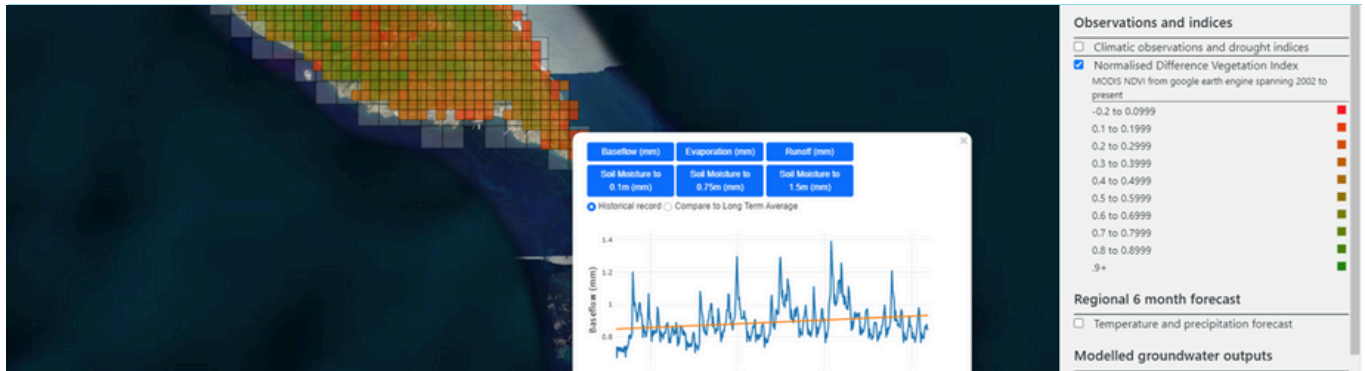




Technical Assistance: Increase the water supply resilience by improved management of aquifers and incorporating drought risk modelling
Location: Saint Kitts and Nevis
Solution: Drought risk modelling as a tool for planning climate change adaptation measures
UNEP CTCN grant: USD 190,925



Drought risk modelling in St. Kitts and Nevis © UNEP-CTCN

Agriculture in St Kitts and Nevis faces significant challenges due to climate change, particularly water scarcity and soil degradation. This project enhances climate resilience by improving water management practices. It includes the development of sustainable farming practices, capacity-building, and the introduction of innovative irrigation systems, as well as drought risk modelling. The project aims to boost agricultural productivity while ensuring environmental sustainability, thereby strengthening the resilience of the agricultural sector against climate change.



Objectives

- The primary objective is to assess drought risk, map water resources, and implement a drought prediction model to enhance the resilience of water resources.
- The project targets local government agencies, water departments, and vulnerable communities by providing them with the tools, training, and resources needed to manage water resources in the face of climate change.



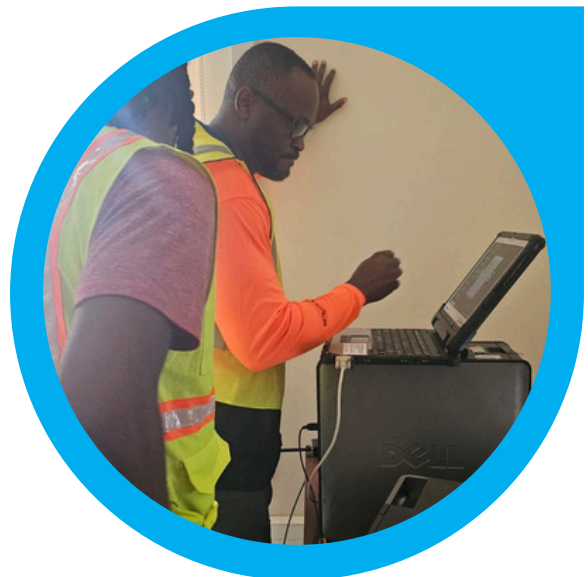
Social Impact

- The project directly supports 55 beneficiaries, of which 23 are women and 5 are youth, by enabling them to utilize drought risks modelling.
- The project also supports another 52,000 people who will gain benefits from improved water management practices, of which 26,000 are women, and 5,200 are youth.



Adaptation Impact

- **Enhanced Drought Prediction and Water Management:** The project improves the capacity to predict and manage drought risk by implementing a drought prediction model. This helps identify areas most susceptible to water shortages and facilitates early action to manage risk.
- **Improved Agricultural and Water Security:** By providing accurate drought predictions, the project supports agricultural planning and water management, contributing to food security and reducing the impact of drought on livelihoods.
- **Effective Resource Management:** The project integrates advanced hydrological modelling and hazard mapping solutions to ensure sustainable water resource management, which aligns with adaptation goals by enhancing resilience to water scarcity.



Other Co-Benefits

- Better access to water.
- Improved water supply systems across sectors.
- Sustainable water delivery.



Innovation & Technology

- **Hazard Mapping Solutions:** Utilization of advanced GIS and remote sensing technologies to map drought risk and water resources accurately.
- **Early Warning Systems:** Implementation of early warning communication systems to provide timely information on drought risk to stakeholders.
- **Water Resource Assessment:** Comprehensive assessment of water resources, including groundwater mapping, to inform better water management strategies.
- **Hydrological Modelling:** Development and deployment of hydrological models to predict water availability and drought conditions, supporting effective planning and decision-making.



Replication Potential

- This project has high replication potential in other island nations or regions facing similar climate-induced water challenges.
- The drought prediction model and water management practices can be adapted and scaled up in other areas.
- Following the Technical Assistance implemented under AFCIA I, the project has been able to leverage USD 100,000 of additional funding from the Caribbean Public Health Agency (CARPHA) to develop a Water Information System for the islands.

Key Figures

- USD 190,925 project budget
- 52,055 people benefitted in total
- 6 events organized as part of the project, 5 of which were climate technology RD&D related
- 8 governmental institutions, 1 private sector actor and 1 non-governmental organization had their representatives trained as part of the project, 100% of which reported increased knowledge
- The project contributed to the following SDGs:

