OPPORTUNITY COST OF INACTION IN WATER QUALITY INVESTMENT

ECONOMIC AND HEALTH IMPACTS OF WATER CONTAMINATION

Contaminated water = lost economic asset

Impacts productivity, health, and resilience

Reduces GDP growth potential

Creates long-term fiscal inefficiency

INACTION HAS AN ECONOMIC COST

WATER POLLUTION REDUCES REGIONAL ECONOMIC GROWTH (DESBUREAUX ET AL., 2019)

- Study of 19 countries (1990–2014)
- Uses river water quality (BOD indicator)
- Compares regions upstream vs downstream
- Moderate pollution: −1.4 pp growth
- High pollution: −2.0 pp growth
- Middle-income countries: up to −2.5 pp
- High-income countries: no significant effect
- Loss ≈ up to 30% of average growth

WATER QUALITY IS A STRUCTURAL HEALTH DETERMINANT

Lower access to clean water → higher DALYs & mortality

Impacts YLL (early death) and YLD (disability)

Strong protective effect of safe water ($\beta \approx -0.60$ to -0.70)

Especially important in Latin America

TRADITIONAL MODELS UNDERESTIMATE REAL COSTS

Focus only on infectious diseases

Ignore chemical pollutants (metals, pesticides, PFAS)

Miss long-term effects: cancer, neurological damage

Economic losses potentially >10% of global GDP

CONCLUSION: WATER INVESTMENT = ECONOMIC STRATEGY

01

Inaction has large macroeconomic costs

02

Impacts GDP, health, and productivity

03

Strong inequality effects (developing countries more affected)

04

Need for "total value of water" approach