

The Water We Cannot See

What 76 young people from 5 municipalities discovered when they measured their own water footprint - and what it means for a country running out of water.

76

STUDENTS

103

CALCULATIONS

5

MUNICIPALITIES

94%

WATER UNSEEN

INTRODUCTION

01 Why we counted our water

Kosovo has roughly **1,600 m³ of renewable water per person per year** - one of the lowest figures in Europe. Three of its four river basins are already under water stress, and the World Bank projects that within twenty years *all* of them will be. Meanwhile around 58% of the water put into the public network never reaches a paying tap: it leaks away or is lost.

Those are national numbers, and national numbers are easy to ignore. So we made it personal. Between January and August 2026, young people from Super-Volunteers clubs across Kosovo used a water footprint calculator built for the Kosovo context - the first of its kind here - to measure their own daily water use. Not just the water they can see coming out of a tap, but the water hidden inside the food they eat, the coffee they drink and the clothes they buy.

This report is what they found. It is a **baseline**: the starting line, not the finish. Every number here was generated by a young person answering honest questions about their own household.

HOW TO READ A WATER FOOTPRINT

Direct (indoor + outdoor) water is what you see: showers, flushing, dishes, laundry, washing the car, watering the garden.

Virtual water is what you don't: the water it took to grow, raise and manufacture the things you consume. A single cotton T-shirt carries about 2,700 litres. A kilogram of beef carries around 15,400. You never see that water, but your choices spend it.

Who took part

76

YOUNG PEOPLE

Aged 11-17, median age 14. 58 girls, 18 boys.

11

SUPER-VOLUNTEERS CLUBS

Took part in the baseline.

5

MUNICIPALITIES

Prishtinë, Ferizaj, Gjakovë, Kamenicë and Podujevë.

16

CAME BACK

Recalculated at least once more to see if they had changed.

HEADLINE FINDING

02 94% of our water footprint is invisible

This is the single most important thing in the data. When we added up every litre across all 76 participants, the water we can actually see - showers, taps, toilets, gardens - accounted for just **5.7%** of the total. Everything else was hidden inside what we eat, drink and wear.

Where a typical young person's water actually goes

Median litres per person per day, n = 76. Segments are labelled directly.

VIRTUAL - hidden in food, drink & clothing



Bar lengths and litre values are group medians. The 94% is the virtual share of the pooled total across all 76 participants (indoor 5.5%, outdoor 0.1%, virtual 94.3%); because medians and pooled shares are different statistics, the litre values do not sum exactly to the median total of 6,481 L/day.

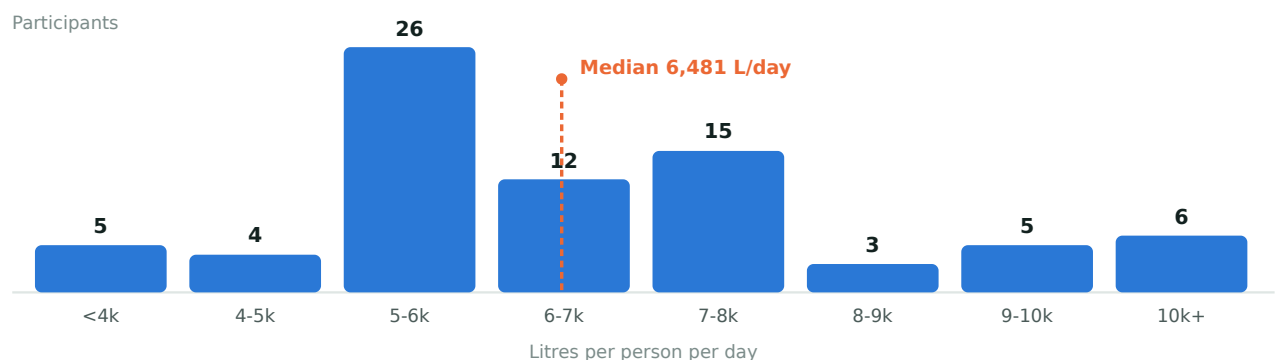
WHAT THIS CHANGES

Turning off the tap while you brush your teeth is a good habit - but on its own it is a rounding error. The participant with the smallest footprint in this study used **2,844 L/day**; the largest used **13,114 L/day**. Almost all of that 10,000-litre gap came from the invisible half of the ledger: diet and consumption, not shower length. Any campaign that only talks about taps is aiming at 6% of the problem.

The spread across participants

Daily water footprint, all 76 participants

Number of participants in each band, litres per person per day.



Half of all participants fall between 5,157 and 7,721 L/day. The distribution has a long right tail - a small number of very high footprints, driven by heavy meat consumption combined with high clothing purchases.

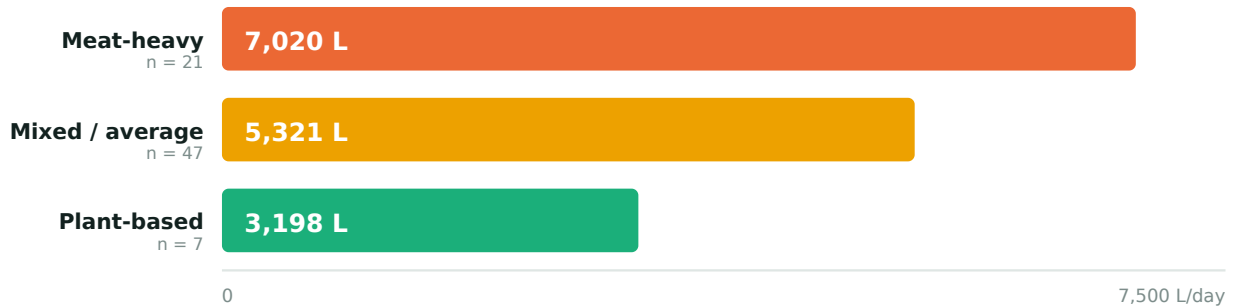
03 Three levers that actually move it

We compared participants' answers against their results to find out which choices matter most. Three stood out clearly - and they are not the ones people usually talk about.

Lever 1 - What is on your plate

Median total footprint by diet type

Litres per person per day. Bar labels show the group size.



One participant reported a vegetarian (not vegan) diet and is not shown separately. Plant-based participants had a median footprint **2.2x smaller** than meat-heavy participants - a difference of about 3,800 litres a day, or roughly 1.4 million litres a year per person.

PUT IT IN PERSPECTIVE

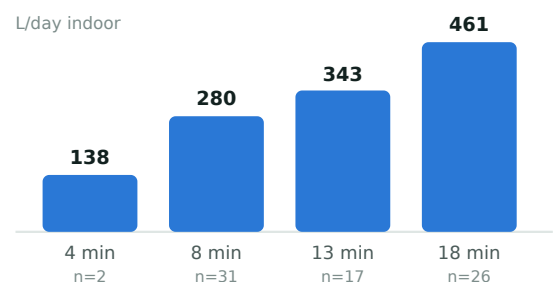
The gap between a meat-heavy and a plant-based diet in this dataset - about 3,800 L/day - is **more than ten times** the entire indoor water use of a typical participant (354 L/day). You would have to give up every shower, tap, flush and load of laundry ten times over to match what one dietary shift does.

Lever 2 - How long you stand in the shower

Within the visible half of the footprint, shower length is the dominant factor. It correlates with indoor use at **$r = 0.72$** - by far the strongest relationship of any single habit we measured. Household size, by contrast, had almost no relationship with a person's indoor footprint ($r = 0.05$), which makes sense: the calculator measures the individual, not the building.

The good news is that this is the easiest thing on the list to change. It costs nothing, needs no permission from anyone, and works tomorrow morning.

Median indoor use by shower length

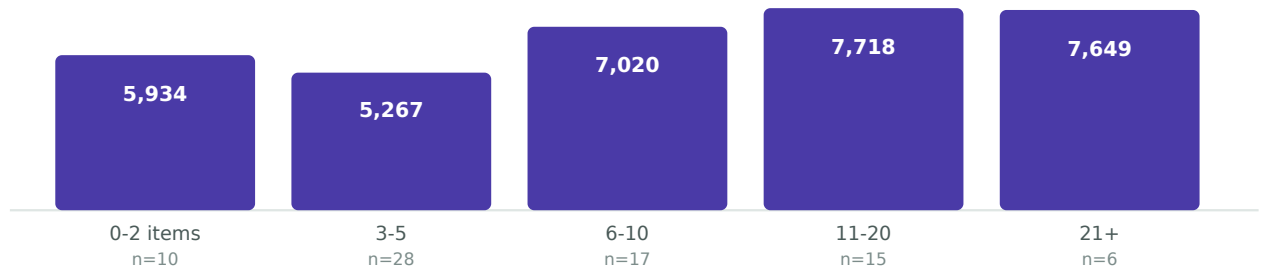


Cutting an 18-minute shower to 8 minutes is worth about 180 litres a day.

Lever 3 - How many clothes you buy

Median total footprint by new clothing items per month

Litres per person per day. Correlation with virtual water: $r = 0.42$.



Participants buying 11 or more items a month had a median footprint about **2,450 L/day higher** than those buying 3-5. The 0-2 group sits slightly above the 3-5 group because it happens to contain several meat-heavy diets - a reminder that these levers interact, and that with 76 participants small groups move around.

WHAT WE FOUND AT HOME

04 Leaks, flushes and the state of our houses

The calculator also asked about the fixtures and habits inside participants' homes. Three of those answers deserve attention from more than just the student who gave them.

30%

POSSIBLE LEAKS

23 of 76 participants said their home has a leak (4) or might have one (19). In a country losing 58% of its network water, this is the cheapest fix available.

70%

DUAL-FLUSH TOILETS

53 of 76 homes already have a dual-flush system - genuinely good news, and better than we expected.

37%

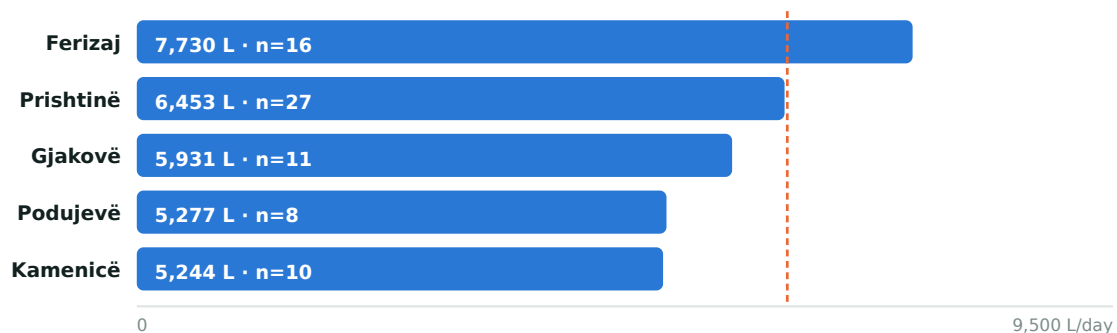
LEAVE THE TAP RUNNING

28 of 76 leave the tap running while brushing teeth at least sometimes. Small litres, but the easiest habit in the whole survey to change.

Municipality comparison

Median daily footprint by municipality

Litres per person per day.



The orange dashed line is the overall median (6,481 L/day). The Ferizaj-Kamenicë gap of ~2,500 L/day is real in this sample, but it reflects who volunteered in each Super-Volunteers club rather than a property of the municipality - participants were not randomly selected.

A NOTE ON FAIRNESS

These are not league tables and no municipality "loses". The Super-Volunteers clubs that took part chose to take part. What the comparison usefully shows is that footprints vary as much *within* Kosovo as between countries - which means the changes that matter are available locally, to everyone reading this.

EVIDENCE OF CHANGE

05 Sixteen of us came back to measure again

The most interesting group in this dataset is the sixteen participants who used the calculator more than once, some as many as four times. They are the only people here who can tell us whether knowing your footprint changes it.

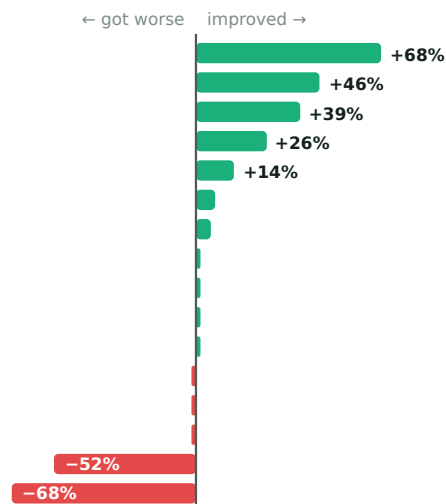
Eleven of the sixteen improved. Among those who did, the median reduction was **7.1%** and the average **18.7%**. The largest single improvement was **68.3%** - a participant who cut their footprint by roughly two-thirds between their first and second calculation.

Five got worse. Two of those were dramatic (-52% and -68%), which almost certainly reflects a more honest or more complete second answer rather than a genuine increase in consumption. That is worth saying plainly: the first time you fill in a calculator like this, you tend to guess low.

With sixteen people and no control group, this is *not* proof that the calculator changes behaviour. It is a promising signal, and it tells us exactly what to measure next.

Change between first and latest calculation

Each bar is one participant, $n = 16$



WHAT WE DO NEXT

06 What this means - and what we're asking for

These findings came from young people, so the recommendations start with what young people can actually do - then move outward to the people with more power than us.

For anyone reading this

1

Shift one meal, not one tap

Replacing meat in even a few meals a week is worth more water than every shower you will ever shorten. In our data the difference between a meat-heavy and a plant-based diet was about 3,800 litres a day - ten times a typical participant's entire indoor use.

2 Take the ten-minute test

Cutting an 18-minute shower to 8 saves roughly 180 litres a day. It is free, immediate, and shower length was the strongest single predictor of visible water use we measured ($r = 0.72$).

3 Check for a leak this week

Nearly a third of participants suspect a leak at home but aren't sure. Read your meter before bed and again before anyone uses water in the morning. If the number moved, you have a leak - and you just found free water.

4 Buy fewer, wear longer

One cotton T-shirt costs about 2,700 litres to make. Participants buying 11+ items a month carried around 2,450 L/day more than those buying 3-5.

For schools and municipalities

5 Put the calculator in the curriculum

A structured cycle - measure at the start of the school year, act on the results, then re-measure before it ends - would turn a voluntary tool into a proper before-and-after study with a real sample.

6 Fix school fixtures first

70% of participants' homes already have dual-flush toilets. School buildings are a bigger and more visible target than the households that have largely already done the easy part.

7 Rewrite the national message

Kosovo's water campaigns talk almost entirely about taps and leaks. That is 5.7% of the story. If 94% of our water leaves the country's rivers through food and goods, public communication has to say so.

METHOD & HONESTY

07 How we did this, and what it cannot tell you

The data

The Kosovo Water Footprint Calculator recorded 80 participant records between 15 January and 18 August 2026. For analysis we removed three test accounts and one record containing physically impossible values (a household of 100 people, 100 flushes per day), leaving **76 participants and 103 total calculations**. All figures in this report use that analytic set unless stated otherwise.

We report **medians** rather than averages throughout, because a handful of very large footprints would otherwise drag the average away from anyone's real experience. Where a group has fewer than five participants we say so and do not draw conclusions from it.

What this study cannot tell you

- **It is not representative of Kosovo's young people.** Participants volunteered through Super-Volunteers clubs - students already interested in the environment. Three-quarters are girls. Prishtinë and Ferizaj account for over half the sample. A random sample would look different.
- **The absolute litre values should be treated as indicative.** Our median of 6,481 L/day sits well above the global average water footprint of roughly 3,800-4,000 L/day, and toward the upper end of the 1,250-2,850 m³/year range reported for industrialised countries. Some of that is real - diets in the sample are meat-heavy - but part is likely the calculator using generous coefficients. **These numbers are reliable for comparing people and tracking change over time; they should not be quoted as a national statistic.**

- **The improvement finding is a signal, not proof.** Sixteen self-selected repeat users with no control group cannot establish that the calculator changes behaviour. Establishing that is the obvious next study.
- **Self-reported data is estimated data.** Nobody times their shower with a stopwatch. The two large negative "improvements" are most plausibly a second, more honest answer.

WHAT IT CAN TELL YOU

That 76 young people across five municipalities measured something real about their own lives, found a 94/6 split they did not expect, identified which of their own choices matter most, and produced a set of recommendations grounded in their own data rather than in a textbook. That was the point of Objective 2, and it worked.

Privacy

All participants are minors. No individual is named anywhere in this report and no result is attributable to a named person. Individual-level data remains with TOKA and is not published.

Sources for external benchmarks. World Bank, *Water Security Outlook for Kosovo* (2018) - renewable water per capita (~1,600 m³/yr), basin water stress projections, non-revenue water (~58%). · Hoekstra & Mekonnen, *The Water Footprint of Humanity* / waterfootprint.org - global average footprint (~3,800-4,000 L/person/day), industrialised-country range (1,250-2,850 m³/yr), agriculture's ~92% share of freshwater use. · Mekonnen & Hoekstra, *The green, blue and grey water footprint of animal products* - beef ~15,400 L/kg. · Cotton T-shirt ~2,700 L - widely cited waterfootprint.org / WWF figure. | **Report** prepared for TOKA from the Water Footprint Calculator export, September 2026.