Health and climate change

جمعية الهلال الأحمر اليمني
YEMEN RED CRESCENT SOCIETY

Røde Kors

Climate Centre

Yemen

Why we should talk about health and climate change

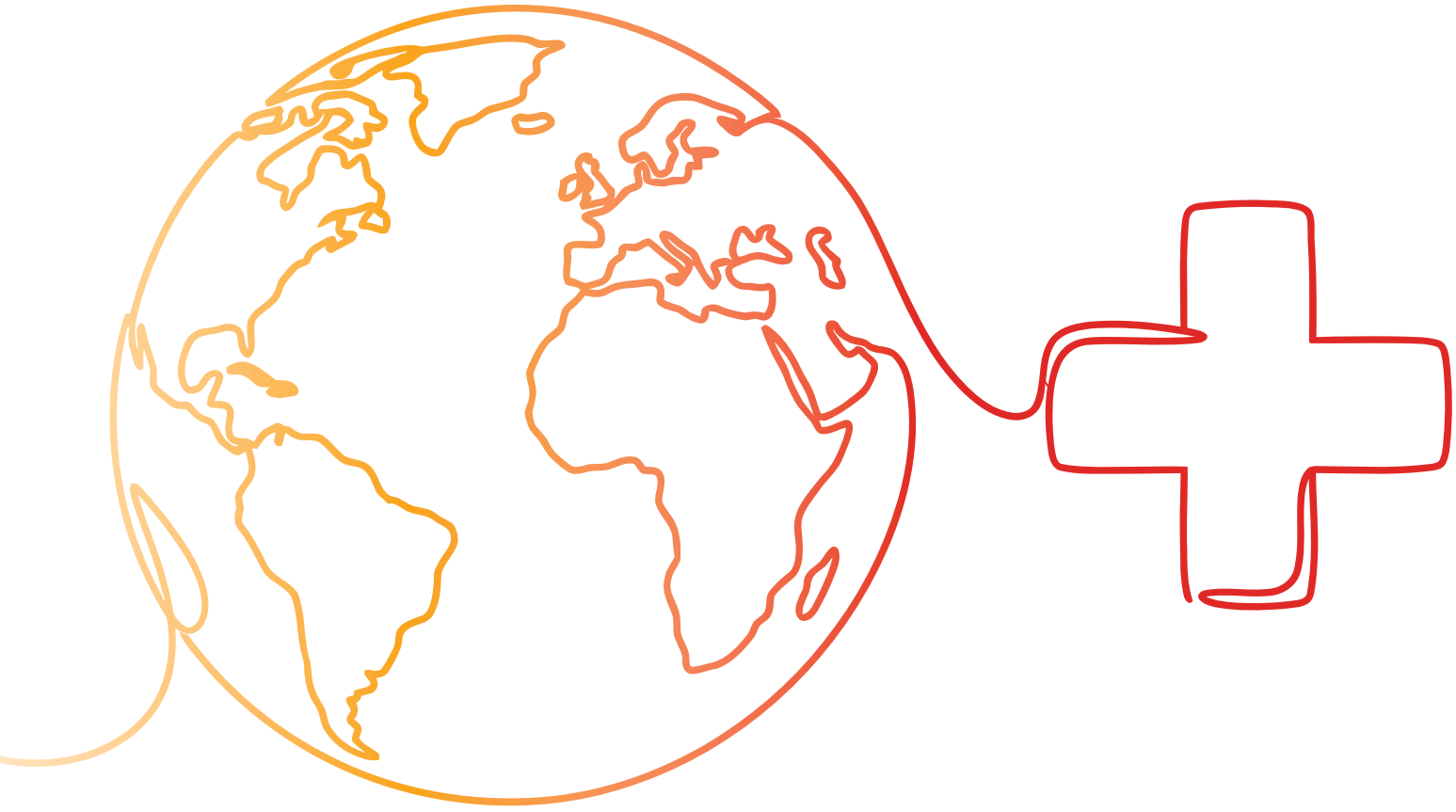
Climate change is affecting our health today

- Our planet is warming rapidly due to greenhouse gas emissions from human activities (e.g., the burning of fossil fuels). Climate change is linked to extreme weather events, water and food insecurity, poor air quality and more.

- Climate change impacts our health in numerous ways: it increases the frequency of communicable diseases such as cholera, dengue, diarrhoeal disease and malaria; of non-communicable diseases, like cardiovascular disease and kidney disease; and of mental health conditions and trauma from extreme weather events, including droughts, floods and heatwaves.

- Climate change disrupts health systems by increasing the frequency of extreme weather events that damage healthcare infrastructure, cause power cuts and disrupt cold chains. It is, therefore, important to maintain essential healthcare services close to the most vulnerable populations.

- You can make a difference by talking about climate change in your communities. You have a unique role in helping your communities understand the impacts of climate change on health and how to protect themselves.



How to communicate on health and climate change to communities

Before you start talking, consider your audience and goal.

Who are you speaking with? It could be community members, local leaders, health workers or policymakers. What is your goal? It might be to empower, raise awareness, convince, inform or encourage.

Keep your message simple and focus on human health.

Simple messages are often the most effective. Presenting climate change as a health issue helps your audience see climate change as a local, tangible problem that they are facing right now.

Tell stories to connect with people.

People can find it hard to connect with facts and statistics, while they relate more easily to stories. If you have personal experience observing the health impacts of climate change, share the story with the community. (e.g., Last year, floods hit our neighbourhood and within weeks we saw a sharp rise in cholera and dengue cases ...).

Empower people to make good decisions about their health and community.

Let people know how they can protect themselves and their communities from the health impacts of climate change.

Vulnerable populations

The health risks posed by climate change can vary both between and within regions and communities. While everyone is affected, certain groups are more vulnerable than others.

Who are the vulnerable populations?

- Elderly people
- Infants and children under five years old
- Pregnant or breastfeeding women
- People with pre-existing health conditions
- People living with disabilities
- Internally displaced persons living in camps or makeshift shelters
- Families who have been forced to leave their homes due to conflict or disaster
- Women and girls, who face extra barriers to accessing healthcare and are at higher risk during crises
- Small-scale farmers and herders in rainfed areas whose livelihoods depend on rainfall
- People who work outdoors in hot climates

Key messages: Health and climate change

Yemen

Health and climate context

- Extreme heat and humidity are intensifying along the southern and western coasts (Aden, Hodeidah, Taiz). By 2030, Hodeidah is projected to have 152 dangerously hot days per year – the worst of any city of its size globally (Washington Post / CarbonPlan, 2023).
- Decreasing temperatures and shifts in the cold season in the northern highlands (Amran, Hajjah, Sa'dah) are creating new health burdens alongside recurrent flash flooding.
- Long-term drought and desertification are damaging food systems and pushing communities towards displacement across the eastern and central plains (Hadramawt, Marib, Shabwah).
- Highest risk group: 4.5 million internally displaced persons – nearly half living in sites at medium-to-high risk of flooding; climate and conflict interact to create compounding, catastrophic health risks (REACH/CCCM, 2022; UNDP, 2023).

1. Flooding and heavy rain

Primary health impacts of flooding and heavy rain:

- Acute watery diarrhoea
- Cholera
- Dengue
- Malaria
- Typhoid
- Hepatitis A
- Injuries and mental health effects

What is happening?

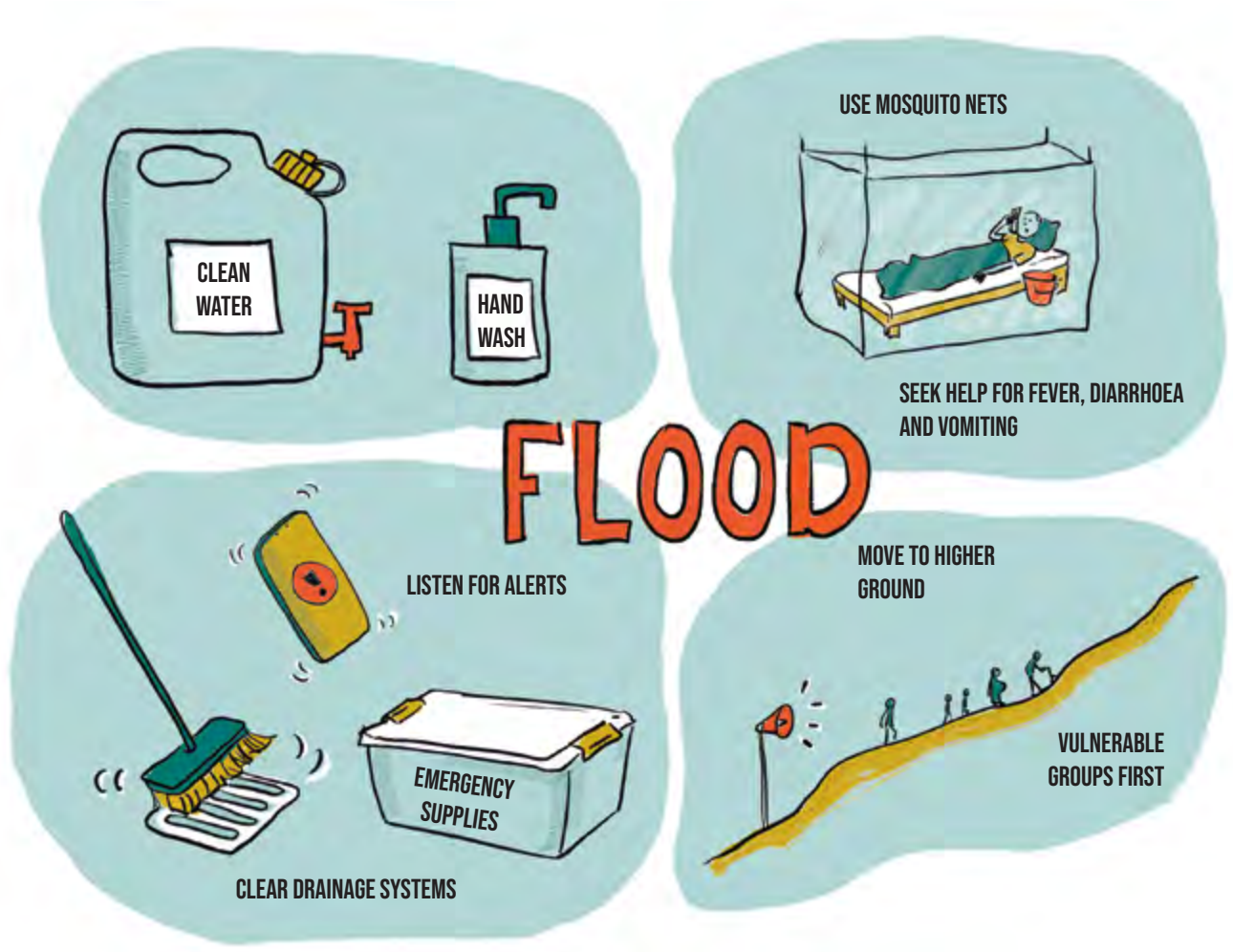
- Flash floods are becoming increasingly severe across Yemen, especially in Amran, Dhamar, Hajjah, Hodeidah, Sa'dah, Sana'a and Taiz, affecting over 93,440 people and displacing thousands in August 2024 (IOM, 2024).
- Yemen carries the highest cholera burden globally: nearly 250,000 suspected cases and 861 deaths in 2024 (WHO, 2024a).
- Stagnant floodwater creates mosquito breeding grounds, driving dengue and malaria surges. Flooding also destroys latrines and contaminates wells, facilitating typhoid and hepatitis A. Today, 15.3 million Yemenis already lack safe water, sanitation and hygiene (WASH) services (UNICEF/WFP, 2024; WHO, 2024b).

How does flooding make us sick?

- Cholera and acute watery diarrhoea: Floodwater contaminates drinking wells and overwhelms broken sewage systems, depositing cholera bacteria directly into the water supply. Severe dehydration from diarrhoea can kill within hours, especially in young children.
- Dengue and malaria: Mosquitoes breed rapidly in puddles of stagnant water left behind by floods. Cases typically spike two to four weeks after a flood event, hitting malnourished children the hardest.
- Typhoid and hepatitis A: Both diseases spread through contaminated water and food. Hepatitis A can cause serious liver disease; typhoid can become life-threatening without antibiotics.
- Injuries and mental health: Floods cause direct injuries and deaths, and the fear, loss and displacement they bring cause lasting psychological distress – especially for families already living through conflict.

What can you do?

- Do not drink floodwater or use it for cooking. Boil water, use purification tablets, or filter it. Keep drinking water in a clean, covered container.
- Wash your hands with soap and water – especially before eating and after using the toilet. This single action reduces the risk of diarrhoeal disease significantly.
- Sleep under a mosquito net and empty containers around your home that collect standing water. Even small amounts of water can encourage thousands of mosquitoes to breed within days.
- If anyone develops diarrhoea, vomiting or fever after a flood, seek help from a health worker immediately. Do not wait – cholera and typhoid can become life-threatening very fast. If you need to relocate, find the nearest cholera treatment centre, water point and health post in your new area as soon as you arrive.



2. Extreme weather changes

Primary health impacts of extreme weather changes – south/coast:

- Heatstroke
- Heat exhaustion
- Worsening malnutrition
- Cardiovascular and kidney disease

Primary health impacts of extreme weather changes — north/highlands:

- Cold-related illness
- Respiratory infections
- Hypothermia in displaced populations

What is happening?

- Temperatures are projected to continue warming to 2050 and beyond. At least one life-threatening heat stress event is anticipated within the next five years. Extreme heat is now a direct health emergency in Hodeidah and along the Red Sea coast.
- Extreme heat and humidity have 'dramatically increased' severe malnutrition cases in Hodeidah, affecting already-weakened children (Washington Post, 2023).
- Cold seasons create a serious risk of hypothermia and respiratory infections for children and the elderly living in makeshift shelters in Amran, Hajjah and Sa'dah.

How do extreme weather changes make us sick?

- Heatstroke and heat exhaustion (south/coast): Heatstroke is a medical emergency – without rapid cooling of the body it causes organ failure and death. Pregnant women, children under five years old, the elderly and those with heart or kidney disease are the most vulnerable.
- Malnutrition worsened by heat: High temperatures increase metabolic stress, suppress appetite and accelerate dehydration – turning moderate malnutrition into a life-threatening emergency.
- Cold-related illness (north/highlands): Displaced families living in makeshift shelters with no heating face hypothermia and serious respiratory infections, including pneumonia.
- Mental health: Extreme temperatures – both heat and cold – cause exhaustion, anxiety and psychological strain, compounding the enormous mental health burden of conflict and displacement.

What can you do?

- In hot areas: drink water throughout the day even if you do not feel thirsty. Stay out of the sun between 11am and 3pm. Wear loose-fitting, light-coloured clothing and cover your head. Wet a cloth and place it on your neck or forehead to cool down.
- Pay close attention to malnourished children during heatwaves along with elderly neighbours, pregnant women and anyone who is ill. If someone seems confused, is breathing rapidly or has hot, dry skin this is an emergency. Move them to a cool place and get help immediately.
- In cold highland areas: keep children and the elderly warm and dry, especially at night. Seek care immediately for any child with fast or difficult breathing, which may indicate pneumonia.


KNOW WHERE THE NEAREST HEALTH SERVICES ARE
INSULATE
KEEP CHILDREN AND ELDERLY WARM AND DRY
ESPECIALLY AT NIGHT
EXTREME COLD
GET MEDICAL CARE WHEN YOU SEE CONFUSION, COLD SKIN OR DIFFICULTY BREATHING
AMBULANCE

3. Long-term drought

Primary health impacts of long-term drought:

- Malnutrition
- Waterborne diseases (cholera, diarrhoea, typhoid)
- Nutritional deficiencies
- Infectious diseases (measles, tuberculosis)
- Reduced hygiene and sanitation

What is happening?

- Yemen is the seventh most water-scarce country in the world. Groundwater is reducing by 2–6 metres per year; rainfall variability is increasing; and spring rains are declining.
- Food insecurity is catastrophic: in 2023, 16.7 million people (around half of the population) faced acute hunger, with 6.1 million people at emergency levels (WFP, 2024).
- Children bear the heaviest burden: In 2024, 2.2 million children needed treatment for acute malnutrition; 500,000 faced life-threatening severe malnutrition; nearly half of under-fives suffered chronic malnutrition; and one-in-five were severely stunted (UNICEF/WFP, 2024).
- Drought also accelerates waterborne diseases. Communities drink from unsafe sources, spreading cholera, diarrhoea and typhoid. The destruction of water infrastructure by conflict means that wells and pipes are rarely repaired, making communities permanently more vulnerable to drought-driven outbreaks.

How does long-term drought make us sick?

- Malnutrition: Severe acute malnutrition devastates the immune system. A malnourished child can be ten times more likely to die from cholera or measles, and experiences permanent cognitive and physical damage.
- Waterborne diseases: As surface and groundwater sources dry up or become contaminated, communities are forced to drink unsafe water, resulting in cholera, diarrhoea and typhoid.
- Infectious diseases: Malnutrition weakens immunity, making communities more vulnerable to measles, respiratory infections and tuberculosis, especially in camps and overcrowded settings.
- Reduced hygiene: Water scarcity forces people to choose between drinking and washing, reducing handwashing and other basic sanitation, which accelerates disease transmission.
- Pregnant and breastfeeding women: Drought disrupts dietary diversity and breastfeeding, threatening both mother and baby.

What can you do?

- Monitor young children. Warning signs of malnutrition include visible weight loss, swollen legs or feet, weakness and loss of appetite. If you see these signs, seek help immediately – early treatment saves lives.
- Give clean, safe water and the best available food first to young children and pregnant or breastfeeding women. Store water in a clean, covered container.
- Find out where the nearest nutrition or therapeutic feeding centre is before a crisis hits. UNICEF and the World Food Programme offer support in many governorates — locate them early.
- Even with very limited water, prioritize handwashing before preparing food and after using the toilet. A small amount of water used for hygiene prevents illnesses where far more water is lost through diarrhoea.

Extra key messages

4. Ongoing conflict and crises

Primary health impacts of ongoing conflict and crises:

- Health system collapse
- Mental health disorders
- Infrastructure damage
- Water insecurity and waterborne diseases
- Malnutrition
- Injuries and disabilities

Why does conflict make the health impacts of climate change worse?

- Health system collapse: Conflict has destroyed or disabled a large proportion of Yemen's health facilities – 84 per cent of diarrhoea treatment and 62 per cent of oral rehydration centres closed in 2024 (WHO, 2024b).
- Mental health: Mental health disorders have increased substantially due to conflict, displacement, loss and the chronic stress of poverty and climate shocks (IOM, 2024; OCHA, 2023, 2024).
- Infrastructure damage: Conflict has destroyed water networks, sewage systems, roads and health facilities, removing communities' capacity to cope with climate shocks (Arab Center DC, 2024).
- Water insecurity and waterborne diseases: Broken water infrastructure combined with drought and flood contamination means safe water is inaccessible for vast numbers of Yemenis (WHO, 2024b).
- Malnutrition: Conflict disrupts food supply chains, markets and agricultural production simultaneously. Combined with drought and extreme heat, this results in acute hunger (WFP, 2024).
- Injuries and disabilities: A decade of conflict has left Yemen with a large and growing population of people with war-related injuries and disabilities who are less able to evacuate from floods or cope with heat.

What can you do?

- Share information about nearby clinics, water points, cholera treatment centres and nutrition programmes – especially with families who have recently arrived in the area.

- Keep up with children's vaccinations and nutrition check-ups, even after displacement. Cholera, measles and polio vaccination campaigns are ongoing in many governorates – seek them out actively.
- Mental health distress is a real health problem. If someone in your community is struggling with grief, anxiety, sleeplessness or withdrawal, you can offer support by listening to them or connecting them with mental health services.
- Protect water points in your community. Do not allow them to become contaminated. Clean water is the single most powerful protection against the diseases most likely to kill in a combined climate—conflict crisis.
- People with injuries or disabilities need extra support during climate emergencies. Make sure they are included in evacuation plans, have access to shade and water during heat events and know where the nearest health service is.

Remember: Adapt these messages to where you are.

Yemen is a large and geographically diverse country, and the climate situation varies greatly from region to region. Communities in the coastal lowlands of Hodeidah face very different threats from those in the northern highlands of Sa'dah or the eastern desert of Hadramawt. Use these messages as a starting point and adjust them to reflect what people in your community are experiencing.

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