

Technology Fact Sheet

Controlling water leakage and preventing loss in water supplyⁱ

1) Technology description

- Water loss control: decentralization; water level meters are installed at the sub-regional level.
- Leakage detection: technologies such as acoustic detectors, infrared, chemical marking or hydraulic principles are being used.
- Fixing leaks: research and study on applications and use of new materials (for pipes, solder mount) and handling leaks.

The concept of preventing water loss has appeared in Vietnam for 15 years. There have been researches and programs to prevent water loss, with limited success as the rate of water loss remains high (30%). The Ministry of Construction has submitted the proposal for a national program to prevent water loss until 2025 to the Government for approval.

2) Socio-economic benefits

- Allowing water supply companies to enhance their pipeline management, client database metadata system and reduce leakage ratio.
- Reducing treatment, maintenance and pipe replacement costs.
- Reducing costs of water supply.
- Improving management capacity of water supply systems.
- Improving customer services.
- Reducing operating costs.
- Preparing a long-term plan to replace the pipes.
- Developing the asset management system of the water supply system.

3) Environmental benefits

- Reducing pressure on water resources and water conservation.
- Reducing energy consumption.

4) Status of technology

- The concept of preventing loss of water occurs only in Vietnam for 15 years. There are many studies and many programs against water loss, but the effectiveness is limited and the rate of water loss is very high (30%). National Program against water leakage by 2025 of Ministry of Construction is submitted to the Government for approval.

5) Application potential

- Great potential in older urban areas with old pipe systems that have not been synchronized and badly damaged.
- There is potential develop this system in parallel with fresh water programs in rural areas.

6) Barriers

- Economic efficiency is not high compared to the cost of implementation.
- The capacity of the water supply entity is limited.
- Lack of data on underground work in areas that need of repair or replacement.
- Lack of effective policies and regulations.

7) Costs

Implementation and technology application costs

- It depends on training costs, training, raising awareness of the community, cost management, operating and equipment costs.

Incremental costs to adapt to climate change (compared to conventional technology)

- The cost to adapt to climate change depends on the cost of replacing pipes, equipment costs change more durable and consistent with the extreme weather conditions caused by climate change.

ⁱ **This fact sheet has been extracted from TNA Report - Adaptation for Vietnam. You can access the complete report from the TNA project website <http://tech-action.org/>**