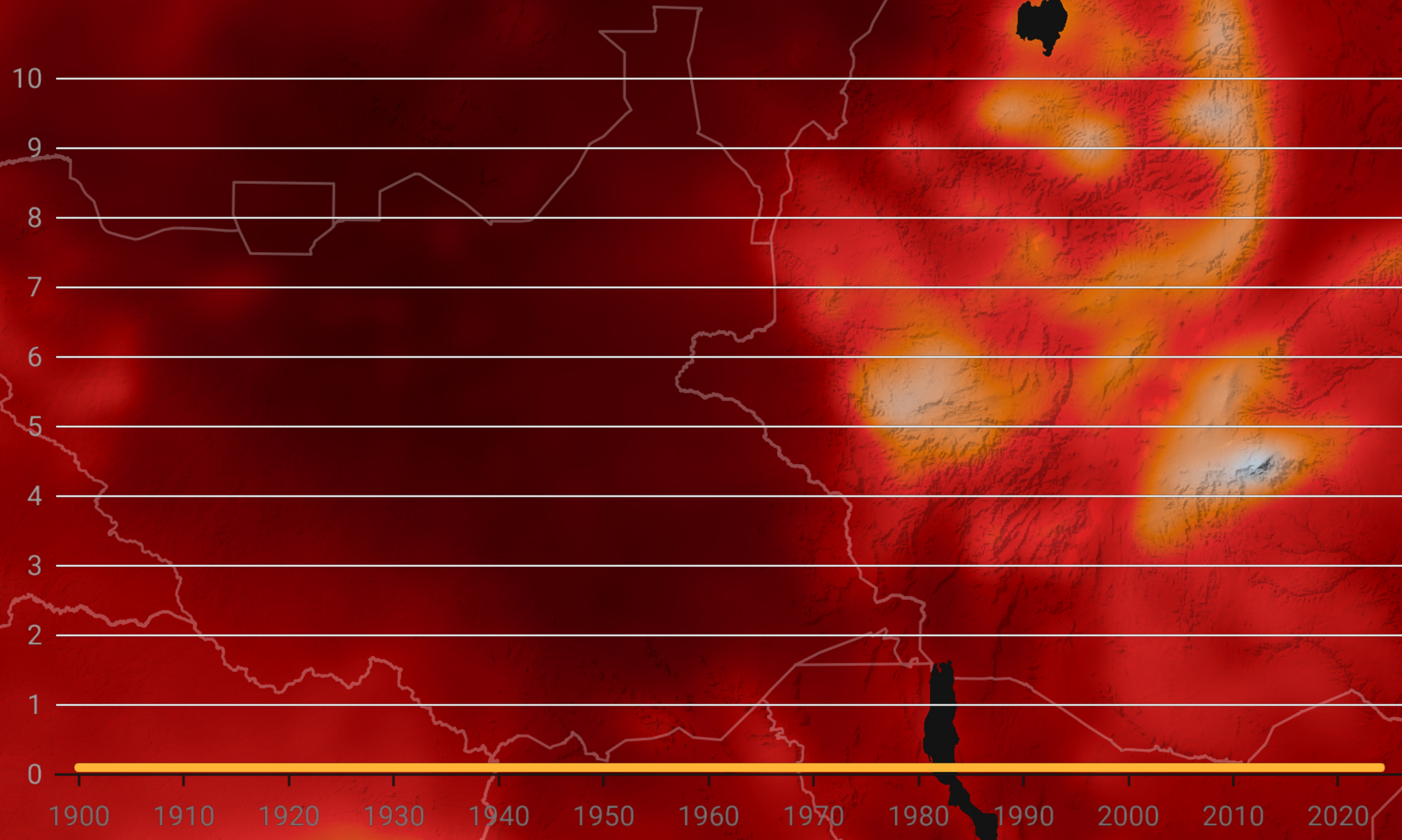


# Heatwaves and their impacts have not been recorded in East Africa, and the most vulnerable are paying the price



Source: Recorded Heatwaves in East Africa 1900-2024 (EM-DAT) • Created with Datawrapper



Scan to have a digital copy of the poster and more information on the project ;)

Background picture shows heatwave over East Africa March 2024, with 2m maximum temperatures reaching 45°C (Picture by Nasa)

## Heatwaves in the Shadows: The Overlooked Threat to East Africa - Synthesis of two Scoping Reviews

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### BACKGROUND

Climate change intensifies heatwaves, threatening human lives, and in particular those of vulnerable groups. These heatwaves exacerbate underlying socio-economic, political, and institutional conditions causing damaging impacts. Climate attribution studies assess the influence of climate change on extreme weather events such as heatwaves. Most attribution studies are conducted for only very impactful events. Unfortunately, impacts and vulnerabilities related to heatwaves are poorly documented in Africa, despite Africa being a heatwave hotspot meteorologically. Attribution studies, awareness and understanding of vulnerabilities are essential.

Here, we present the state of attribution studies on heatwaves in East Africa (EA) and the current knowledge of vulnerabilities related to heat.

### METHODS

Two independent scoping reviews on:

(A) Climate attribution studies in EA (2204 studies reviewed, 27 included)

(B) Vulnerabilities to heat and drought in Kenya (852 studies reviewed, 81 included)

### RESULTS

#### Limited Evidence:

**Review A:** Only two attribution studies exist, showing increased heatwave frequency and intensity in Madagascar due to human-induced climate change.

**Review B:** Vulnerability to heat is not well documented. Of 81 studies, only 16 consider heat, most treat it as a secondary factor.

#### Heat-Related Vulnerabilities in Kenya

- **Rural Areas:** Agricultural communities suffer reduced productivity (livestock, labor, harvests) during heat, and worsening food insecurity during and after droughts. Limited access to water and health services amplifies health risks, especially for children, women, the elderly, and people with chronic conditions.
- **Urban Areas:** Heat is the most reported climate change impact. Informal settlements experience severe heat due to dense housing, poor materials, and minimal greenery (Urban Heat Island Effect). High temperatures in informal settlements have been linked to increases in hospital admissions and premature deaths, affecting in particular children, elderly, and chronically ill.
- **Rural-Urban Migration:** Migration to urban informal settlements due to e.g drought in rural areas shifts vulnerabilities to new forms, now related to heat in urban areas.

**Barriers to Studies on Heatwaves Include:** lack of impact metrics, data scarcity, climate model limitations, different heatwave characteristics in terms of length and temperatures compared to e.g Europe, lack of heatwaves being recognised as disasters.