



# WASH Cluster Emergency Flood Response Plan for 2016

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# 1 Executive Summary

The WASH Cluster objective during the response to the El-Niño induced flood crisis in Ethiopia is to provide access to safe water and appropriate sanitation facilities, including dissemination of hygiene messages to flood affected communities. This objective will contribute to a measurable improvement in WASH-related morbidity and mortality among the affected population through the efficient, effective and timely implementation of emergency WASH and related early recovery programmes.

In agreement with WASH cluster partners, UNICEF and the Ministry of Water, Irrigation and Energy (MoWIE), have developed this flood response plan to provide a framework for the Cluster's response to meet this objective.

## 1.1 Emergency Response Plan Key Parameters

Duration	6 months (June 2016 – December 2016)
Severely Affected Areas and Population	Amhara: 317,622
	Oromia: 041,832
	Somali: 157,561
	SNNPR: 119,090
	Gambella: 70,464
	Afar: 63,000
	Dire Dawa: 15,000
	Tigray: 11,700
	Harari: 2,055
<b>Total: 798,324</b>	
Potentially Affected Population	3,000,000
Total Funding Requirements	USD\$14,807,882
Funding Request / Beneficiary	USD\$4.94 per person
Total Funding Received	USD\$2.9 million (EHF)
Total Funding Gap	USD\$11,907,882

## 2 Overview

As the impacts of the El-Niño phenomenon evolve, the humanitarian needs have significantly increased and shifted. Ethiopia now faces simultaneous drought and flooding crisis. The Government of Ethiopia (GoE) through the Ministry of Water, Irrigation and Electricity (MoWIE) has requested WASH cluster partners to consider the flood situation as an urgent priority for their intervention. Based on this request, WASH partners are delivering various WASH services across all affected regions of Ethiopia. Due to the widespread geographic localities that have been affected, a concerted and coordinated response is required. This document is designed to be an operational complement to the Joint Government – Humanitarian Partners’ National Flood Contingency Plan 2016 – *belg* (NFCP 2016).

### 2.1 Situation Overview / Context

The multi-agency Flood Task Force (FTF) issued a Flood Alert in April 2016 to raise awareness of anticipated flood risks in southern and south-eastern parts of the country. Additionally, the alert indicated that flash floods are likely to occur in the north-eastern, central and eastern parts. According to the NFCP 2016, almost 500,000 people are in immediate need of flood-induced assistance. This is inclusive of almost 190,000 displaced persons across 18 affected woredas, out of a total of 59 flood prone woredas.

**Table 1: Regional Summary of Flood-Affected Woredas with estimated population**

Region	# of Affected Woredas	Estimated Affected Persons
Amhara	2	317,622
Oromia	22	41,832
Somali	10	157,561
SNNPR	19	119,090
Gambella	7	70,464
Afar	5	63,000
Dire Dawa	1	15,000
Tigray	1	11,700
Harari	1	2,055
<b>Total</b>	<b>68</b>	<b>798,324</b>

Since April, the WASH sub-clusters have reported an increase in flood affected areas. This Response Plan will be based upon the reports, as summarised in Table 1. This Response Plan will also be a working framework to be used as a planning tool for the potential 3,000,000 affected person.

### 2.2 Cluster Response

The WASH Cluster will respond to the WASH needs of the affected population as detailed in Section 4. This shall be a coordinated response between the GoE, UN agencies and NGOs. MoWIE will lead the WASH Cluster on behalf of the GoE.

UNICEF will undertake the central procurement of any equipment and consumables that require importation. UNICEF will establish partnership agreements with the GoE and various NGOs to facilitate rapid distribution and monitoring. The WASH Cluster partners can utilise UNICEF as a supplier of goods in kind, and they will be expected to distribute the items at their costs. Additionally, UNICEF commits to directly respond to the needs of 40% of the severely affected population for the Cluster contribution through these established partnerships. At the time of writing, this is at least 270,000 of the total number

of people severely affected by the floods as reported through MoWIE and the Regional Water Bureaus (RWBs).

## 2.3 Current Funding and Stockpiles Available

### 2.3.1 Funding Requirements

The funding requirements to respond to the severely affected population is estimated at USD\$14.8 M at a cost of USD\$4.94 per person, to cover the water purification needs of 3,000,000 people over a period of 3 months for the Relief Phase.

### 2.3.2 Current Funding and Gap

UNICEF currently has USD\$2.9 M in grants secured to respond to the crisis, thus the current funding gap for the WASH Cluster is USD\$11.9M.

#### **Cluster Partner Funds:**

- GoE (through MoWIE or NDRMC):
- NGO Partner 1:
- NGO Partner 2:

### 2.3.3 Available Stocks

UNICEF currently has prepositioned stocks to rapidly respond to the crisis. The number of stocks for each relevant item is listed in Table 2. Based on the currently affected population of 676,905, it is estimated that the current stock levels of household water treatment chemicals will serve for a period of one month.

**Table 2: UNICEF stockpiles of WASH NFIs (equipment and consumables) available in Addis Ababa**

Item Type	Material Description	# of Units
Household	Body soap, 75g	275,400
Household	Bottle, water guard, 150ml	23,957
Household	Jerry can, rigid, plastic, 20ltr	14,826
Household	Soap, laundry, 250g	210,148
Household	Squatting plate, plastic, w lid	200
Household	Water purif. Floc and Disinfectant 4g sachet (PUR)	2,817,104
Household	Water purif. (NaDCC) 67g tabs (AquaTab)	70,800
Community	Aluminium sulphate, bag of 50kg	538
Community	Calcium Hypochlorite (HTH), drum 45kg **	61
Community	Water purification machine	20

## 2.4 Emergency Scenarios

The following are the scenarios being considered:

**Worst-Case Scenario:** Continued through to end of October, heavy and widespread flooding across all prone areas, includes flash flooding. Areas not considered prone also affected, primarily by flash floods. Populations displaced, significant infrastructure damaged or destroyed. More than 3,000,000 people are affected and require assistance.

**Most-Likely Scenario:** flooding in most prone areas, with the main areas in the following river basins:

- Shabelle Basin (South-Eastern Somali)
- Genale/Dawa Basin (South-Eastern Oromia and Southern Somali)
- Awash Basin (North Oromia and South/South-Eastern Afar)
- Omo Basin (SNNPR)

It is expected that there will be intermittent flash floods. Some displacement and infrastructure damaged. Up to 3,000,000 people are affected and require assistance.

**Best-Case Scenario:** no further flash floods, any further floods in well defined, predictable areas that have minimal impact on population and infrastructure.

### 3 Needs Analysis

It is estimated that approximately 676,000 people are currently in urgent need of safe drinking water and basic sanitary assistance<sup>1</sup>. A further 2.3 million people are at risk of being affected by flood incidents<sup>2</sup>. The needs of the affected communities differ significantly due to geographical and vulnerability factors. It is estimated that between 10 – 30% of the affected population will be displaced. This will result in a displaced population of between 67,600 and 200,000 people, which is in line with reports of approximately 150,000 currently displaced person.

Assuming that this range of displacement is an accurate estimation, the WASH Cluster expects between 300,000 and 900,000 people to be displaced by the end of 2016 based on the Most-Likely scenario. In any affected location, the displaced people are considered to be at higher risk of being affected by water borne diseases than others. Regardless of location or context, women, children, the elderly and disabled are at greatest risk.

#### 3.1 Resource Estimates

Table 3 below shows estimates of resources required to respond to the needs of 3,000,000 affected persons for a period of 3 months:

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<sup>1</sup> Sub-cluster reports.

<sup>2</sup> 2016 HRD Prioritisation Statement – May 2016 Revision.

**Table 3: Estimated Resource Requirements for 3M persons for 3 months**

Item	Level	# BNF	# units required	Unit Cost	Total Cost
PUR Water Treatment Chemical	Household	3,000,000	91,800,000	0.06	5,508,000
Aqua Tab (Low NTU purification)	Household	3,000,000	3,780,000	0.18	680,400
Jerrycan, 20 litre capacity	Household	1,500,000	300,000	2.55	765,000
EmWat Kits	Community	168,000	42	14,745	619,290
HTH Calcium Hypochloride (65-70%)	Community	168,000	174	180	31,320
Aluminium Sulphate (50kg Bag)	Community	168,000	174	27	4,698
Aquasure Mobile Treatment	Community	168,000	42	2,825	118,650
Aquasure Chemicals	Community	168,000	4,200	282	1,186,500
Rototank, 10m3 Capacity	Community	336,000	84	1,296	108,889
Rototank Accessories (stand, piping, tap stand, transportation)	Community	336,000	84	4,500	378,000
Emergency Latrines	Community	336,000	3,360	290	974,400
Emergency Bathing	Community	336,000	3,360	280	940,800
Hygiene Message Brochure	Community	3,000,000	3,000,000	0.03	90,000
Hygiene Message Poster	Community	3,000,000	75,000	1.00	75,000
Megaphone	Community	3,000,000	24	35	840
Cleaning Campaign	Community	1,500,000	1	500,000	500,000
Pool Test Kit	Quality		150	175	26,250
DPD 1	Quality		300	83	24,900
C4D Officers (x 24 for 3 months)	Staff		72	926	66,672
Project Coordinator (NFI Distribution - 3 months)	Staff		3	6,300	18,900
Project Coordinator (RTM - 6 months)	Staff		6	6,300	37,800
Air Freight	Logistics		1	500,000	500,000
Operational Costs (Warehousing, distribution etc)				0.10	1,265,631
HQ Overheads				0.07	885,942
<b>Total</b>					<b>14,807,882</b>

### 3.2 Prioritisation Strategy

Proactive efforts will be made to identify the most vulnerable groups and individuals in need of assistance. This requires a strong focus on cross-cutting issues, including gender equality, age, disability, environment and disaster risk reduction.

Government-provided data by region, zone and woreda will provide the foundation for ensuring provincial equity, by focusing the WASH Cluster's efforts on the most severely affected areas and communities.

## 4 Response Strategy

Both the relief and early recovery needs are massive and services need to be provided quickly to minimizing WASH-related disease risks. The WASH Cluster has identified the following options for scaling up to meet the needs:

- Working through local partners (NGOs) and local government who have the local knowledge and ability to recruit local staff and volunteers quickly.
- Continue using existing national structures and resources in close coordination with the respective sectoral clusters – e.g. EHWs and community volunteers for hygiene promotion.
- Advocacy with major INGOs and humanitarian actors to revise their El-Niño response to address the most critical need.
- Implementing partners to pursue multiple options for sourcing materials so as not to rely on a limited number of major suppliers. Local procurement should still be utilized to the extent possible.
- If necessary, technical agreements through WASH Cluster TWGs on best practice (latrine design etc.) to support smaller WASH actors and minimize duplication of efforts and facilitate simpler monitoring.
- Improved forward planning, material stockpiling of WASH needs for the recovery phase and for AWD outbreaks to ensure that the WASH Cluster is able to be responsive, effective and proactive.
- Collaborate with Shelter, Logistics and Food Cluster to speed up delivery of some basic materials by conducting joint distribution.
- For areas identified to be at most risk of being cut-off, to have pre-positioned stocks.

While the government has demonstrated leadership and readiness to respond, resources are not sufficient to adequately cover and coordinate all the WASH response. As a result, the WASH Cluster will work together with all mandated bodies at all levels to ensure a complementary and effective coordination among the WASH response.

### 4.1 Relief Phase

During the relief phase, the cluster will focus on distribution of household-level water treatment chemicals, deployment of community-level mobile treatment facilities and improving personal/household hygiene practices.

#### **Water:**

- Water supply to temporary settlements as life-saving measure through mobile water treatment plants and associated storage requirements (IDPs only)
- Distribution of household water treatment chemicals and storage containers
- Community-level water source disinfection
- Water quality testing – residual chlorine and bacteriological parameters.

#### **Sanitation:**

- Construction of emergency latrines/open trenches for defecation with handwashing facilities
- Construction of temporary washing/bathing facilities

## Hygiene

- Hygiene promotion and messaging especially on household water treatment and safe storage, handwashing with soap, latrine use and keeping WASH facilities clean and clear of stagnant water, and management of solid waste in the domestic area,
- Production and distribution of C4D materials (IEC/BCC print materials and video/audio public service announcements),
- Cleaning campaigns for solid waste and open defecation

## Coordination and Capacity Building

- As part of an integrated survival strategy, support a rapid response team to respond to AWD outbreaks
- Support the establishment of a joint coordination unit in hot-spot woredas with Health and Nutrition/Food Clusters.
- As required, support the establishment of WASH Committees to represent the WASH needs of the affected population.

**Note:** All activities involving infrastructure shall be of a temporary manner to support life-saving interventions.

### 4.2 Early Recovery Phase

During the early recovery phase, the WASH Cluster will focus on the rehabilitation of water and sanitation facilities in affected communities to at least pre-disaster levels, incorporating Disaster Risk Reduction (DRR) based improvements wherever possible, as well as building capacities within communities and local government for water and sanitation management through:

- Repairs/maintenance/upgrade of broken systems (water supply network, tube wells equipped with hand/motorized pumps) taking Disaster Risk Management (DRM) into account
- Cleaning contaminated open wells by the removal of debris, chlorination and protection
- Support for toilet rehabilitation in coordination with the Shelter Cluster.

## 5 Priority Actions and Interventions

A matrix has been developed that captures the priority actions and interventions for both the Relief and Early Recovery Phases, see Annex 1 for details. The matrix outlines the following:

- Area of Activity (Water, Sanitation, Hygiene or Coordination),
- The Proposed Action of intervention
- Who is Responsible for delivering the action
- Who are the target beneficiaries (IDPs, Local Population or Both)
- The timeline for initial response, i.e. response must be delivered within the stated hours
- The expected duration for the response
- Indicators for the proposed action
- Locations that the actions shall occur
- Cost estimate for the response of that action per household, for the expected duration

## 5.1 What

Government: undertakes the mitigation and preparedness measures, including storage of pre-positioned stocks

UNICEF: primarily plays a central procurement and logistics role.

WASH Cluster Partners: responsible for distribution and monitoring activities

## 5.2 Where

The prioritisation of interventions shall happen in the following order;

1. Locations that are hosting displaced populations
2. Locations where flash floods have occurred
3. In established villages that are affected, but not to the extent of displacement

## 5.3 Timeframe

Where populations have been displaced, the initial response shall occur within 36 hours of the displacement. It is expected that populations will be displaced for a period of less than three months. Full details for each priority action are found within the matrix in Annex 1.

## 5.4 Assumptions and Risks include

- Government of Ethiopia takes lead and owns process
- Affected areas remain accessible
- Adequate funding is secured
- Offshore Procurement/delivery lead times do not cause long delays.

## 5.5 Water Quality

The quality of water is often seriously affected by disasters like flooding. It is best practice to disinfect all water supplies for human consumption during these times.

It is therefore important to carry out water quality testing of all the water being provided to the affected people. One of the crucial parameters to be tested, is the bacteriological quality. The most widely accepted marker is to test for faecal coliforms, which cause diarrhoeal diseases.

Water quality testing and analysis is a powerful tool in determining the regimen for water treatment, as well as providing crucial support to evidence-based hygiene promotion (especially the safe water chain).

The most common way to disinfect, is by use of chlorine. However, for open/surface sources of water with a high turbidity, > 5 NTU, the efficacy of chlorine is reduced by the particles in the water. Therefore a flocculent should be introduced to remove the particles before disinfection. PUR (a water treatment chemical) has both flocculation and disinfection properties, and is recommended for use while treating water from open sources.

Before commencing any water quality regime, a detailed water quality testing plan must be devised and have WASH cluster technical approval.

#### 5.5.1 Water Quality Standards

**Residual Chlorine:** For the purposes of this response, the WASH Cluster will aim to meet the WHO standards for residual chlorine in drinking water. These standards state that residual chlorine levels of 0.2 - 0.5 mg/l should be present, in order to provide continued protection for post collection/treatment contamination.

#### **Bacteriological:**

#### 5.5.2 Timely requirements for testing

Testing shall be performed on a weekly basis at the point of distribution of water.

#### 5.5.3 Who will perform water quality testing activities

UNICEF provided several water testing kits to the RWBs and Health Posts. Water quality testing will therefore be done by the RWB personnel who are trained. INGOs also have staff trained in carrying out water quality activities. WHO also has one focal person for water quality testing, at the federal level and 2 in the regions. The WHO water quality surveillance team can be approached in case any member of the WASH Cluster needs water to be tested in the AWD affected areas.

#### 5.5.4 Challenges with water quality testing

The following challenges are identified with the effective deployment of water quality testing regime:

- Insufficient training in procedures for water quality testing and analysis,
- Inconsistencies in carrying out the tests,
- People may not like the taste of chlorine, and therefore may not use chlorinated water
- Water testing kits may be in disrepair,
- Lack of consumables,
- There is no clear platform for sharing Water Quality testing and analysis results.

Each of these challenges shall be addressed in the required water quality testing plan.

### 5.6 Coordination

The Government of Ethiopia will be the lead agency in the response to a flood crisis. The National Disaster Risk Management Committee (NDRMC) has established a Flood Task Force (FTF) which shall be the technical advisor and coordinator for the response. The WASH Cluster will support this response and take direction from the NDRMC and the FTF as appropriate.

### 5.7 Monitoring and Evaluation

Monitoring of the WASH response will primarily be captured in the pre-existing 4W matrix. The reporting schedule of one month shall remain in place.

Ad hoc and time-critical reporting of the situation can be submitted to the Cluster co-chair at [wash.cluster.ethiopia@gmail.com](mailto:wash.cluster.ethiopia@gmail.com).

## 6 Mitigation and Preparedness

It is essential to develop mitigation measures that will build local capacities to reduce the vulnerabilities of communities to hazards that affect them from time to time. Some of these measures include:

- **Public awareness and information dissemination** (SMS, TV and radio adverts, safety in the home, working with media and early warning centres)
- **Safety in schools** (non-formal education on DRR, climate change through school councils and peer to peer support, theatre and arts, evacuation plans, equipment, simulations)
- **Preparedness capacity development of existing voluntary rescue/ community groups and government emergency services and departments** (women's vulnerabilities, promotion of women's rescuers, first aid, rescue skills through simulations, equipment)
- **Mitigation Works:** including cleaning water channels and drainages, building raised water supply facilities to continue to function in flood situations.

### 6.1 Early Warning Systems

- ◆ Early warning system need to be an **integral part** of an overall preparedness work, with comprehensive community risk maps.
- ◆ Centralized forecasting and warning systems with strong links to remote communities.
- ◆ Establishing effective dissemination methods to transmit information in a timely manner to all communities at risk.
- ◆ The need to protect livelihood assets is a powerful influence on how the people respond to early warnings
- ◆ Government plays a major role: At local level DDMA needs to take the lead in disaster risk reduction planning and working with the communities (with support from CSOs)