

# THE EFFECT OF CLIMATE CHANGE ON HEALTH AND WATER SECTORS IN ETHIOPIA



## SUMMARY

Ethiopia is ranked globally as one of the most vulnerable countries with respect to climate change, especially within its health and water sectors. Rising average temperatures, erratic rainfall, and other extreme weather events are expected to threaten health, livelihoods and the development progress that the country has made in recent years.



Climate change will increase variability in rainfall and drought incidence

## WATER IS A NATURAL RESOURCE THAT IS THREATENED BY THE EFFECTS OF CLIMATE CHANGE.

Ethiopia's water resources are particularly vulnerable in terms of:

### 1. DROUGHT

Rising temperature and decreasing rainfall have worsened drought conditions, leading to:



#### Water scarcity

This results in decreased access to drinking water, reductions in hand-washing and bathing, and limits on the use of water-flushed toilets.



#### Water-washed diseases

Diseases or infections that are caused by poor personal hygiene resulting from inadequate water increases. For example the 2016 drought in Ethiopia, which led to a scabies outbreak in the Amhara State.

### 2. FLOODING

Changes in precipitation and seasonal variability has caused increased incidences of:



#### Flash flooding

In 2006, flooding led to several acute water diarrhoea outbreaks across Ethiopia.



#### Vector-borne diseases

Climate change contributes to the more fertile breeding conditions for mosquitos, intensifying the occurrence of diseases, such as malaria, schistosomiasis and leishmaniasis.

# WASH: Water, Sanitation and Hygiene

Ethiopia is one of several countries worldwide that displays a high burden of climate-sensitive diseases, including those related to water, sanitation and hygiene (WASH). Managing the effects of climate change on water supply and sanitation is the top priority of Ethiopian water management policy and strategy.

## The WASH project

In 2013, Ethiopia was selected to participate in a project funded by the United Kingdom's Department for International Development (DFID) that focuses on "Building adaptation to climate change in health in least developed countries (LDCs) through resilient WASH."

## Aims of the project



To assist countries in their response to climate-related health risks through more resilient health and WASH adaptation practices.



To define and implement WASH policies that are climate-resilient and health-promoting.

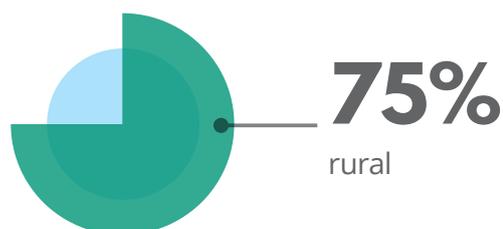
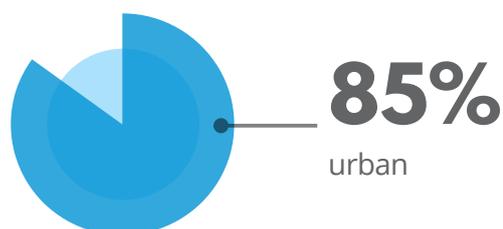


To increase access to water and sanitation by strengthening service delivery and education around WASH.

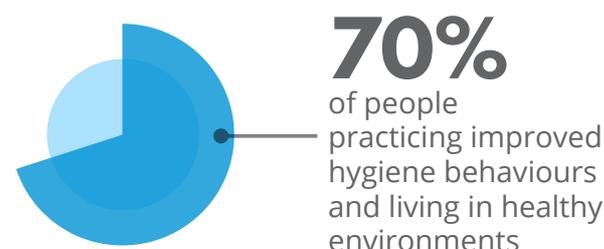


## Project goals

By 2020, the WASH project aims to reach:

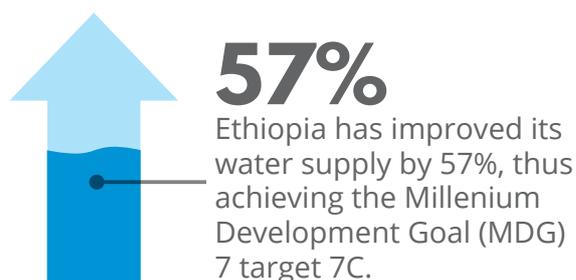


coverage of water supply and sanitation



## Highlight

Ethiopia has made remarkable progress in water and sanitation over the last two decades.





# TIMELINE OF KEY ACTIVITIES AND OUTPUTS

1

2013 and 2014

## **National working and expert groups established**

These groups, representing government stakeholders and UN agencies, support implementation of the WASH project by providing technical guidance for planning and implementation. Expert groups drive the development and implementation of climate resilient water safety plans (WSPs) by developing frameworks and guidelines.

2

2014

## **National framework for a climate resilient health sector**

This framework provides policy guidance and a concrete roadmap to support the development of a formal Health National Adaptation Plan.

3

2015

## **Review of national policy**

The review assessed relevant national policies and strategies on climate change, WASH and public health. Health and WASH sectors were found to have robust institutional arrangements for implementing climate resilient strategies, but there are still some gaps. Recommendations were made to ensure the inclusion of climate resilience into future policy.

4

2015

## **Vulnerability and Adaptation Assessments**

These assessments evaluate populations' susceptibility to health risks of climate change. It identified that increased malnutrition, diarrhoea and malaria are the most significant threats, along with the re-emergence of dengue and yellow fever. Recommended adaptation strategies include improving early warning systems, technical capacity building, health services, inter-sectoral communication and public education.

5

2017

## **Water resources vulnerability and adaptation assessment**

Key vulnerabilities in water quality and quantity in response to climate change were identified. Recommended adaptation options included increased treatment of water source supplies, groundwater protection strategies and increasing capacity for water storage.

6

2018

## **Health component of the National Adaptation Plan developed**

This plan outlines the priority adaptation strategies for the health sector. Its key objectives are focused on building capacity in the health sector to achieve climate resilience, enhancing resilience and early warning systems and surveillance, and creating enabling environments for these processes.

# Case study 1: Development of national approach for CR-WSP

In December 2014, a customized national framework for CR-WSP development and implementation was prepared following a national training workshop. The aim was to adopt a plan to assess and manage climate risks that may impact drinking water security from urban and rural supply systems.

## ACTIVITIES FOLLOWING THE WORKSHOP



Base-line impact assessment of climate resilient WSPs to generate evidence on the impacts of WSPs on key water supply indicators.



Partnership programmes and training to ensure a multiplicative effect and enhanced roll-out of WSPs nationwide.



Enhanced inter-country collaborations with other countries participating in the climate resilient WASH project.



Training technical and academic staff to improve awareness of CR-water safety in the future workforce.

## KEY OUTCOMES OF THE WSP PROJECT

**31** water supply systems  
have developed CR-WSP

**1.2** million  
people served with water security

**60** districts  
have included CR- WSPs in their  
annual WASH programmes

## OUTCOMES OF WORKSHOP

- 1.** Detailed system improvement plans to prioritize system upgrades
- 2.** Simple, low-cost interventions to improve water resilience were identified

Examples in WSP sites included:



Retaining wall to minimise contamination, especially during flooding



Diversion ditch to protect community water source