Swiss EurEau Water Summit 2026

Climate-Smart Water Management
Challenges and solutions in Italy

Alessandro Garavaglia
ESG Director Acqua Novara.VCO

Zürich

21.10.2026



THE ITALIAN SCENARIO

Systemic vulnerability



Climate change is permanently transforming the global water cycle

Extreme climate events

Extended droughts and heavy rainfall

Obsolete infrastructure

High percentage of losses

Multi-sectoral stress

Severe impact on agriculture and industry

CASE STUDY

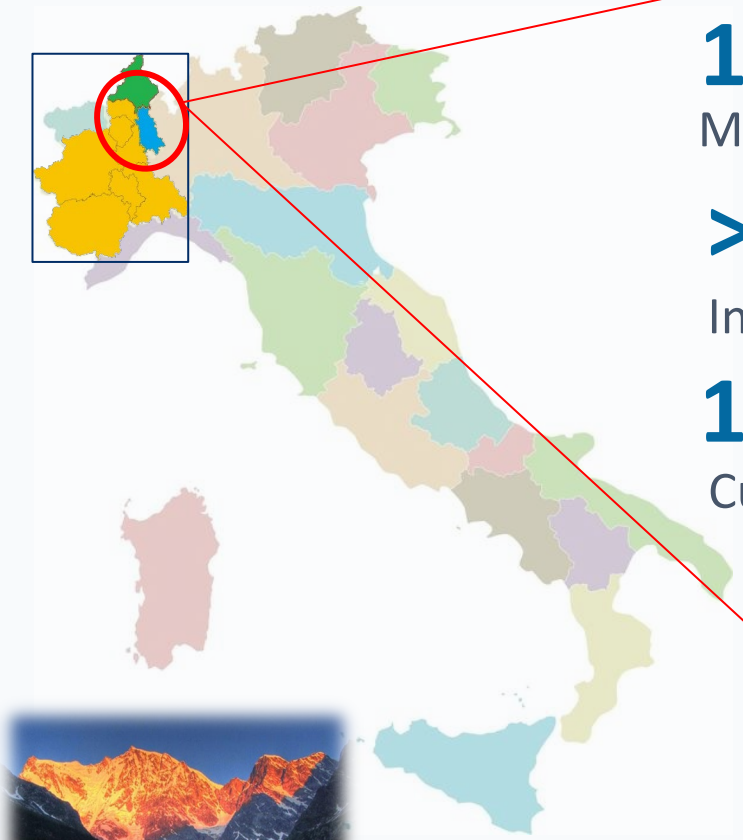
Acqua Novara.VCO Experience







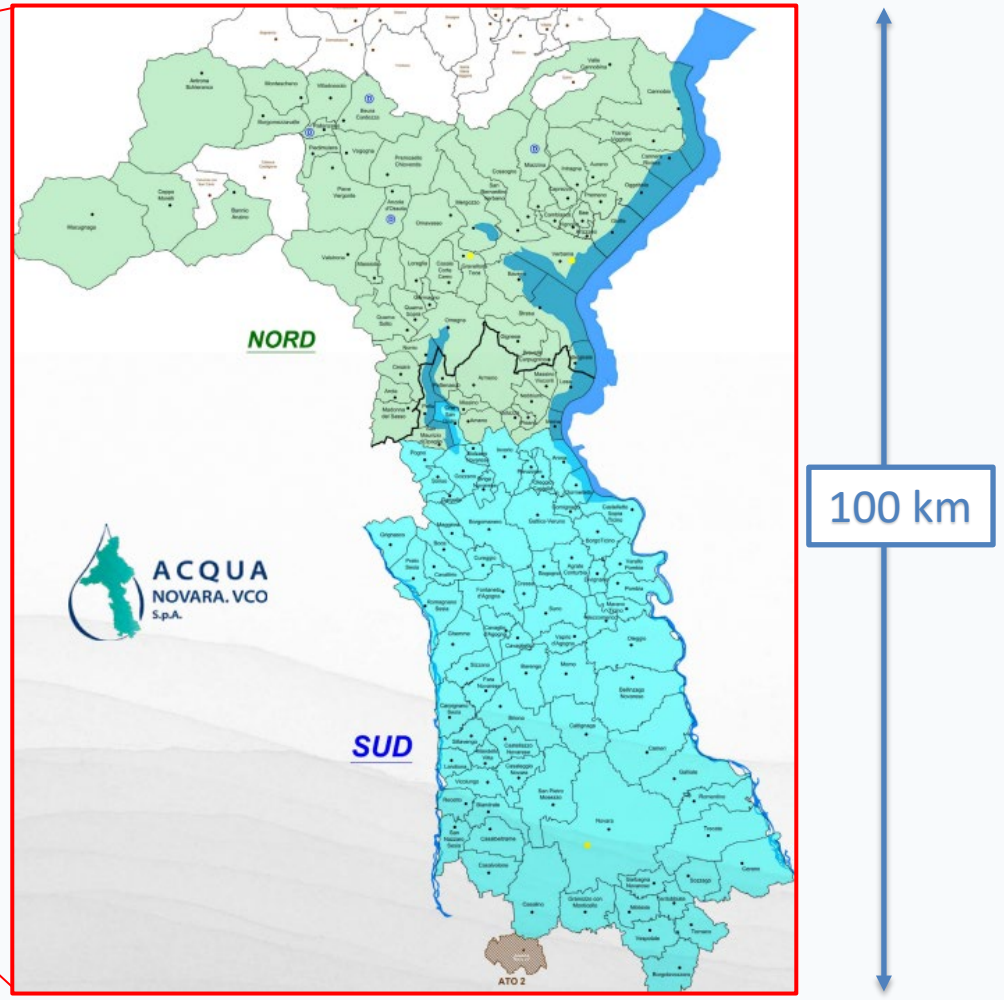


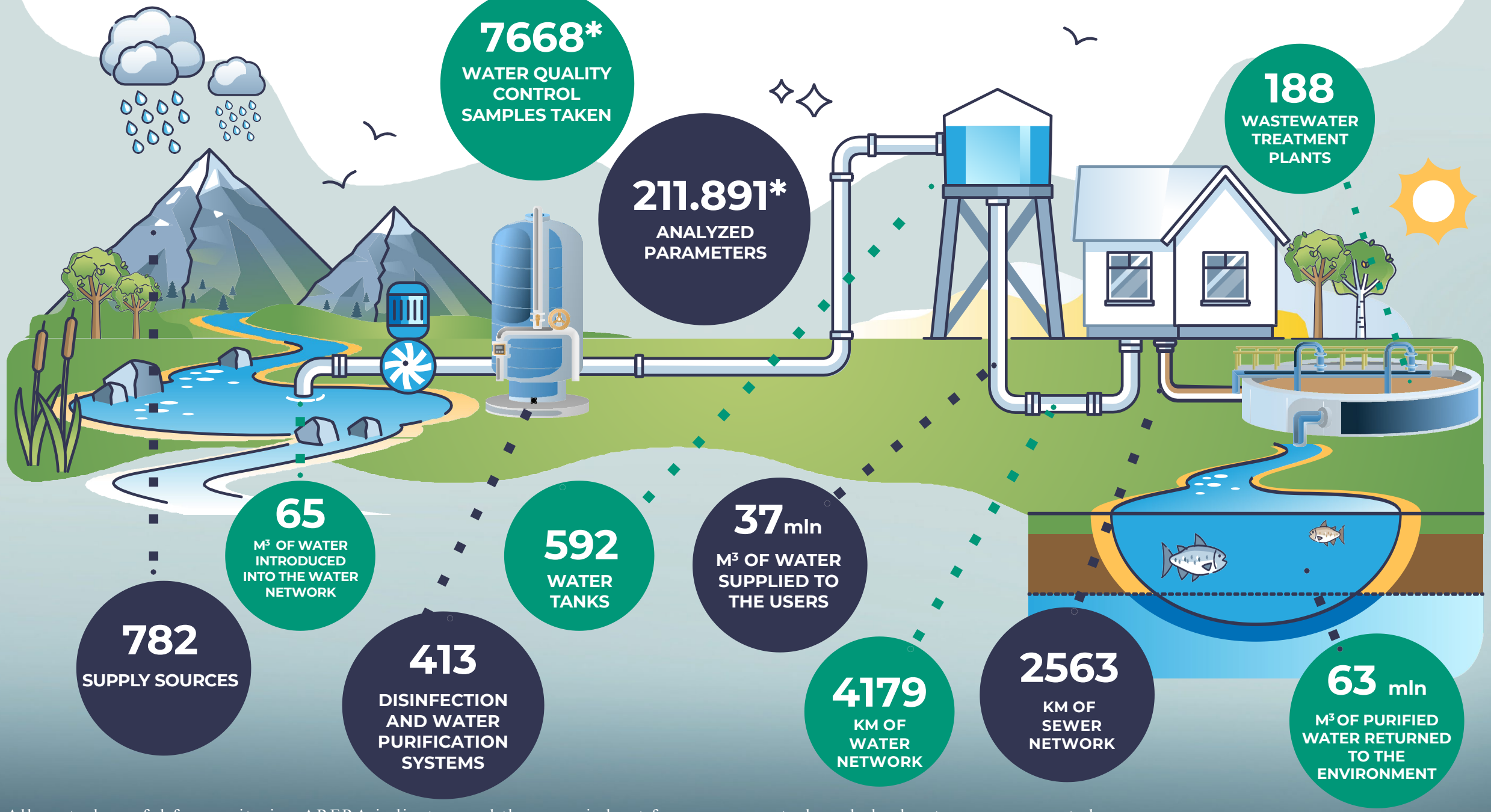


139
Municipalities

>450k
Inhabitants

187k
Customers





* All controls useful for monitoring ARERA indicators and those carried out for process controls and checks at users are counted

The Eastern Piemonte Paradox

For generations, our water supply was **guaranteed** by lakes, rivers, and glaciers. Now, climate-driven water stress is putting our water security at **serious risk**

Average temperature variation compared to the average observed in the thirty-year period 1961 - 1990

2023

+2.27°C

2024

+1.90°C

2025

+1.92°C

2026

+2.95°C

Partial data from January to June

Our territory is running faster than the global average.

Climate change imposes a new water management paradigm

The integrated plan of investments and sustainability

AGENDA 2036
ACQUA NOVARA.VCO
INVESTIMENTI E SOSTENIBILITÀ

€ 565 MILLION

TOTAL INVESTMENT



- Aqueduct
  48% (270 M€)
- Wastewater Treatment
  25% (141 M€)
- Sewerage
  17% (96 M€)
- Company
  10% (58 M€)

The largest public investment plan ever approved in our area (2024 -2036).

AGENDA 2036

THE 3 STRATEGIC DRIVERS

DRIVER 01

CLIMATE ADAPTATION

Respond to the "Hot Spot" emergency with infrastructure resilience and source protection.

- Water loss reduction
- Source Diversification
- Network interconnections

DRIVER 02

REGULATORY ADAPTATION

Anticipate the evolution of ARERA and environmental rules to become a benchmark sector.

- Proactive Management (e.g. PFAS)
- Wastewater Directive
- Drinking Water Directive and its transposition

DRIVER 03

FINANCIAL SUSTAINABILITY

Ensure coverage of the €565 million investment plan, while maintaining the economic balance.

- Investment Target
- Profitability Target
- Secure additional funding

Climate-Smart Actions on the Ground for Adaptation

Water 4.0 & Active Leak Management

Advanced network districtization using IoT acoustic sensors and predictive digital twins to halt water losses before they occur.

Water Safety Plans (WSP)

Implementing dynamic, climate-resilient risk mapping from environmental abstraction points straight to the consumer's tap.

Energy Efficiency & Asset Optimization

Complete revamping of wastewater treatment infrastructure to aggressively shrink our carbon footprint and maximize energy recovery.

Technological Innovation

Deploying cutting-edge mass-spectrometry testing and advanced carbon filtration to proactively eliminate emerging threats like PFAS.

Climate adaptation is not a one-time project, it is the new operating standard.

1. Water utilities must transition from fixed, historical modeling to dynamic, **flexible systems** engineered **for extreme weather duality**.

2. True climate adaptation requires a focus on **infrastructure funding**.

3. **European policy and funding** must evolve from rigid compliance checks to flexible, streamlined **enablers of localized innovation**.

ACQUA NOVARA. VCO S.p.A.

Thank you for your attention



Alessandro Garavaglia

ESG Director

alessandro.garavaglia@acquanovaravco.eu