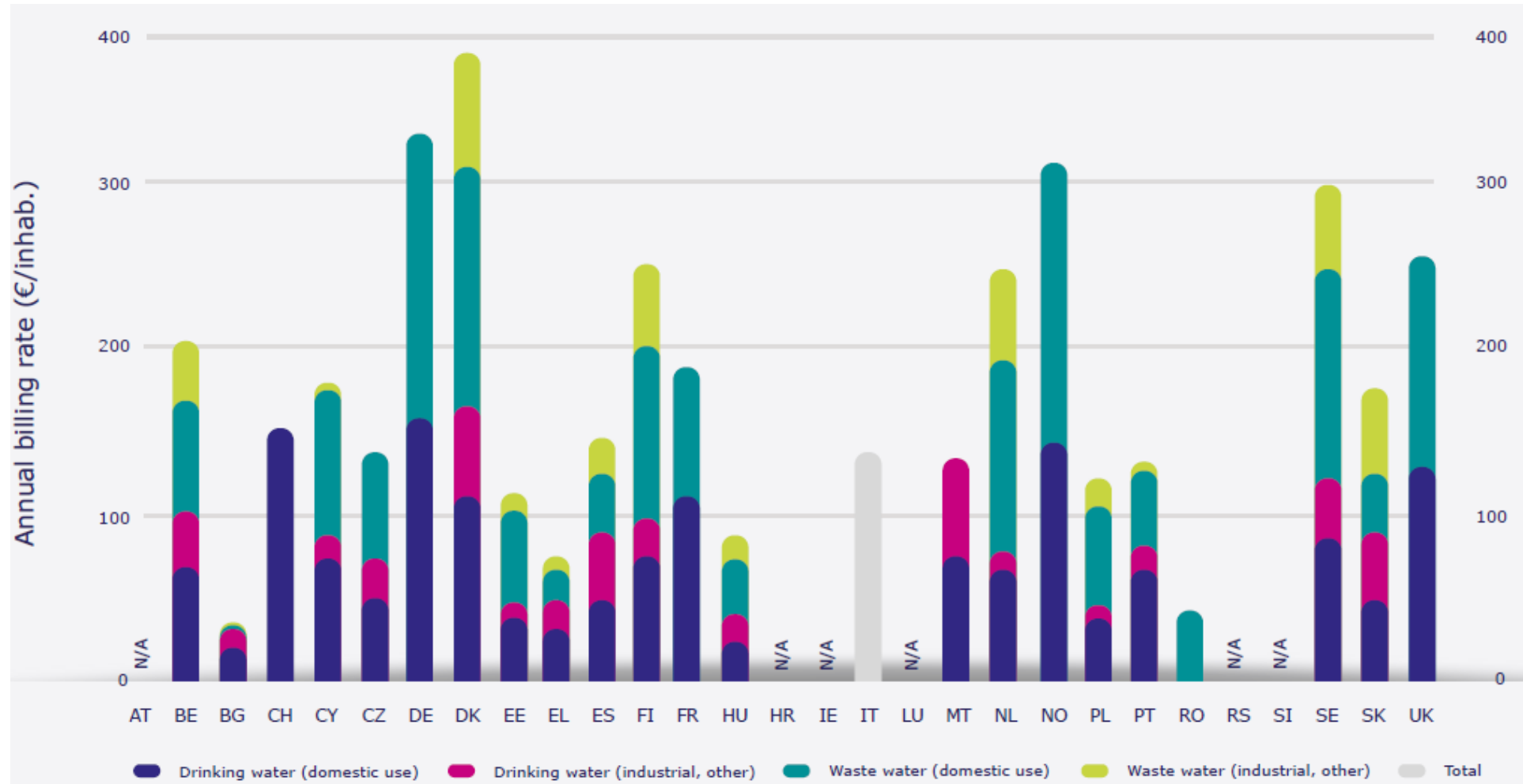
# Water tariff, national values



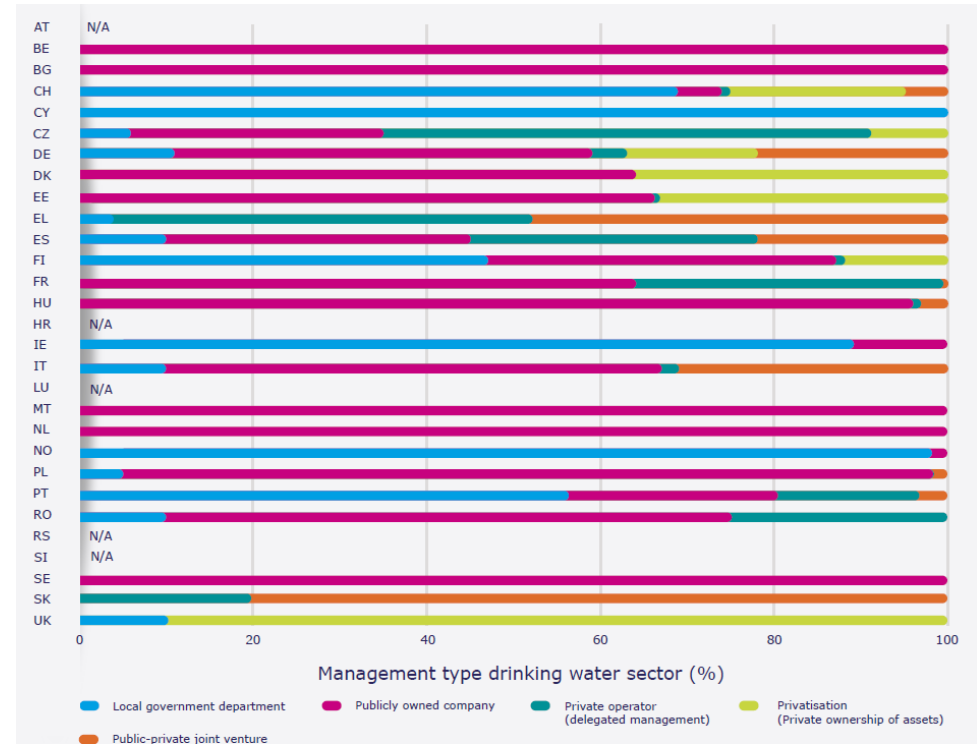
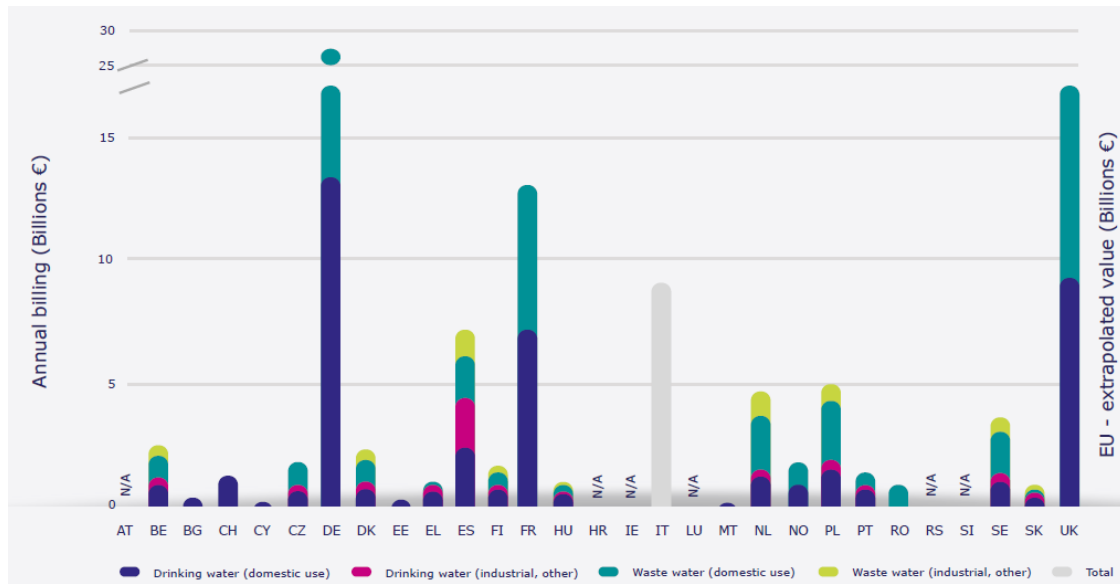
# Composition of the wate tariff



# Annual revenue collected from the different water services per inhabitant (VAT excluded)



# A big business....

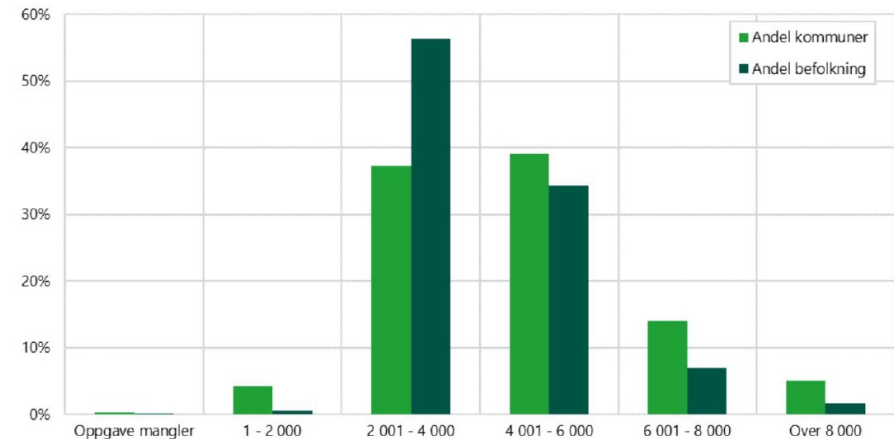
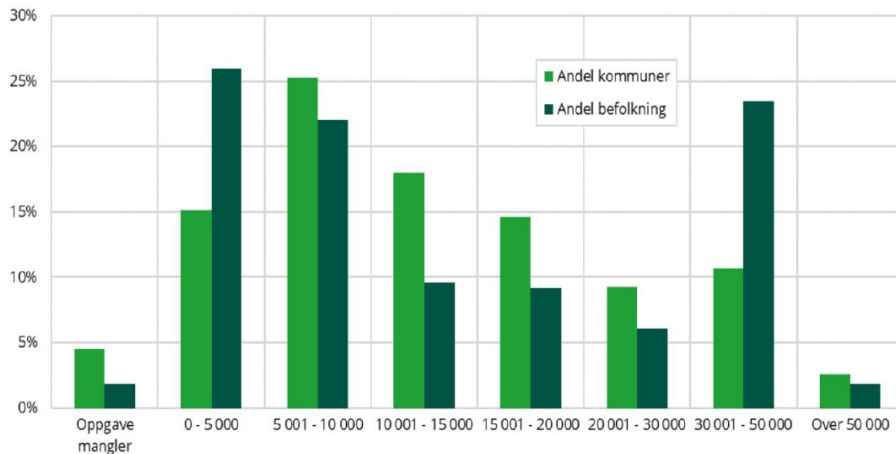




15 counties  
357 municipalities

- Municipality implements the legislation- guidance from County governor
- **Act on water and sewage charges:**
  - Only water and sewage fees can be charged for municipal services, i.e. services based on municipal waterworks and sewage systems (utilities);
  - Applies also to utilities owned by the municipality and operated by a municipal A/S or private companies;
  - Municipality determines the fees within the applicable rules and the municipality pays the private company for their services;
  - The private company can calculate a profit that the municipality can collect via the fees, but only the "necessary costs" for the municipality;
  - Municipal water and sewage charges prohibits the municipality from making a profit in the water and sewage sector.

- An estimate of the municipality's direct and indirect operating, maintenance and capital costs over the next 3-5 years shall form the basis for the fee;
- For the WW sector – no requirement to cover all costs. The board of the municipality may decide;
- The connection fee is a one-off fee, while the annual fee is paid annually (either on the basis of water consumption or a two-part fee arrangement with a fixed and a variable part).



Connection and annual fees for operations – wastewater only, €

## Water supply – fees & tariffs in Norway, €

	2019	2020	2021	2022	2023
Operating expenses per capita (€)	98,5	98,6	107,5	112,5	117,5
Operating expenses, production of water, per capita (€)	35,7	36,4	39,8	45,5	50,1
Operating expenses, distribution of water, per capita (€)	62,8	62,3	67,7	66,9	67,5
<b>Fee basis per m3 municipal water supply (€/m3)</b>	<b>1,0</b>	<b>1,0</b>	<b>1,1</b>	<b>1,3</b>	<b>1,5</b>
Fee basis per capita (€)	151,7	146,4	163,5	189,2	212,8
Income from fees per capita (€)	145,2	148,5	162,0	172,4	195,5
Annual fee for water distribution (€)	340,4	352,4	366,3	381,8	436,8
<b>Connection fee - singular fee system (€)</b>	<b>773,8</b>	<b>770,4</b>	<b>805,4</b>	<b>837,0</b>	<b>883,9</b>
Connection fee, high (€)	342,4	394,9	375,7	407,5	453,0
Connection fee, low (€)	126,5	140,8	123,9	135,0	152,0
Financial coverage rate (per cent)	96,0	101,0	99,0	92,0	92,0
Self cost rate (per cent)	98,0	98,0	99,0	99,0	98,0
Fee per cubic meter of water – excl. VAT. (€)	1,2	1,3	1,3	1,4	1,6
Two-part fee – fixed rate (€)	122,9	130,8	141,3	141,2	158,2

- **Fairness and the prime cost principle:** Consumers should pay no more than what is fair and equitable, and the gross revenue from the tariff should not exceed the utility's total expenditure;
- A tariff model is a framework used by water regulators to set tariffs, considering the costs of providing the service, the quality of the service, and the affordability for the customers. The tariff model is used to ensure that tariffs are fair and reasonable and that the revenue generated covers the costs of providing the water service while ensuring that it is affordable for the customers;
- Capital accumulation possible if re-investment plans can be presented and money used within 3 years (Some municipalities have paid money back to subscribers (charged more than self-cost));
- Swedish Water Supply and Sewage Tribunal - adjudicates disputes (prices and actual costs).

- **Financial Sustainability:** ensure that the tariffs generate sufficient revenue to cover the services' operational, maintenance, and capital costs. Generate a fair return on their investment while also ensuring that the services are accessible to all customers, regardless of their ability to pay;
- **Efficiency:** A well-designed tariff model should incentivize customers to conserve and use water efficiently (Volumetric pricing model);
- **Equity:** A tariff model should also be designed to be fair and equitable. Social tariffs for low-income customers, ensuring they have access to essential water and wastewater services, regardless of their ability to pay;
- **Environmental sustainability:** A well-designed tariff model should also consider the environmental impact of the water and wastewater services. Tariffs that encourage water conservation, promote the use of sustainable water sources, and support the development of sustainable wastewater treatment methods.

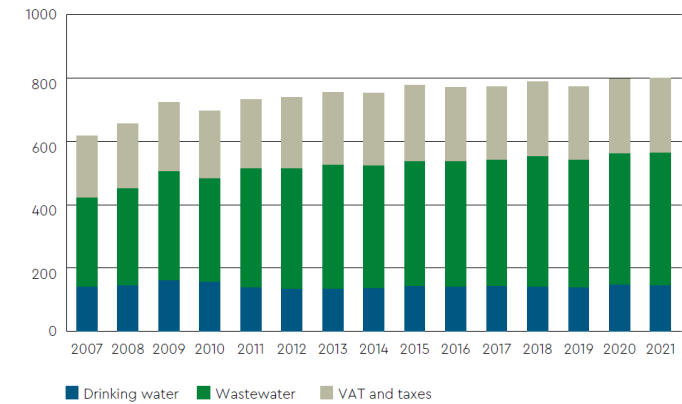
## WATER COMPANIES are based on the break-even principle

As a rule, the water sector is based on the so-called break-even principle. This means that a water company's expenditure and income must balance, measured over a number of years. Water companies are 100 % financed through tariffs, and all activities, investments and operating costs are paid by the customers.

However, to prevent socio-economic waste and stimulate development, innovation and climate-friendly energy production, water companies are permitted, in addition to their water and wastewater activities, to sell services, residues and energy with a certain profit, provided that such sale is closely linked to their drinking water and/or wastewater activities.

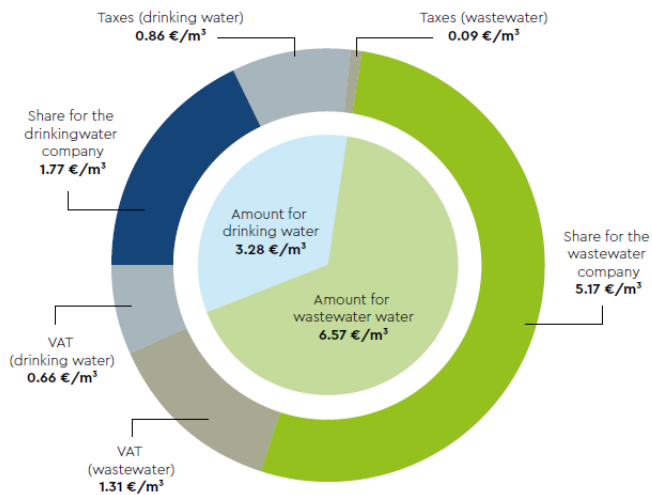
AVERAGE HOUSEHOLD'S EXPENSES, 2007 - 2021

€/M<sup>3</sup> (2021 PRICES)



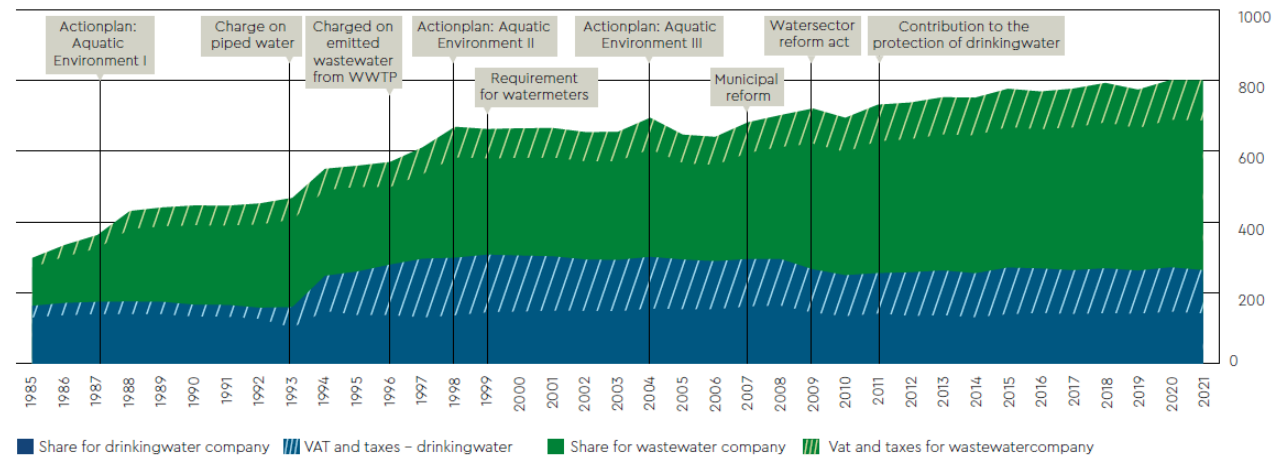
The estimate is for an average family of 2.12 persons with an average consumption of 38.77 m<sup>3</sup> per year per person.

COMPOSITION OF WATER PRICES, 2021

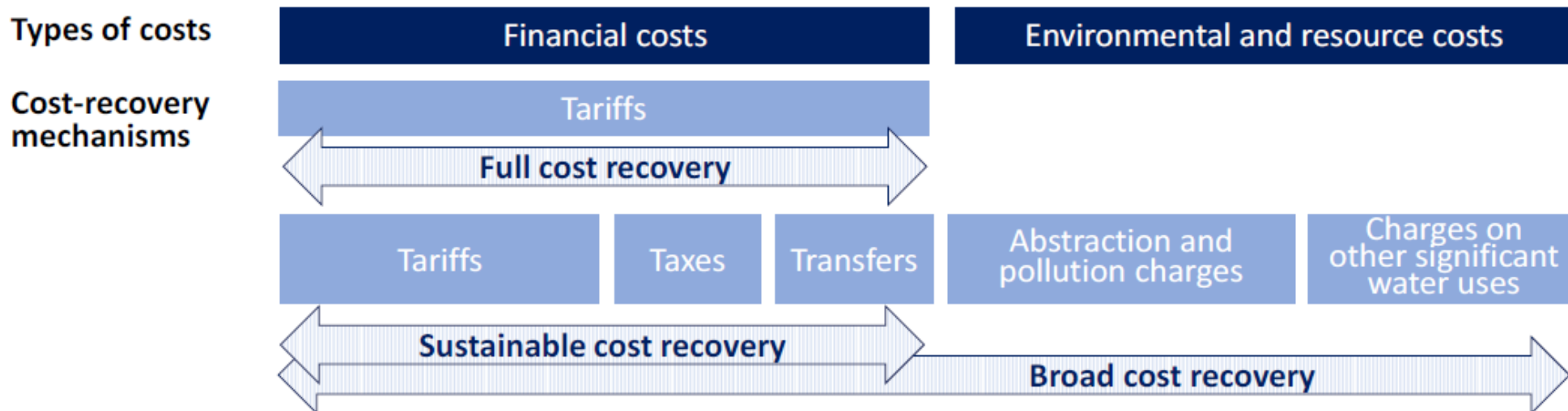


AVERAGE HOUSEHOLD EXPENCES, 1985 - 2021

€/YEAR (2021 PRICES)



- Water utilities in Finland aim at Full Financial Cost Recovery (FFCR);
- Charges should cover all capital investments on water services as well as operating expenditures in the long run;
- May include only a reasonable rate of return on capital investments;
- Charges have to be reasonable and equitable;
- The requirements of water demand management, special water use, or exceptional wastewater quality or quantity can be considered when setting the charges;
- The charges may also be such that they enhance viable use of water and reduction of the quantity of wastewater, and that they prevent the discharge of harmful substances into sewers.



**Sustainable water pricing is critically important to the water sector**



**MULȚUMESC!**



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