

# EMPHNET Emergency Bulletin

July 14, 2024

## Climate Change and Public Health Events in the EMR

### Situation Overview

The Eastern Mediterranean Region (EMR) is struggling with significant challenges that have led to dire humanitarian crises. In the conflict-affected areas of Gaza and Sudan, the ongoing violence and instability have resulted in severe casualties, injuries, and widespread displacement. These conditions also led to preventable deaths caused by hunger and disease. The effects of climate change have further exacerbated these humanitarian crises, and they intensified existing health inequalities, thus making life even more challenging for affected populations.

The region is increasingly facing natural disasters that are intensified by climate change. Flash floods in Pakistan and Afghanistan have resulted in 700 casualties and widespread destruction. According to the United Nations Environment Program (UNEP), such events are becoming more frequent and severe due to climate change. The heatwaves across the region and beyond have had deadly consequences.

Between the years 2000 and 2019, studies show that approximately 489,000 heat-related deaths occur each year. In 2024, more than 1,300 deaths were recorded in Saudi Arabia during Hajj due to heat. During the current armed conflict in Sudan, at least 40 Sudanese died while en route en-route to Southern Egypt in search of shelter. In Pakistan, around 427 deaths in a span of four days were recorded in Karachi, Pakistan, between June 22nd and June 25th, 2024.

Therefore, it is imperative to raise awareness about the effects of climate change on public health and to implement adaptive measures to mitigate its impact on public health and livelihoods in the EMR.

### In Numbers

#### Gaza

**37,953+**  
Palestinian fatalities  
*since Oct 7, 2023*

**~1.9 million**  
internally displaced  
persons (90% of Gaza)

**495,000**  
People facing catastrophic  
levels of food insecurity  
*(IPC Phase 5)*

Children in Gaza can  
spend 6-8 hours a day  
collecting water & food  
*(according to UNRWA)*

#### Sudan

**16,650**  
reported fatalities  
*(between 15 April 2023 and  
10 May 2024)*

**4 million**  
People in need of  
assistance in 2024

**>11 million**  
people, internally  
displaced *(including those  
displaced since mid-April 2023)*

**153,000**  
people facing  
catastrophic levels of  
food insecurity *(IPC Phase 5)*

#### Afghanistan

**6.3 million**  
people were displaced due  
to various emergencies

**120,000**  
people were affected by three  
successive drought-like conditions  
followed by flash floods

**610,000**  
Afghans return from Pakistan  
to equally vulnerable host  
communities

**7.6 million**  
people will lack access to essential  
life-saving health assistance if  
funding levels remain the same

**15 million**  
people are classified by the  
Integrated Food Security Phase  
Classification (IPC) at 3 and 4

**70.5%** increase in Dengue  
Fever *between April and  
May, 2024*

**81.1%** increase in Crimean-  
Congo Hemorrhagic  
Fever (CCHF) *between  
April and May 2024*

#### Saudi Arabia

**1.8 million**  
total people Performed  
Hajj pilgrimage

**1,301**  
pilgrims died, mostly as  
a result of heat stress

**1.3 million**  
prevention services were delivered,  
including early detection, vaccinations,  
and medical care upon arrival

**390,000**  
pilgrims received  
medical care

#### Iraq

**1.1 million**  
Iraqis are still displaced  
*(March 13, 2024)*

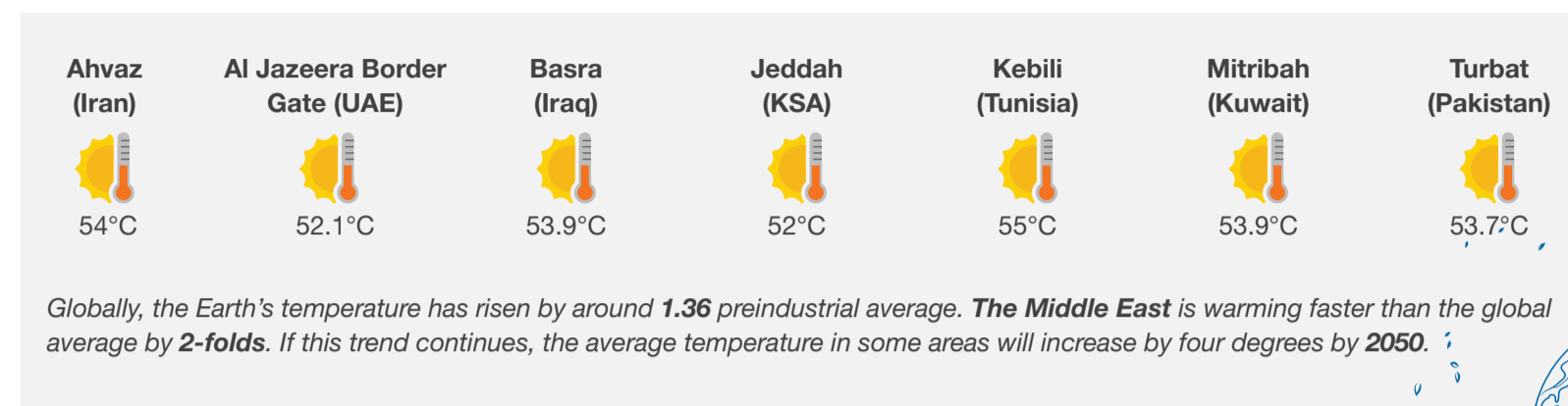
**300,000**  
Syrian refugees are hosted  
in Iraq's Kurdistan Region

**130,000**  
Iraqis in the south  
were displaced due to  
climate change



## Heatwave in the EMR

The following countries from the EMR are listed amongst the ten hottest places on Earth in 2024:



## Public Health Implications and Reflections

Human actions have caused global warming through the emissions of greenhouse gases, thus leading to climate change. As a result, our planet has recorded its hottest temperatures within the last 125,000 years. Heatwaves have been growing exponentially, floods are occurring more frequently, storms are increasing in intensity, droughts are almost doubling, and other natural disasters are intensifying. Such changes affect the most vulnerable first and foremost.

**"An unusual heatwave ... made the already inhumane living conditions even worse for 1.5 million people, mostly living under plastic sheets in Rafah"**, said UNRWA chief Philippe Lazzarini on Gaza.

Furthermore, such heatwaves have a direct effect on vulnerable people's livelihood as they can affect crop production, thereby affecting food supplies as well as the people's source of income.

**"The heat wave coincided with maize's grain-fill and maturity phase, significantly impacting the harvest,"** said Abdul-Rahim Mohamed, a farmer in Northern Sudan.

Within the existence of favorable circumstances for pathogens and vectors, such as mosquitoes, the spread of infectious diseases increases. Climate change has the potential to worsen the transmission of diseases such as malaria and dengue fever. West Nile Fever, an infectious disease that spreads through mosquitos, is re-emerging in Europe and the Middle East. Italy and Spain have recorded new cases, and rising cases are documented in the Occupied Palestinian Territories, leading to 11 deaths.

Furthermore, changes in climate patterns increase the possibility of altering water quality due to bacterial and other microbiological contamination. This can result in the spread of diseases that are transmitted by water. According to the World Health Organization

(WHO), contaminated water and poor sanitation are linked to diseases such as cholera, diarrhea, dysentery and hepatitis A. In Gaza, diarrheal diseases have increased by 25 folds.

In extreme heat conditions and high humidity, people are at high risk of heat stroke. In such conditions, the human body struggles to regulate its own temperature, and heat stress can occur more quickly, meaning that the body cannot cool itself fast enough. In Iraq, rainfall is diminishing, which, with the heat, is causing rivers and marshes in southern Iraq to dry up and the desertification of farmland.

In acute cases, this can lead to serious medical conditions or even death. Such heat strokes that have caused deaths particularly happened during the Pilgrimage season in Saudi Arabia, where 1301 pilgrims died as temperatures soared beyond 50 Degrees Celsius. To mitigate heatwaves, KSA has adopted an environmental engineering concept that focuses on changing the environment to mitigate and control possible upcoming risks. This includes, but is not limited to, building shaded areas, the availability of water mist sprays along the route of pilgrims, planting trees in open areas, and ensuring the availability of air-conditioned buses and more than 100,000 air-conditioned tents, alongside other measures. Such measures can be enhanced through strengthening the public health response capacities in Mecca. This includes empowering public health Rapid response teams and field epidemiology graduates who are able to assess and identify the risks and implement informed decision and control measures to protect the population health.

The effects of climate change are global. They go beyond the region. Deadly floods have recently occurred in Brazil and Nepal. Mexico has seen a prolonged heatwave, which has taken the lives of 125 people in June 2024.



## Conclusion

Despite the scale and speed of climate change across the globe and the impact it is already having on millions of people, international attention and support has been slow. The frequency and intensity of public health crises relating to climate change will continue to escalate, thus leading to widespread infectious diseases, worsening of living conditions, and increased mortality. If no action is taken, the Middle East, specifically countries

with high population density like Egypt, Iran, and Iraq, will face unprecedented heat waves, making life in some areas intolerable. It's imperative that we raise awareness and call for action plans to mitigate the impact of climate change-related health, urban greening, and the adjustment of programs that can contribute to protecting the most vulnerable groups in society and ensuring a more sustainable future for all.



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