



**HUNGARIAN
WATER
PARTNERSHIP**



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CONFERENCE**

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**Cost recovery constraints
in water infrastructure development**

Bankable and Sustainable WASH Solutions

to overcome affordability barriers limiting
the mobilization of private capital.

The challenge

Even in Europe, water utility infrastructure, management, and development face significant financing gaps. The reconstruction of the aging network is often underfunded and underperforming. Capital costs are either not included in tariffs or are only partially covered by public spending. The annual reconstruction rate of the existing infrastructure is estimated between 0,1-1 %, suggesting an impractical life expectancy of over 1,000 years.



Source: UNEP City Level Decoupling 2013 http://www.unep.org/resourcepanel/portals/24102/pdfs/Cities-Full_Report.pdf

Detailed and large-scale investment and asset evaluation results indicate that EU-standard (nearly full-scale) water and sanitation utility infrastructure investment or replacement costs range from **€1,500 - €7,500 per capita**. Of this, the costs of collection and distribution networks account for **€1,200 - €5,700 per capita** (75–80% of the total), varying primarily based on local conditions and municipality size – with smaller municipalities incurring higher costs.

If full-scale and inclusive water infrastructure development in the world's wealthiest regions is deemed unbankable, how can we expect it to succeed globally?

Private investments must be mobilised to supplement limited and often ineffective public financing, yet cost recovery remains minimal or non-existent. Limited capacity and/or willingness to pay (partly, but not exclusively due to affordability constraints) combined with increasing sustainability demands, call for innovative, efficient, and compelling public and private approaches, solutions.

The [UNEP City-Level Decoupling Report](#) estimates that \$22,600 bn. in financial resources will be required to fund city-level WASH investments. However, this figure is far too large to be financed in its entirety. On a global scale, this immense capital requirement must be translated into individual spending. Dividing the \$22,600 billion by the projected 6 billion people living in cities by 2050, as stated in the report, results in an investment need of \$3,500–4,000 per capita. This aligns precisely with the conclusions we reached based on asset evaluation results for “nearly full-scale” water infrastructure systems in Europe.

The solution

A wide range of **affordable and sustainable WASH approaches exist that have been proven effective and can also attract private sector investment.** Our focus must be on solutions for both [drinking water provision](#) and [liquid waste \(septic sludge\) management](#) in communities lacking adequate water supply or sewerage networks.

For drinking water, access can be provided with an initial investment of less than **€25** per person and an annual service fee of under €5, which includes cost recovery for the initial capital expenditure. Similarly, liquid waste management and purification can be achieved for an initial cost of less than **€45** per person and an annual service fee of under €10 per person, also covering cost recovery for early capital investments.

The UNEP City-Level Decoupling Report emphasises the significant CAPEX and OPEX variations in WASH expenditures. To address these challenges, we must prioritise alternative **“near-to-consumer” solutions.**

The total capital required to serve 4 billion people living in less developed cities and rural areas is estimated at **just \$280 billion**, thanks to alternative “near-to-consumer” solutions. These solutions offer investment costs of less than **€70 per capita** for drinking water supply and liquid waste management.

Comparison of full-scale and near-to-consumer solutions

Infrastructure costs /person

drinking water

wastewater

drinking + wastewater

Supply cost /person/year

drinking water

wastewater

drinking + wastewater

Global capital needs USD

drinking + wastewater



Full-scale solutions

500–2 500 €

1 000–4 500 €

1 500–7 000 €

35–70 €

50–100 €

85–170 €

\$22 600
billion



Near-to-consumer solutions

<25 €

<45 €

<70 €

<5 €

<10 €

<15 €

\$280
billion

The implementation of these alternative “near-to-consumer” solutions will achieve the following outcomes:

- ✓ A reduction in required investment capital by **nearly 99%**
- ✓ Provision of safe drinking water for less than **€5 / person / year**
- ✓ Liquid waste management & purification services for **< €10 /per. / year**
- ✓ **Affordable WASH services** with tariffs that include initial capital costs
- ✓ **Return on invested capital** and private sector funding involvement

The bankable and sustainable solutions are registered as

[Water Action Agenda commitments](#),

contributing to the acceleration of the Sustainable Development Goals.

For more information on the Hungarian Water Partnership click [here](#).