

<b>Forum:</b>	World Health Organization
<b>Issue:</b>	Addressing the floods in Yemen
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## Introduction

The ongoing floods in Yemen have affected over half a million people, where just over 200 have been killed, with thousands more injured and displaced. The situation regarding the floods, caused by unprecedented heavy precipitation, has been exacerbated by years of political instability and conflict, hindering humanitarian aid and long term rebuilding efforts. International organisations, local governments, and infrastructure experts must collaborate to address the issues of displaced families, damaged infrastructure, and increased likelihood of waterborne diseases like cholera. The approach must be well balanced, incorporating aspects of both immediate aid and future flood prevention strategies, to safeguard Yemen's future against further calamities.

## Definition of Key Terms

### Natural Disasters

Natural disasters are severe and sudden weather events that cause major damage to an area. Examples include floods, hurricanes, droughts, etc., which can lead to repercussions including loss of life, disruption of communities, and property/land damage.

### Humanitarian Crisis

A humanitarian crisis is a situation that puts a large number of human lives at risk, often caused by natural disasters, conflict, and political instability. People living in areas experiencing humanitarian crises often lack access to basic resources like food and water. Examples include the current Yemeni situation and Syria.

## **IDP (Internally Displaced Person)**

Internally displaced person(s) refers to the forced migration of people from their homes, often due to the same reasons as a humanitarian crisis. Currently, in Yemen, people are being displaced from their homes due to the floods and the conflict, which damage areas so severely that they become no longer inhabitable, forcing them to seek refuge in the numerous IDP sites set up by organizations across Yemen to provide for these people.

## **Resource Insecurity**

Resource insecurity refers to a lack of access to essentials such as water, food, energy, and shelter, which are required to sustain human life. When these resources cannot be obtained consistently, people are considered more vulnerable to loss of life. In Yemen, a lot of the displaced population does not have access to these basic resources, making them more prone to starvation and dehydration, amongst other issues.

## **Sustainable Recovery**

Sustainable recovery is an approach aimed at long term restoration to improve living conditions in an affected area. It also makes sure resources and manpower are used sustainably throughout the recovery process.

## **Background Information**

To fully comprehend the complex situation within Yemen, the following paragraphs will give a detailed explanation of the causes of the floods and political situation, the current situation regarding the regions most affected, and a summary of the implications. Due to a complex geographical composition, it is suggested that the reader already has a shallow understanding of Yemen's government system, including governorates, districts, and sub districts.

## **Causes**

The main cause of the current humanitarian crisis in Yemen is the extreme weather events that occurred from April to September 2024, including windstorms, heavy rainfall, and floods, and have been exacerbated by the political instability caused by the war between the Yemeni Government and the Houthis Rebels.

## *Impact of Climate Change*

Rising global average temperatures have been associated with changes in weather patterns, leading to increased risks of extreme weather events like heat waves and prolonged storms. These changes in atmospheric temperature and gas composition could lead to several consequences including: increased atmospheric moisture leading to more intense rainfall, changes in jet streams which lead to longer-lasting weather systems, warmer oceans which increase the likelihood of hurricanes and typhoons, etc (NASA). The floods in Yemen are hypothesized to be one of these uncommon and extreme weather events that have occurred as a result of climate change globally.

## *Floods*

The floods in Yemen have affected many citizens, and the situation caused by heavy rainfall and windstorms has been worsened by poor drainage systems, especially in urban areas, contributing to the flooding. The lack of flood prevention infrastructure makes Yemen specifically more susceptible to severe weather events. This correlates with the fact that less developed countries suffer the impacts of climate change significantly more than more developed countries, due to their lack of resources available to help cope with the aftermath of any extreme weather events.

## *Political Instability*

The humanitarian crisis is further exacerbated by the years of political instability and conflict caused by the fight between the Government and the Houthi rebels for over a decade (UN). This has weakened Yemen's ability to respond effectively, resulting in inadequate planning and response mechanisms for the people affected by the floods.

## **Affected Areas**

### *Ma'rib Governorate*

Firstly, one of the hardest hit regions/governorates in Yemen is the Ma'rib governorate northeast of Sana'a (the capital city). The weather since 11 August damaged 73 displacement sites, affecting just over 21,000 households. Electricity networks have been severely affected, exacerbating the crisis in one of Yemen's most vulnerable regions. (UN). People have been left without clean water, shelter, or even access to basic services, and many lives have already been lost.

### *Al Hudaydah (Al Hodeidah) governorate*

Secondly, over 15,000 families in Al Hudaydah are in need of emergency support as floods have damaged roads, shelters, water infrastructure, and medical facilities there since early August. (UN). The flooding has impacted 20 districts within Al Hudaydah, most notably including Al Marawa'ah, Al Zaidiyah, Al Qanawis, Zabid, Al Hawak, and Az Zuhrah, with reported deaths accumulating to 31 so far, with 5 missing (UNFPA).

### *Taiz governorate*

Thirdly, over 11,000 families in Ta'iz are reported to have been affected by the floods, with consequences being similar to the other governorate regions (UN). On 2<sup>nd</sup> August, floods hit nine sub districts within Maqbanad (district within Taiz), where 15 went missing and 7 were reported dead. Regarding infrastructure damages, Local authorities reported 70 buried drinking water wells, 350 washed away palm trees and mango farms, and damage to community assets including farms, solar pumps, generators, houses, a graveyard, a mosque, and 13 homes (UNFPA).

### *Hajjah governorate*

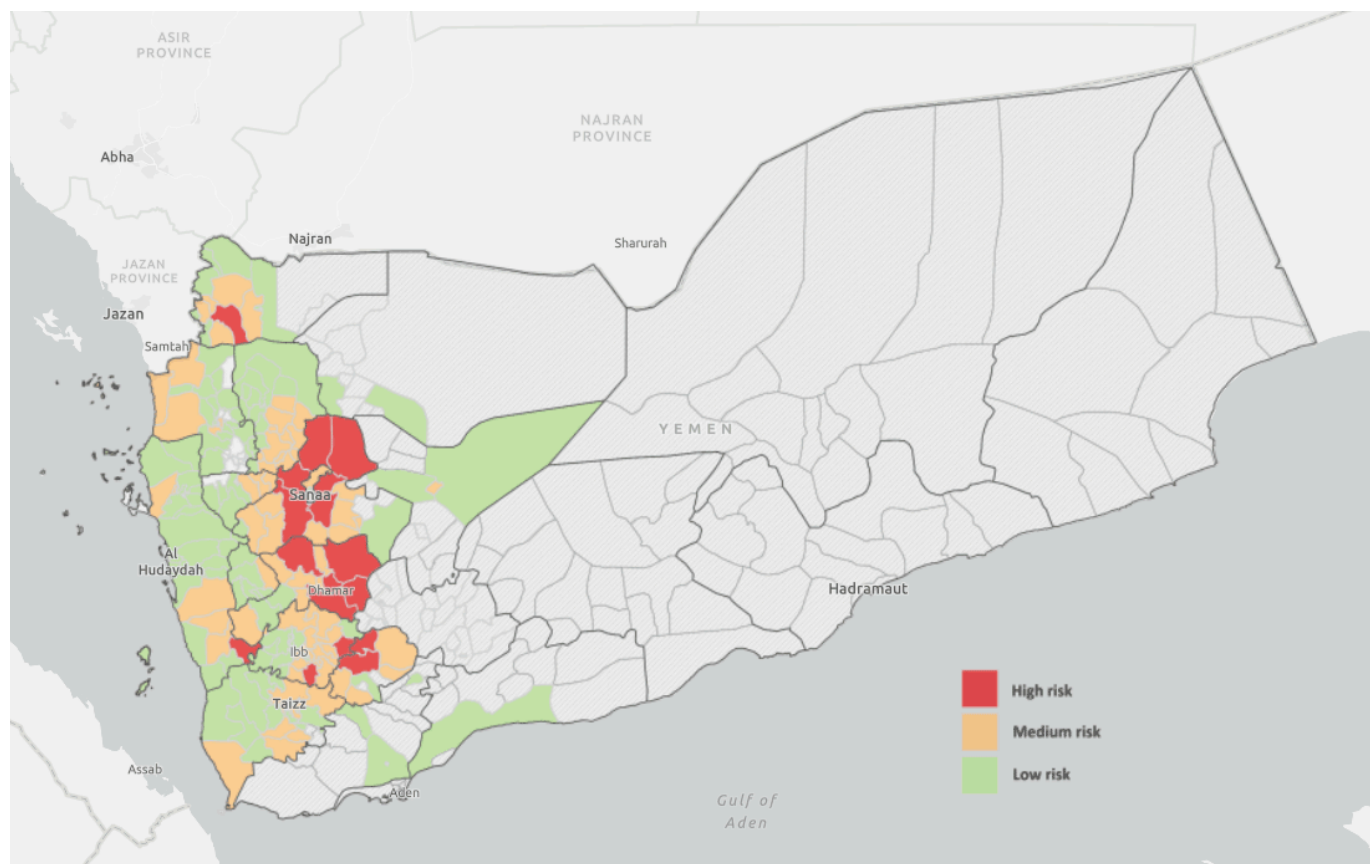
Fourthly, the Hajjah Governorate has experienced similar flooding across several districts, particularly in Abs, Hajjah City, Mustaba, Qulf Shamer and Kuaydinah. Thousands have been displaced, with many agricultural losses. In the Aah Al Yemen district, 15 families suffered total damage with one person seriously injured, and in the Khayran Al Maharaq District, 10 houses suffered total damage. The Abs district in Hajjah Governorate has been identified as the most affected area by the recent flooding with the RRM having so far enrolled 2,800 flood affected persons (UNFPA).

### *Sa'dah governorate*

Fifthly, On 23 July, the Sa'ada Governorate in north Yemen had rainfall and torrential floods, affecting families accommodated in IDP sites (housing IDPs that moved due to conflict). The floods claimed the lives of 3 people, including a child. They impacted an estimated 2,000 families, and more than 1,000 shelters sustained damages (UNFPA).

### *Other governorates*

Among other affected areas, other governorates that have been severely affected by the floods but are missing several key data points include the Al Mahwit governorate (particularly the district of Bani Sa'ad), the Raymah governorate, the Ibb governorate, and the Sana'a governorate (UNFPA).



*Map from WHO EMRO depicting the flood forecast from August 2024, which was mostly accurate*

## Impacts

As of now, an estimated 689,682 people total have been affected by the flooding and windstorms, with at least 223 people dead and 39 missing, leaving thousands of IDPs, and many host communities in need of resources and assistance (Mohammed, Majed). The floods are suspected to have been most prevalent between June and August 2024, with the exception of some floods in early April. Not to mention the deaths and missing people, the largest impact these floods had was on the IDPs of Yemen, causing them to become increasingly resource insecure, putting them at risk of a multitude of diseases. Particularly, the 1,335 IDP households residing in the Maryamah, Madouda, Hosh Al Adros, and Northern Gharran camps (located in Sayun, Mukalla, and Al Abr Districts) have encountered the most severe consequences (OCHA).

### *Potential for a Cholera Outbreak*

Due to the damaged water and health infrastructure, coupled with food and water insecurity, cholera has been on the rise ever since the August floods (UN). Experts hypothesized that Yemen may be on the brink of another cholera epidemic, similar to the one they faced years prior from 2016 to 2022. As of August 2023, there have been an average of 1,500 cases of cholera reported per day. Besides the enormous impact this has on the infected people, it also puts an even greater strain on the struggling healthcare system. If not addressed quickly and effectively, Yemen may see even more deaths arise from untreated and undernourished populations (Al Jazeera).

### *Destroyed Livelihoods*

Outside of the deaths and missing people, many citizens have been impacted by the floods beyond physical injuries, including loss of agricultural land and livestock, and destruction of living quarters. Over 98,000 hectares of crops and orchards were destroyed, and a total of 279,400 livestock has been disrupted, impacting over 35,000 households (FAO). This has led to many families being forced to become IDPs and seek refuge elsewhere within the country, whilst other families have to adapt to find other sources of income before their agricultural land can be restored to a certain extent. Whilst no exact number has been estimated in agricultural economical losses, there has been significant impact on food security within Yemen, as around 20% of most food is locally sourced. With that local supply being severely diminished, much of the population has been faced with rising goods prices, leading to a struggle to cope day to day with limited energy stemming from lack of ample nutrition (FAO).

### *Impact on Infrastructure*

The list of infrastructure impacted extends to shelters and homes, roads, healthcare facilities, sanitation infrastructure, education facilities, electricity grids, and more. These damages have not only directly impacted the standard of the citizen's living, but also the distribution of humanitarian aid to those in need, as several bridges and roads have been damaged beyond use. Without these key transportation networks, humanitarian aid cannot reach those in the most impacted regions, hindering efforts from both local and international organisations. The most impacted water systems also reside within IDP camps, with leakages and contamination being amongst the most common problems (OCHA).

## Major Countries and Organisations Involved

### Yemeni Government

The Yemeni Government is the main ruling body of Yemen currently, fighting with the Houthi Rebels for complete dominance of the country. The ongoing conflict restricts the government's capacity to respond to the flood situation, hampering recovery and humanitarian aid efforts.

### Houthi Rebels

The Houthi Rebels control significant portions of Yemen, including most western areas of Yemen. They emerged in the 1990s from the Zaydi sect of Islam, practiced at the time by around 35% of the population. They capitalized on the frustration against growing foreign influence within the country, which led to insurgencies against the government in 2004 and 2010. They gained significantly more power during the Arab Spring protests, where the old president, Ali Abdullah Saleh, stepped down for Abdrabbuh Mansur Hadi, the new Saudi-backed president. The Houthis obviously opposed this choice, leading to a military campaign against the government and the still raging civil war. By 2015, they had taken control of the Yemeni Government, dissolving parliament and declaring themselves the acting authority (Gordon, Anna). Their control restricts government access to these areas, again hindering humanitarian aid from reaching those most impacted by the floods.

### UN (United Nations)

The United Nations and its other agencies including the UNFPA (United Nations Population Fund) and OCHA (Office for the Coordination of Humanitarian Affairs) have been coordinating international responses to both the flooding and humanitarian crises. They provide key resources and aid for those in need, conduct assessments to determine the damage created, and are part of peace agreement negotiations between the Houthi rebels and the Yemeni government.

### IOM (International Organization for Migration)

The IOM is another international organization actively providing emergency assistance to those affected by the flood in Yemen. They have both launched appeals for funding to support displaced people totaling around 13.3 million USD and provided shelter and basic necessities to people residing in IDPs or damaged houses.

## IFRC (International Federation of Red Cross and Red Crescent Societies)

Similarly to the UN and IOM, the IFRC provides humanitarian aid to those in need within Yemen, including providing food, shelter, and medical assistance.

## Qatar Charities

Qatar charities is yet another humanitarian aid group that is coordinating efforts to provide shelter and resources to affected families, but the main things they have done are distribution food packages and shelter kits.

## IRC (International Rescue Committee)

The IRC is the last mentioned humanitarian aid group that is currently providing emergency assistance such as but not limited to food aid, support for water sanitation services, and health services within Yemen.

## Timeline of Events

Date	Description of event
April 2024	Rainfall begins across Yemen, which marks the start of the long rainy season (IFRC).
23 July 2024	Heavy rainfall in Sa'ada Governorate leads to severe flooding, impacting 2,000 families in IDP sites, and resulting in 3 fatalities including a child (UNFPA).
28 July 2024	Torrential rains across western Yemen, impacting 34,620 families, and killing 57 people due to floods (UNFPA).
2 August 2024	Severe flooding in Taiz, 7 deaths, and numerous missing people (UNFPA).
6 August 2024	Heavy rain caused flooding in Al Hodeidah, 30 deaths, and 9,000 families affected (UNFPA).
11 August 2024	Strong winds in Ma'rib governorate damaged 73 IDP sites, affecting over 21,000 households (IFRC).
12/13 August 2024	UN and humanitarian organisations report over 100 total deaths, and 38,285 families affected in total (UNFPA).



28 August 2024	Total number of affected individuals reaches 562,000. Ongoing appeals have been made for assistance by IOM for 13.3 million USD to help over 350,000 people (IOM).
5 September	15,000 in Al Hodeidah and 11,000 in Taiz require support due to damage to shelters and medical facilities, leading to a cholera outbreak and severe food insecurity in the region (UNFPA).
10 September	Renewed assessments conclude that 80,284 families have been affected as of July 2024 (IFRC).

## Relevant UN Treaties and Events

- United Nations Security Council Resolution 2216, 14 April 2015 (**S/RES/2216**)
- United Nations Security Council Resolution 2451, 21 December 2018 (**S/RES/2451**)
- United Nations Security Council Resolution 2739, 27 June 2024 (**S/RES/2739**)
- United Nations General Assembly Resolution on Humanitarian Access, 20 December 2020 (**A/RES/75/123**)
- UN Security Council Resolution on Humanitarian Access, 21 June 2019 (**S/RES/2474**)
- UN Security Council Resolution on Yemen, 15 July 2021 (**S/RES/2573**)

## Previous Attempts to Solve the Issue

Many humanitarian aid organizations are already actively providing resources and personnel for the affected families and individuals within Yemen, such as the UN, IOM, IFRC, Qatar Charities, and IRC. Most of their strategies are focused on providing for the IDPs and affected families, with solutions ranging from providing shelter in IDP sites, providing food and water, and providing medical/health services. However, most of their existing IDP sites have been affected by the recent floods, which creates the opportunity for rebuilding the existing facilities to accommodate more of the IDPs. Additionally, not many of the organizations have been focused on long term development, mostly due to a lack of funding and awareness of the current Yemeni crisis.

## Possible Solutions

Solutions to address the floods in Yemen must be multifaceted, to encompass the complicated nature of the situation. It is advised to focus mainly on two aspects, the short term humanitarian aid, and the long term rebuilding efforts.

For the short term solutions, delegates should focus on addressing the IDPs and injured people, to ensure that they do not face further challenges. This could include building more IDP sites to provide to that portion of the population and setting up proper but temporary medical sites to treat the injured. Another issue is the people still missing from the floods, so measures could be made to ensure that they are found, and if alive, provided for. Additional solutions would include sourcing resources for the IDP sites and making sure they are distributed fairly and effectively amongst the affected population.

For the long term solutions, delegates should focus on flood prevention strategies and infrastructure development projects. This could include installing proper drainage systems, especially within urban settings, to ensure extreme floods can be prevented, and building/rebuilding damaged facilities, including houses, public services (especially medical centres), and agricultural plots.

Finally, delegates should take into consideration how the ongoing conflict between the government and the Houthi Rebels could impact/hinder humanitarian aid efforts, and how the conflict may increase the number of IDPs and people in need.

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## Appendix or Appendices

- I. [The Houthi Rebel Movement: Analysis on the Role of Wartime Social Order, Legitimacy and Greed in the Houthi Rebel Resilience in Yemen between 2017 and 2023](#)

- II. [The Impact of Climate Change on Human Development in Yemen](#)
- III. [Yemen: Needs grow for millions displaced amid catastrophic flooding and prolonged humanitarian emergency](#)