💧 Drinking Water & Public Health:

Infrastructure Resilience

Access to safe, reliable drinking water is fundamental to public health, social equity, and economic development. **Magnetic Water Treatment (MWT)** strengthens municipal water infrastructure by reducing scaling and corrosion in distribution networks, lowering maintenance and energy costs, and decreasing reliance on chemical treatment—while improving overall water quality for end users.

Africa:

Decentralized Solutions

MWT enables resilient drinking water access in regions with limited centralized infrastructure.

Key benefits

- Enables off-grid, decentralized treatment using magnetic modules that require **no electricity**
- Ideal for remote and rural communities with limited technical infrastructure
- Improves taste, mineral bioavailability, and biological compatibility of drinking water
- Increases community acceptance and consistent use of safe water sources
- Reduces maintenance burden where technical expertise and spare-part availability are limited..

Asia:

Universal Access

MWT supports large-scale drinking water missions by protecting assets and improving water quality.

Impact outcomes

- Supports India's **Jal Jeevan Mission** and **AMRUT 2.0** by preventing pipeline degradation
- Reduces scaling and corrosion in municipal distribution networks
- Extends pipeline and infrastructure lifespan by **50–70%**, reducing premature replacement
- Cuts chlorine and disinfectant demand by **50–70%**
- Lowers population exposure to chemical by-products while improving taste and odor.

Europe:

Regulatory Compliance & Sustainability

MWT helps European utilities meet strict quality, environmental, and sustainability standards.

Compliance and cost advantages

- Supports compliance with the **EU Water Framework Directive** and **Drinking Water Directive**
- Reduces dependence on chemical treatment while improving water quality parameters
- Aligns with **European Green Deal** objectives through reduced energy and chemical use
- Enhances treatment efficiency for **PFAS and emerging contaminants**, reducing need for intensive chemical interventions
- Extends the life of historic water infrastructure (often 100+ years old), cutting replacement costs by **40–60%**
- Lowers operational costs for utilities by **25–40%**, supporting affordable access across communities

North America:

Infrastructure Modernization

MWT provides a cost-effective retrofit pathway for aging municipal systems.

Modernization benefits

- Enables sustainable upgrades for mid-20th-century water infrastructure
- Reduces pumping energy and treatment intensity, easing the **water-energy nexus**
- Aligns with the **EPA Water Infrastructure Resilience Framework**
- Helps utilities meet stringent **Lead and Copper Rule** requirements by reducing corrosion in pipelines and household plumbing.

South America:

SDG Achievement

MWT strengthens drinking water systems in rapidly urbanizing and climate-stressed regions.

Development impact

- Supports achievement of **UN Sustainable Development Goal 6** (Clean Water and Sanitation)
- Improves reliability and affordability of municipal water services
- Reduces rural and peri-urban water treatment and distribution costs by **20–35%**
- Enables service expansion without proportional budget increases
- Enhances water security in fast-growing cities facing climate-driven stress.

Building Resilient Drinking Water Systems

By improving infrastructure durability, reducing chemical dependence, and lowering operational costs, Magnetic Water Treatment offers a practical, scalable pathway to strengthen public health protection and drinking water resilience—particularly in an era of aging infrastructure, tightening regulations, and climate uncertainty.