

TRANSFORMING REAL ESTATE  
ONE DROP OF WATER AT A TIME

**1<sup>ST</sup> ANNUAL  
WATER  
REPORT**

**2022**

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**Water is one of the essential ingredients of life.** While most of us take its presence for granted, millions of people deal with water scarcity on a daily basis. And that number is growing. At Smartvatten, we are committed to saving hundreds of millions of liters of water every year and making clean water for everyone a reality.

We believe that the responsible use and management of water can make a world of difference on the road to a sustainable and water-efficient future. And in order to do that, we need accurate information and insight into our consumption. Through monitoring, measuring, and analyzing the water consumption of leading companies in more than 10.000 properties in 22 countries, Smartvatten now has the largest European collection of water data measured in real-time at professionally managed companies.

With this veritable treasure trove of information, we have put together our first annual water report. We take a closer look at increasing water prices across Europe, go into what average water consumption looks like, and what that means for your portfolio's CO2 emissions. The overview of the average size and frequency of leaks also gives us useful information – as do the differences between property types.

We hope this document will provide you with valuable insights and inspiration, and look forward to working together on the road to a sustainable future.



**Joe Hamari**  
Co-Founder & CRO  
[joe.hamari@envera.fi](mailto:joe.hamari@envera.fi)

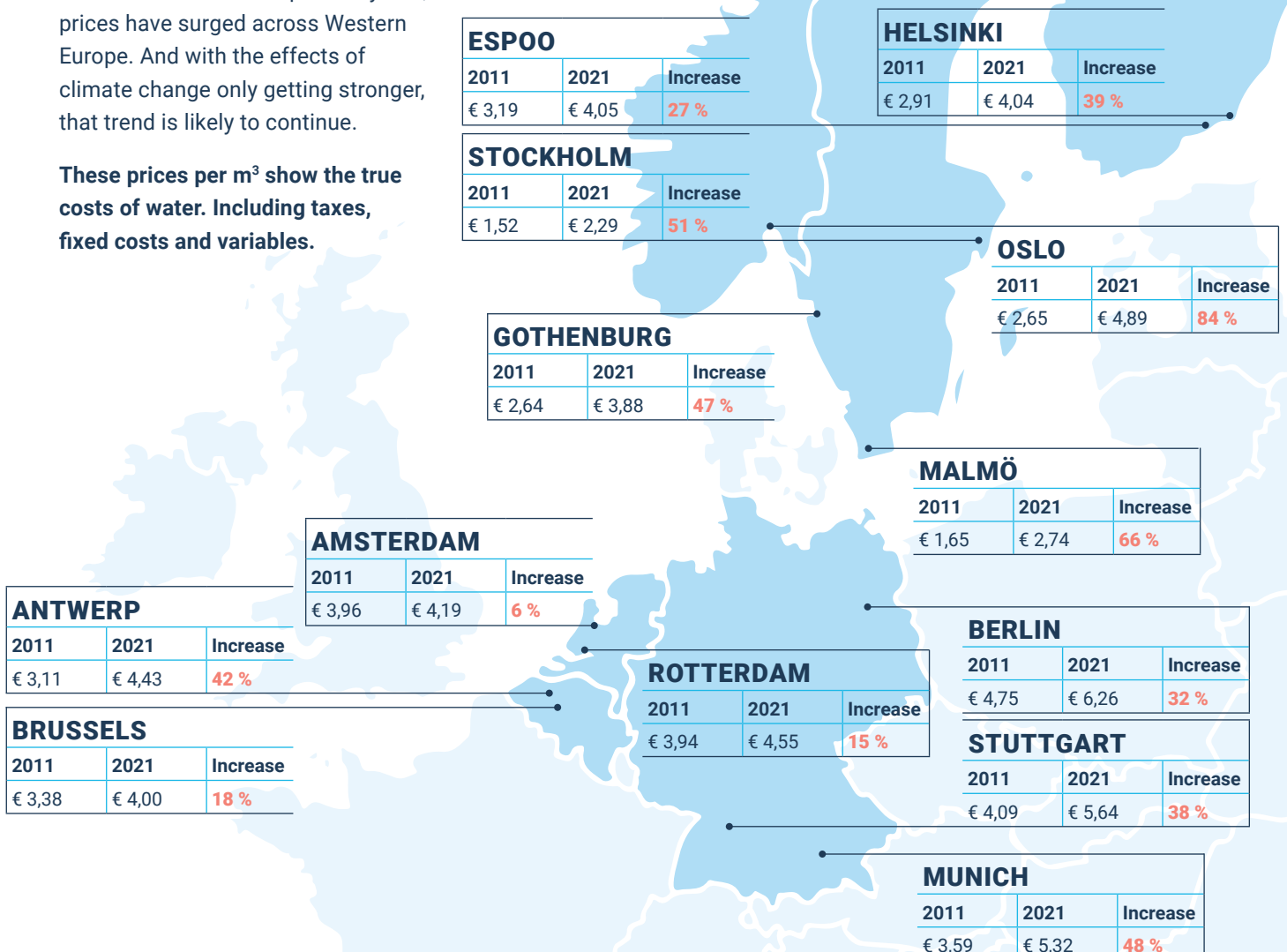
# WATER PRICES INCREASING

Water prices around the world are increasing. The global population's continuous growth and the resulting increase in demand, combined with the effects of pollution and climate change, have made water a scarce and highly valuable resource.

Prices will go up when demand increases for a limited resource. But it's more than that. Increased demand means water companies all over the world are obliged to invest in production and infrastructure – leading to even more costs, reflected both directly in the price of water and indirectly through increased taxes. For the real estate sector, the combined cost of the water supply, heating water, and the sanitation system is already one of the biggest costs of property management.

The 2021 Global Water Tariff Survey shows us that over the past 10 years, prices have surged across Western Europe. And with the effects of climate change only getting stronger, that trend is likely to continue.

**These prices per m<sup>3</sup> show the true costs of water. Including taxes, fixed costs and variables.**



# AVERAGE WATER CONSUMPTION

In Finland, the average water consumption per day is 93 liters for a person living in an apartment building or terraced house, when water is billed based on use. The average number of square meters per person is 40 in Finland. That means the typical consumption comes to 2,3 liters/m<sup>2</sup> per day.

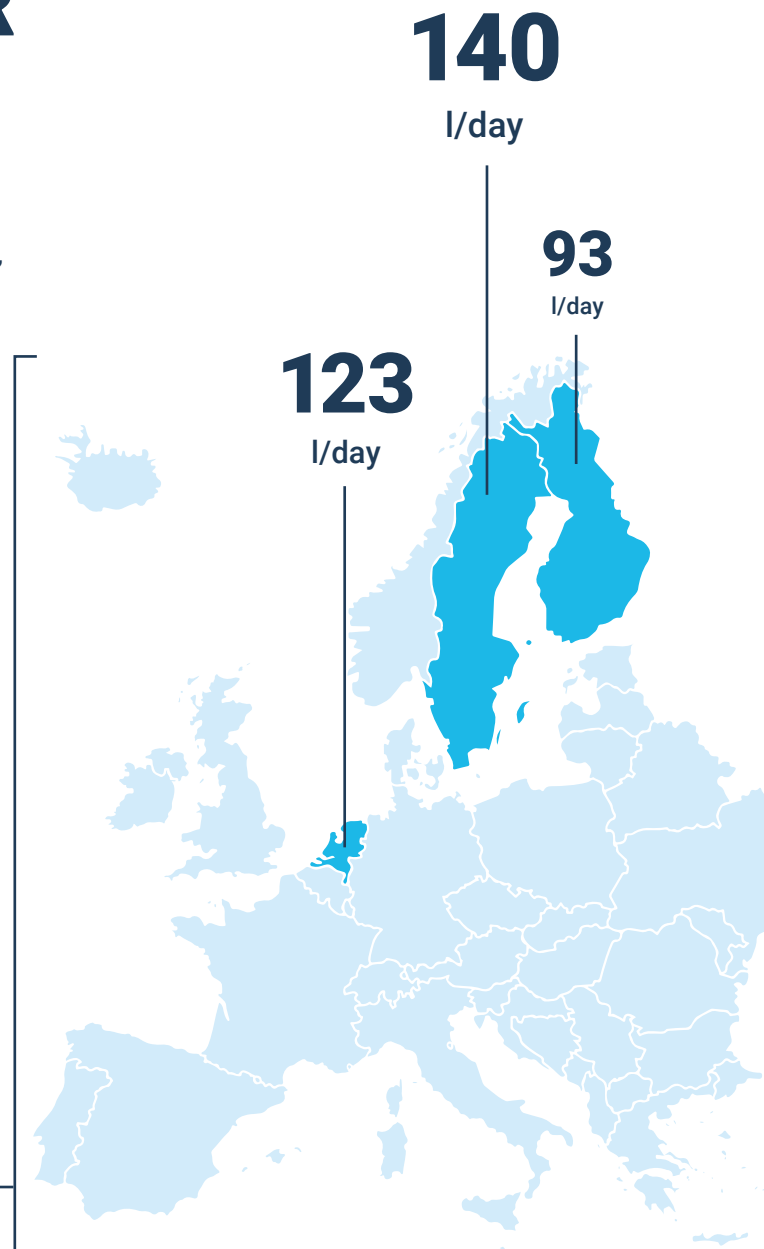
In Sweden, the average consumption per day is 140 liters per person, with an average number of 42 square meters per person. That means the typical consumption is 3,3 liters/m<sup>2</sup> per day.

In the Netherlands, the average consumption per day is 123 liters per person, with an average number of 65 square meters per person. That means the typical consumption is 1,9 liters/m<sup>2</sup> per day.

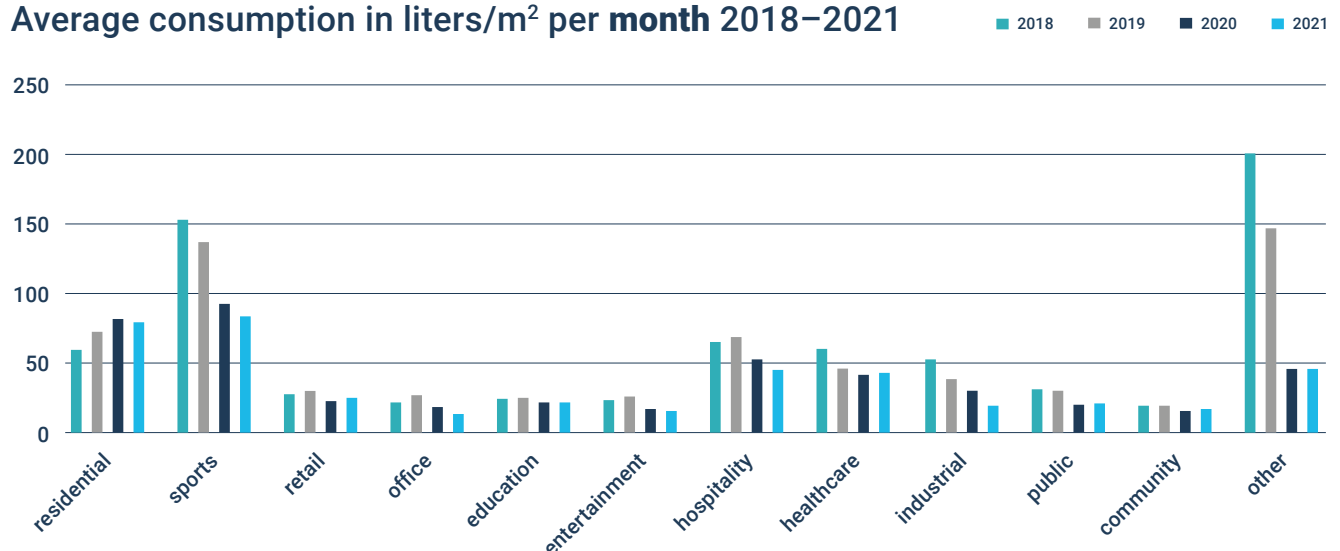
Across Europe, the average consumption is 143 liters per person per day, with an average number of 43 square meters per person. That means the typical consumption is 3,3 liters/m<sup>2</sup> per day.

**Thanks to active real-time monitoring, our leak detection system and water saving measures, the average consumption for Smartvatten customers is 2,6 liters/m<sup>2</sup> per day, which is much lower than the average consumption in Europe. Especially the high penetration rate of Smartvatten's water saving installations in Finland explains the lower average compared to other countries.**

**143**  
l/day



Average consumption in liters/m<sup>2</sup> per month 2018–2021



# AVERAGE LEAKS

With residential leaks, up to 1,7 liters of water are wasted per minute. It can quickly add up in both liters and costs – and that's before taking into account the potential water damage.

Properties can experience leaks of over 15 m<sup>3</sup> per day – which means more than 15.000 liters – and, if they continue for a month, could cost up to €1000 per month.

## IF A LEAK LASTS

**2**  
days



**5** m<sup>3</sup>  
5.000 liters

**20** €

## IF A LEAK LASTS

**30**  
days



**80** m<sup>3</sup>  
80.000 liters

**320** €

## IF A LEAK LASTS

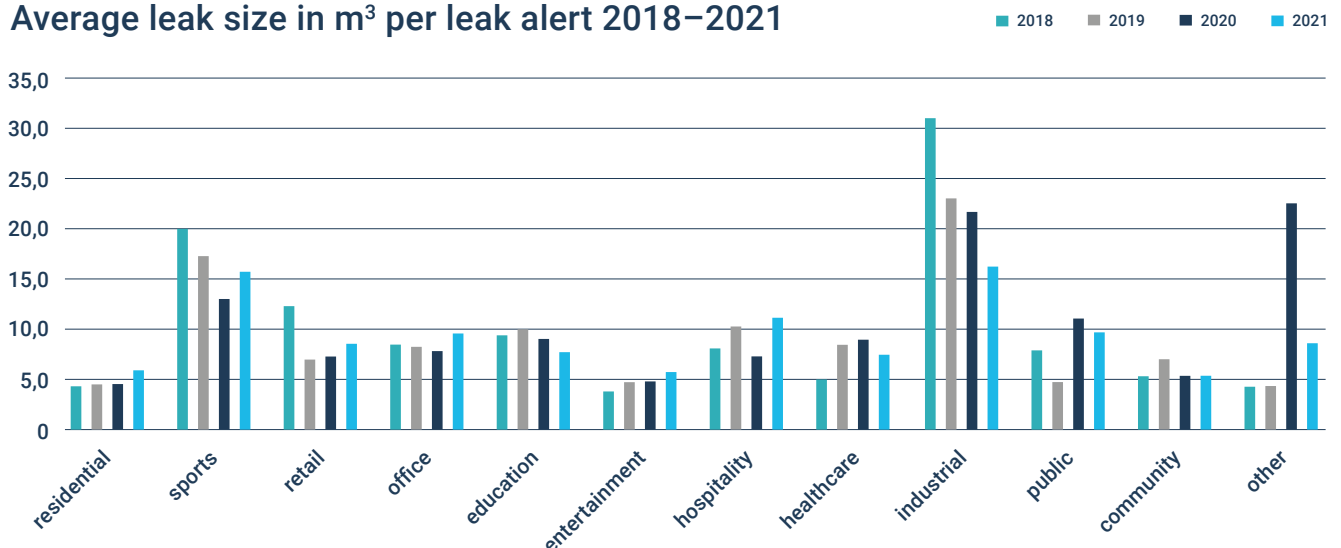
**365**  
days



**913** m<sup>3</sup>  
913.000 liters

**3600** €

## Average leak size in m<sup>3</sup> per leak alert 2018–2021

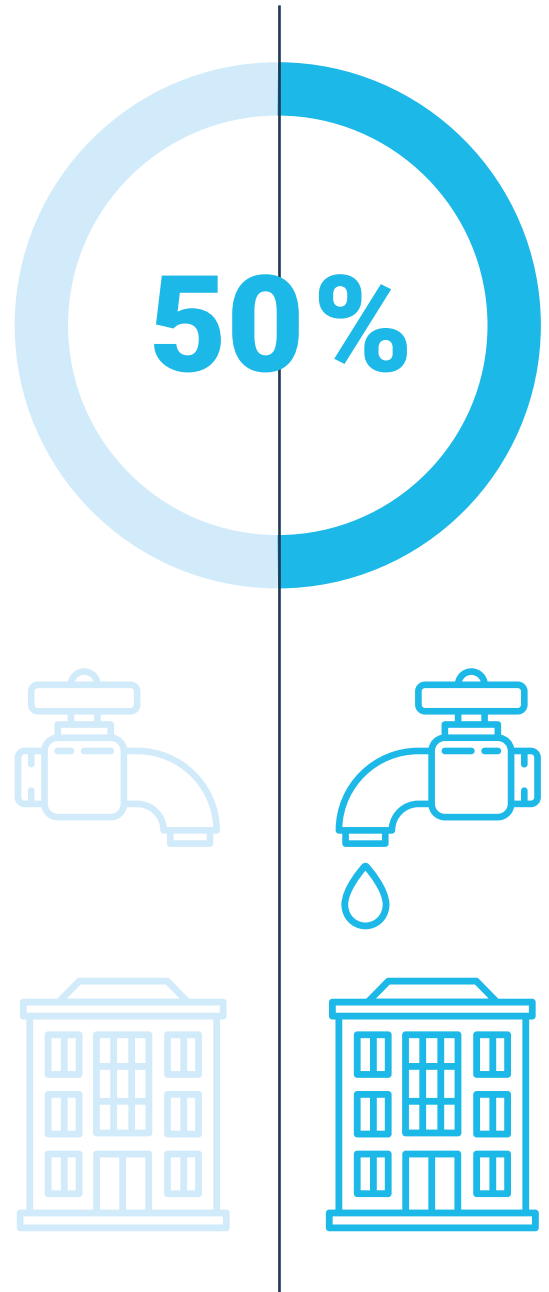


# LEAK OCCURRENCE

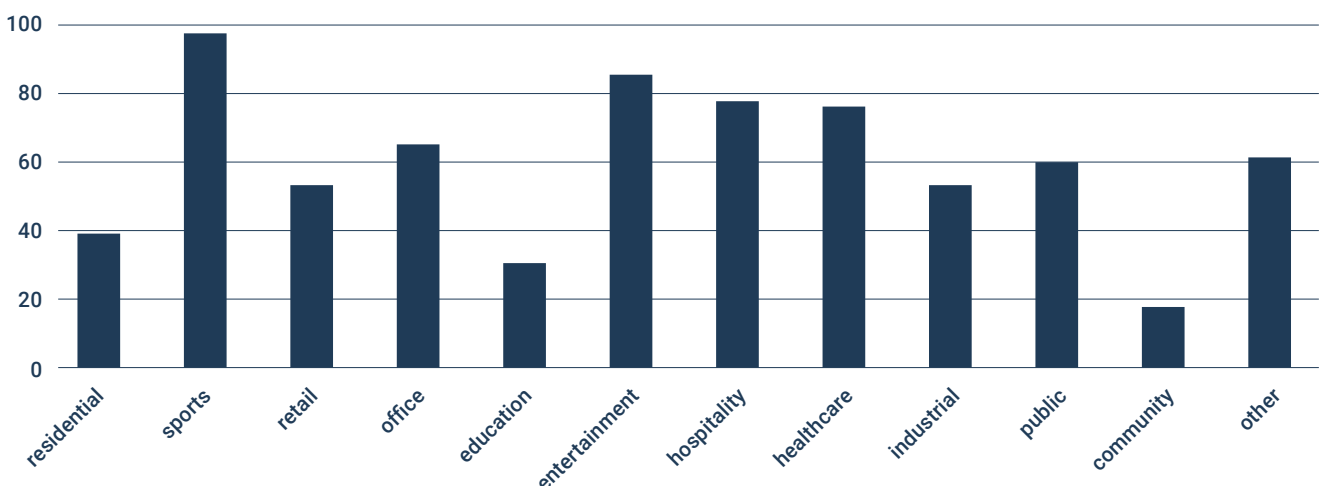
Leaks occur in all shapes and sizes: from a flooded basement to a leaking tap or continuously flowing toilet. And whether it's due to an extreme weather event, a bursting or leaking pipe, a plumbing problem, or a malfunctioning appliance, they all mean the same thing: water is being wasted and there is potential damage to your property.

Over 50% of residential buildings have experienced a leak alert in each month of this year. This means that almost half of residential customers deal with one leak in every month. As property owners and managers, our customers are usually not the end users of their buildings. Tenants are not responsible for maintenance, and often don't notice small leaks or fail to report them. For example, a continuously flowing toilet can go unnoticed for a long time in an office building, and while it might seem inconsequential, the amount of water wasted is significant.

With automatic leak detection and instant alerts, there's tremendous potential to cut down the waste of water due to small leaks. And when it comes to bigger leaks, the Smartvatten service enables you to limit or prevent serious damage to your property.



Average percentage of customers who have experienced at least one leak in a month 2018–2021

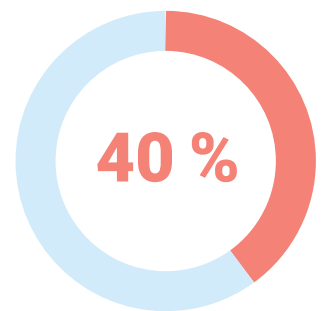


# CO<sub>2</sub> EMISSIONS

Managing your water consumption is not just about water. It's also about your CO<sub>2</sub> output. Purifying (sea)water to get it ready for consumption, transportation to your property, heating water for a bath or shower, and treating wastewater after it goes down the drain all lead to CO<sub>2</sub> emissions. That means that by improving your portfolio's water efficiency, you not only save water – you reduce your carbon footprint, too.

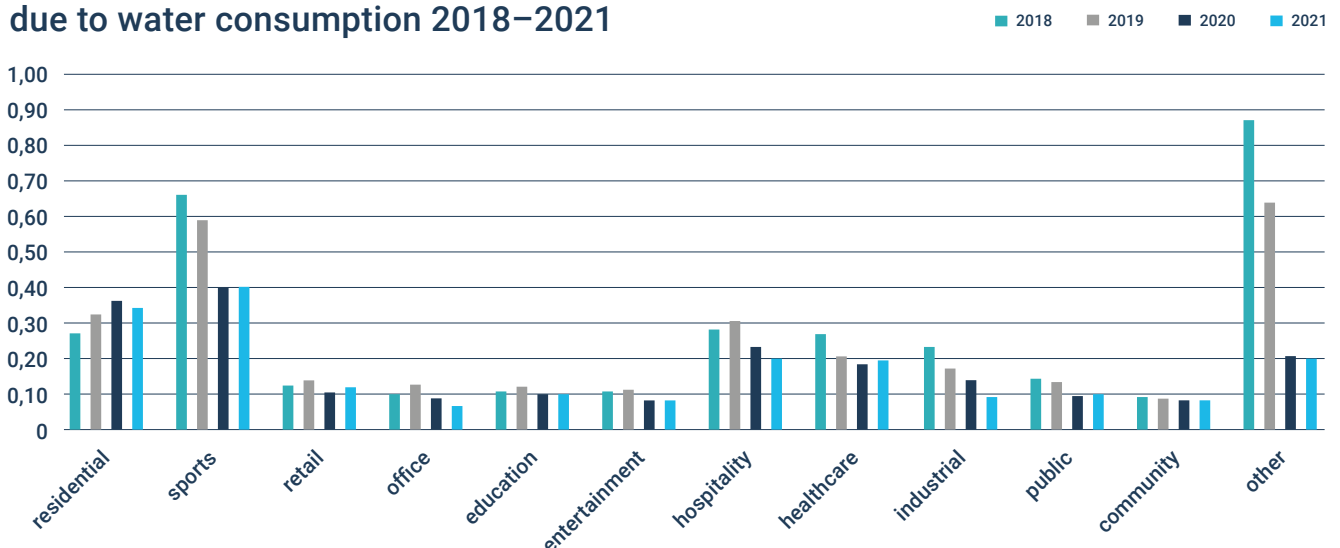


Water consumption related CO<sub>2</sub> emissions are the result of **heating, wastewater handling and water transportation.**



Approximately **40%** of the water used by households is **hot water.**

Average CO<sub>2</sub> emissions in kg/m<sup>2</sup> per month due to water consumption 2018–2021



# PROPERTY TYPES

The way in which water is consumed is very much dependent on the purpose of the building. That's why in order to share our collected data in a more useful way, we've chosen to categorize the properties by type on the previous pages. For example, in residential apartment buildings peak consumption might be in the mornings, evenings, and weekends, while offices see the most use during working hours. And when we're talking about businesses, there's a big difference in a building filled with cubicles or one that consists mainly of installations and machines.

We've highlighted a few categories below to provide insight into what causes the differences in consumption, leak size, and emissions.



## Sports

The water consumption in properties in the sports category is considerably higher than in many other categories. In these buildings – sports stadiums, for example – the large number of visitors at peak times and a high concentration of food and beverage services leads to a much higher consumption rate. It also means there's a lot more hot water being used – and that means the CO<sub>2</sub> emissions go up.

The leak occurrence is higher, too. Peaks in consumption during games alternating with periods of hardly any use at all puts a strain on the water system. Combined with overdue maintenance, leaks are more likely to occur. And because the location closes down after the weekend game, leaking toilets might go unnoticed for a week if no one is actively looking for them.



## Community

In community spaces, it's often the opposite. The number of visitors is much smaller, and the regular presence of facilities personnel or daily cleaning rosters means that leaks are quickly detected and solved.



## Industrial

Industrial properties experience much bigger leaks than other categories. And that's due to a combination of factors. These locations usually work with large-scale installations that use a lot of water which requires bigger pipes – and results in much bigger leaks if they are damaged. Combined with the daily practice of operating vehicles like forklifts and trucks in the vicinity of these installations and pipes, accidents are much more likely to happen.

### THE PANDEMIC



## Office

During the pandemic, consumption habits completely changed for both office buildings and residential properties. Offices suddenly used much less water, but with a significantly limited number of people present, leaks could go undetected for longer periods of time. Most organizations pay their water bills in advance, and are billed based on their historical use. Some companies paid tens of thousands of euros too much up front. That makes real-time insight into water consumption all the more relevant.



## Residential

For residential properties, the opposite happened. With the majority of the population working from home, consumption increased significantly. Some of our customers include water in their service fees and send out bills for the upcoming year. We were able to assist several customers with calculating the extra costs that they would have to deal with, avoiding additional fees down the line.



# CONCLUSION

With water prices on the rise around the world, responsible water management is becoming increasingly important for the real estate sector. Focusing on reducing waste and improving the complete water installation system will help you save money as well as valuable natural resources. And in order to start doing that, you need accurate information and a clear water strategy. That's where we come in.



## The Impact of Water Consumption

So, how exactly should we interpret the numbers we've shared in this report? They show us that water prices are rising significantly. They tell us that leaks are not rare – the opposite, in fact. The size of the leak may vary from a dripping tap in an apartment to a burst high-pressure pipe in a factory. But no matter what types of property your portfolio consists of, leaks are bound to happen.

The numbers also show us that the impact of water consumption is much bigger than what it looks like at first glance. Consuming water requires energy. The amount of energy that goes into the transportation, heating, and treatment of water should not be underestimated. By saving water, you will also be reducing CO<sub>2</sub> emissions.



## Monitor, Measure & Manage

Monitoring your water consumption and implementing a leak detection system allows you to prevent serious damage and avoid wasting significant amounts of water and money. And by tracking, measuring, and analyzing your consumption, you'll gain invaluable information about your properties – enabling you to implement water saving measures and responsible water management.

And that's exactly what we hope to help our customers with. Smartvatten provides high-quality data in real-time, sends instant leak alerts, and shares its expertise to help you create a clear water strategy. Join us and reduce water wastage, carbon emissions, and costs – and increase your asset value at the same time.

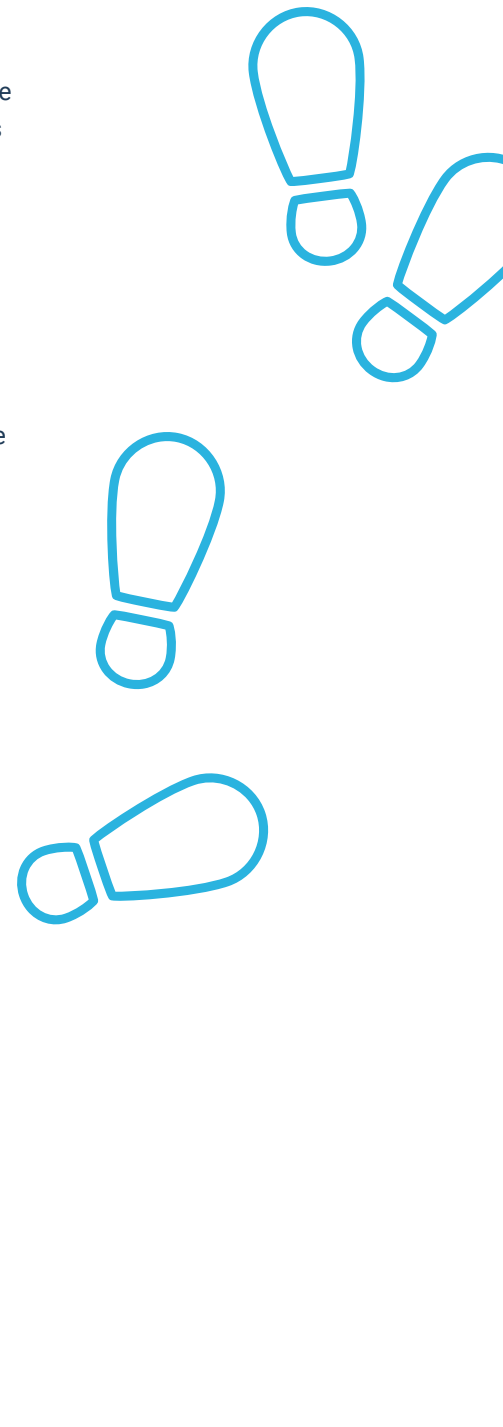
# HOW TO CREATE YOUR WATER STRATEGY

Water is one of the biggest expenses in property management. Every tap, shower, toilet, and heating facility adds up to millions of liters of water consumption. Add to that the costs of undetected leaks and excessive use, and there's tremendous potential to save both water and money.

A clear water strategy helps you ensure your properties use water responsibly, all while saving money and limiting the strain on natural resources. **With Smartvatten, it only takes 5 simple steps:**

- 1 Measure** – Our simple device is installed directly on your property's water meter and is then connected to our cloud-based software. Together, they track and record your consumption in real-time.
- 2 Analyze** – This data allows our system to spot any deviation and send out immediate leak alerts, enabling you to act quickly and prevent serious waste and damage. Regular reports and the online portal provide detailed insights into your consumption.
- 3 Evaluate** – For a complete picture, our experts examine the current state of your water supply, installations, and sanitation system. We'll figure out exactly where you can save and how to do it in the most efficient way possible.
- 4 Strategize** – With all this information, we're ready to share our insights into the best options for improvement. Together, we'll map out a plan to upgrade your system and reduce both waste and costs.
- 5 Save** – By installing water-saving devices and making sure the whole water system runs smoothly, you'll be all set with a user-friendly, sustainable, and future-proof water management system. Time to start saving water, time, and money!

Ready to take the first step toward water efficiency?  
Contact us at [info@smartvatten.com](mailto:info@smartvatten.com).



# SCORING POINTS FOR GRESB AND BREEAM



Sustainability certifications ensure that your efforts and progress are properly determined, valued, and ready for comparison. And as a Smartvatten customer, you'll hit the ground running.

In the annual **GRESB** Assessment, a Smartvatten subscription guarantees you at least 4.66 points out of 100 in the category Water Performance. With **BREEAM**, you'll potentially earn 18 points – and 29 when you actively work with our system.



## GRESB Points for Water Performance when using Smartvatten

<b>WT1 – Water Usage</b>	Water Data Coverage – <b>4 points</b> . Applicable if 100% of the portfolio has 12 months of water consumption data for the full floor area. If its less than 100% of the floor area, the data coverage of the portfolio is benchmarked and scored dynamically (i.e., 70% data coverage for office assets in Europe will score differently than having 70% data coverage for industrial assets in Europe) with the scores ranging from <b>0–4 points</b> .
<b>MR3 – External Review of Water Data</b>	Smartvatten provides annual review statements to clients, confirming their annual water usage. This results in <b>0.4166 points</b> .
<b>RA4 – Water Efficiency Measures</b>	It can be assumed that some assets in the portfolio have had automatic (smart) meters installed within the last 3 years. This is automatically <b>0.25 points</b> .

## BREEAM Points for Water Performance when using Smartvatten

<b>ASSET</b>	<b>WAT01 – Measuring water use</b>	When our device is installed on the main meter of your property, you'll receive <b>4 points</b> . When every installation or floor that's responsible for more than 10% of the water use is equipped with a submeter and another device, another <b>2 points</b> are added.
	<b>WAT07 – Leak detection main water connection</b>	Because Smartvatten's leak detection system, you'll be awarded the full <b>4 points</b> , after a complete calendar year.
<b>MANAGEMENT</b>	<b>WAT11 – Measuring water use</b>	You'll receive <b>4 points</b> for sharing your water meter data annually, which usually already applies. By using Smartvatten, you no longer have to share the data yourself.
	<b>WAT12 – Monitoring &amp; reporting water use</b>	When using Smartvatten, you automatically earn <b>2 points</b> for having a water policy and daily recording of data (at the minimum). You can earn <b>up to 8 points</b> when you compare your data with goals and target figures, report internally and publish your results in your public annual report.
<b>USAGE</b>	<b>WAT18 – Limiting water use</b>	Smartvatten provides a feedback process, automatically earning you <b>1 point</b> . You can earn <b>2 more</b> by appointing specific employees who are responsible for preventing waste of water, and by offering them formal and regular training for this purpose.
	<b>WAT19 – Implementing &amp; monitoring water policy</b>	By actively working with our system awards you <b>2 points</b> (if not, only 1 point) for monitoring your water use and having a water management system.
	<b>WAT19 – Implementing &amp; monitoring water policy</b>	You'll earn <b>2 points</b> for measuring your water data for the complete calendar year. We do that for you, by automatically measuring your data at midnight on January 1st.

# GETTING STARTED WITH SMARTVATTEN

## Who we are

Since its foundation in 2013, Smartvatten has been committed to making sustainability user-friendly. From producing energy certificates to providing simple water-saving installation services in Finland, to facilitating remote monitoring of water consumption in Europe, to offering full-service water efficiency strategies worldwide.

## What we do



Our device comes equipped with optical recognition technology, is installed on your property's water meter, and then tracks and records your water consumption in real-time.



The device is directly linked to our cloud-based software, where your data is collected and analyzed without delay.



Any deviations in water consumption trigger an alert – helping you to quickly respond to leaks, preventing serious damage to your property.



Our reports provide you with detailed insight into your water consumption, which we can use to help you create a clear water strategy to save water, time, and money.

**1000+** satisfied customers have already gone before you.

Read about their experiences at [smartvatten.com/testimonials](https://smartvatten.com/testimonials).

NETFLIX

AROUNDTOWN<sup>SM</sup>

syntrus | ochmeo  
real estate & finance



NREP

BNP PARIBAS

nuveen  
REAL ESTATE

CBRE

pwc

savills

Bouwinvest

JLL

Want to find out more? Get in touch!



### GLOBAL

Tim Twisk  
Global Key Account Manager  
[tim.twisk@smartvatten.com](mailto:tim.twisk@smartvatten.com)



### FINLAND

Kari Haahtela  
Sales Manager Finland  
[kari.haahtela@envera.fi](mailto:kari.haahtela@envera.fi)



### NETHERLANDS, BELGIUM & LUXEMBOURG

Raymond Tieman  
Sales Manager Benelux  
[raymond.tieman@smartvatten.nl](mailto:raymond.tieman@smartvatten.nl)



### SWEDEN, NORWAY & DENMARK

Patrik Tjäder  
Sales Manager Nordics  
[patrik.tjader@smartvatten.se](mailto:patrik.tjader@smartvatten.se)