

ADAPTATION FUND

**Climate
Innovation
Accelerator**

SMALL GRANTS. BIG IMPACT.



Solution Summary

Location:

Saint Kitts and Nevis

Solutions type:

Early Warning Systems

Innovation type:

Proof of concept

Project proponent:

Saint Kitts Water Services
Department

Implementing entity:

UN CTCN

Technical assistance provider:

HR Wallingford Ltd

Funding received:

USD 171,730 (Adaptation Fund)

SOLUTION FACTSHEET

Piloting GIS-based Tools to Reduce Water Loss for Water Planners

2026-2027



ADAPTATION FUND

The Adaptation Fund Climate Innovation Accelerator provides grants and technical assistance to innovative solutions for adapting to climate change.

- Saint Kitts and Nevis is using GIS, leakage detection and district-level water balancing to reduce water losses, strengthen drought resilience and provide communities with a more reliable water supply.

Adaptation Innovation

- An estimated 25–35% of the water supplied in Saint Kitts and Nevis is currently lost through leaks, metering problems or other weaknesses before it can be billed or effectively used. Recovering even part of this lost water could increase the amount available to communities during severe droughts.
- The project is establishing a GIS-based monitoring and control system linking information on the physical water network, customers, metering, repairs and maintenance, while improving the procedures used to collect, update and share this information.

Climate Impacts

The solution is helping Mongolia adapt to:



Storms and
cyclones



Erratic rainfall



Sea level
rise



Drought and
water security

Key Achievements

By completion, the project is aiming to:

- Create a *digital map of the water network* and link it to customer, metering, billing and financial records.
- Train at least *10 water authority staff* to use the system, identify leaks and reduce water losses.
- Test the approach in 1 or 2 parts of the water network to *pinpoint where water is being lost* or going unbilled.
- Bring together representatives from 5 *Caribbean countries* to *share lessons* and explore how the approach could be replicated elsewhere.
- Ensure *training, data collection and stakeholder engagement* consider the needs of women and vulnerable households.

Replication and Scaling Potential

- The model can be extended from the pilot locations across the country's water networks, while findings can inform national water-management strategies and future investment in pipeline repairs, metering and pressure management.

- A regional exchange involving five Caribbean countries will share lessons and support replication in other Small Island Developing States.

Investment Potential

- **Business model:** Financial benefits would arise from converting lost water into billable supply and reducing operating, maintenance and emergency water-supply costs.
- **Sustaining criteria:** Continued staff capacity, updated GIS data, software maintenance and funding for repairs and meter replacement.
- **Expected return:** Lower operating costs, increased billable water, faster leak repairs and greater water availability during droughts.

Project Location



The innovation will be tested in one or two District Metered Areas in Saint Kitts and Nevis.



To learn more, visit [CTCN-AFCIA here](#)

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