IUSSP WEBINAR-Climate Change and Population Health: Evidence from Africa and Beyond

Climate Change Resilient Equitable Healthy Cities in Africa (CLARITY-Africa) Presentation

October, 2026

Funded by wellcome

Introduction

- West Africa is one of the regions most vulnerable to climate change globally.

  - Rapidly rising temperature (rising 1.5 times faster than the global average);
  - extreme hydrological volatility (severe prolonged drought and sudden intense downpour);
  - Coastal erosion; and Rising Seas.
  - Flooding
  - Wildfires/harmattan dust

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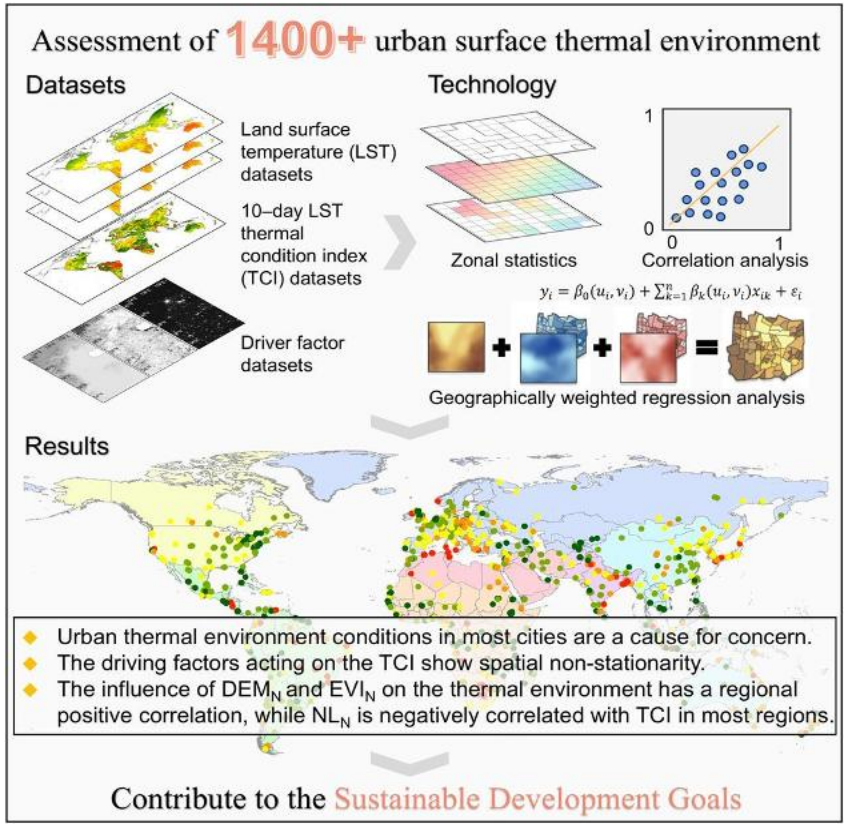
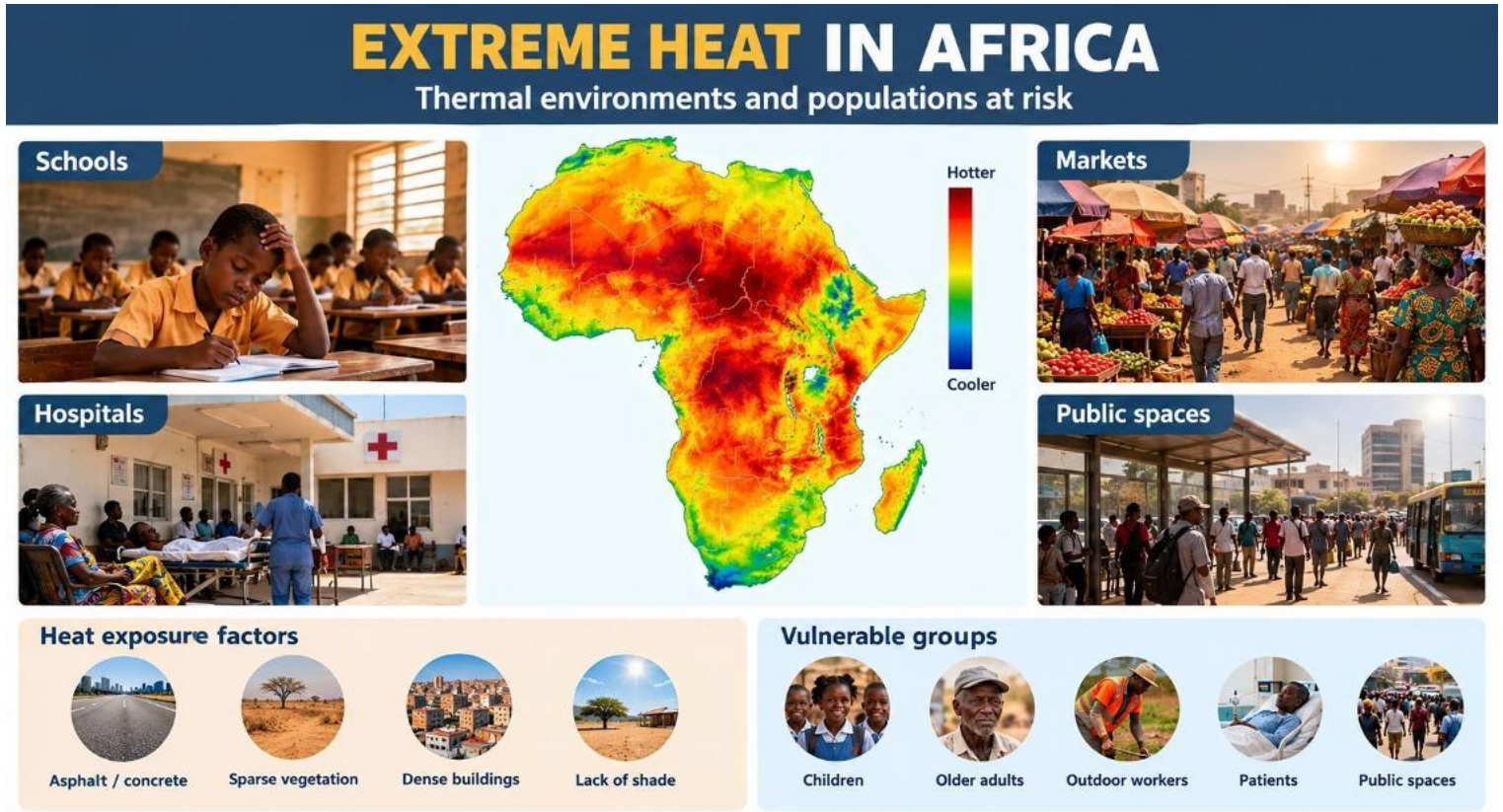


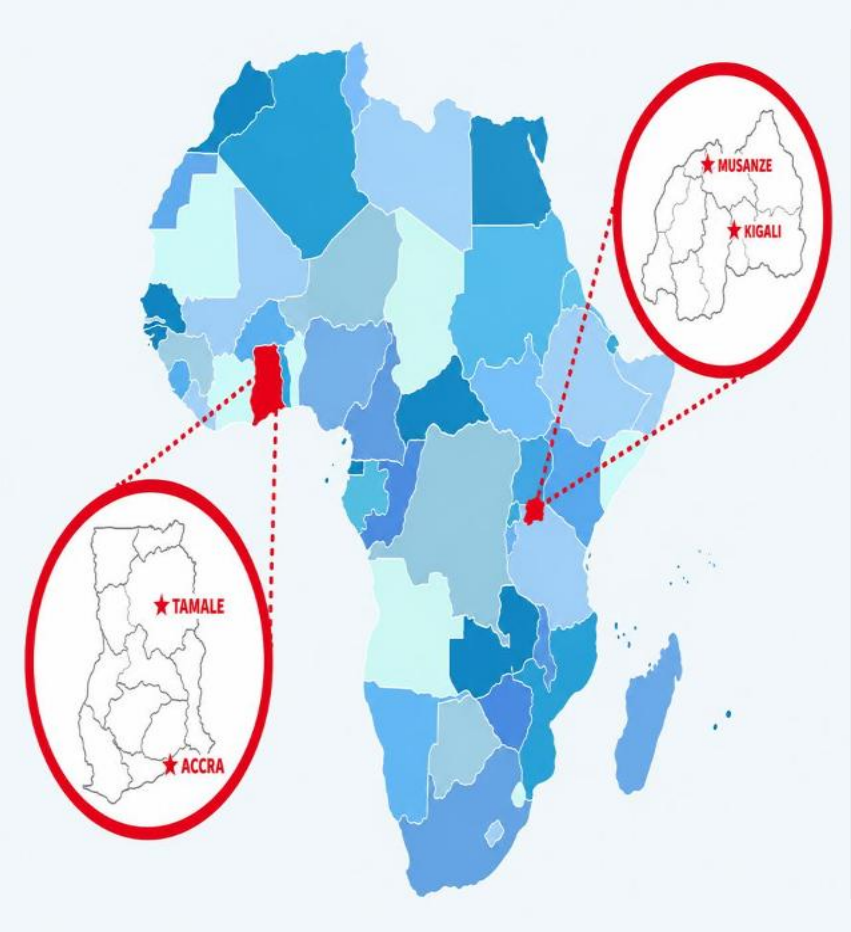
Yang et al. (2025)

Cell Reports Sustainability



Setting the scene – Heat

CLARITY-Africa Project – two urban African contexts



CLARITY-Africa is examining how heat and WASH conditions shape children's health, comfort and learning in schools in Accra and Kigali.

88	1,056	61	976
schools in Accra	students in Accra	schools in Kigali	students in Kigali

Overarching aim

Understand lived experiences and measurable outcomes, then co-produce interventions that are contextually feasible, appropriate and acceptable.

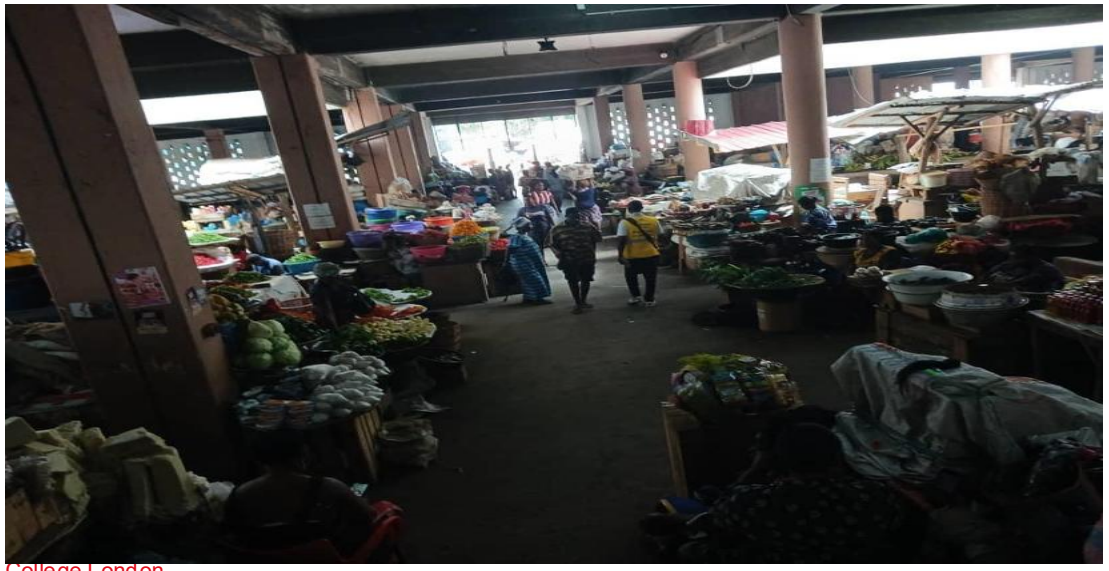
Heat | Health | WASH | Learning | Policy action

Early-stage project: ethics approval and field protocols are central to the work.

Selected Markets under the CLARITY - Africa

Okaishie Market

Mallam Market

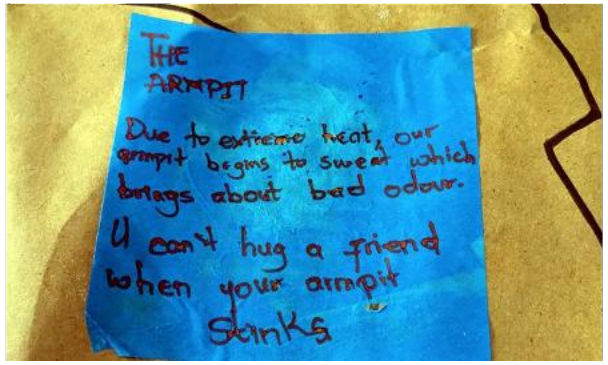


Kaneshie Market

Madina Market

Transdisciplinary Methods

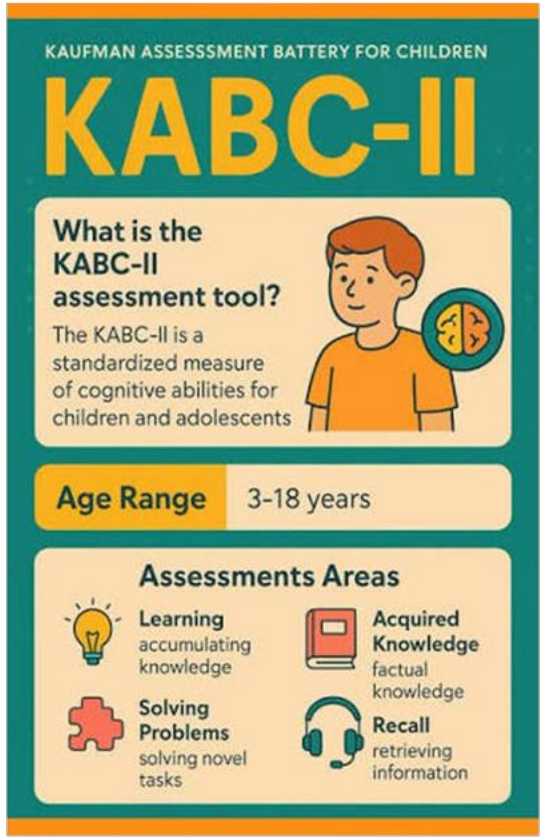
Participatory methods



Temperature sensing

Policy workshops as well as the participatory work

Questionnaires and cognition



Flooding

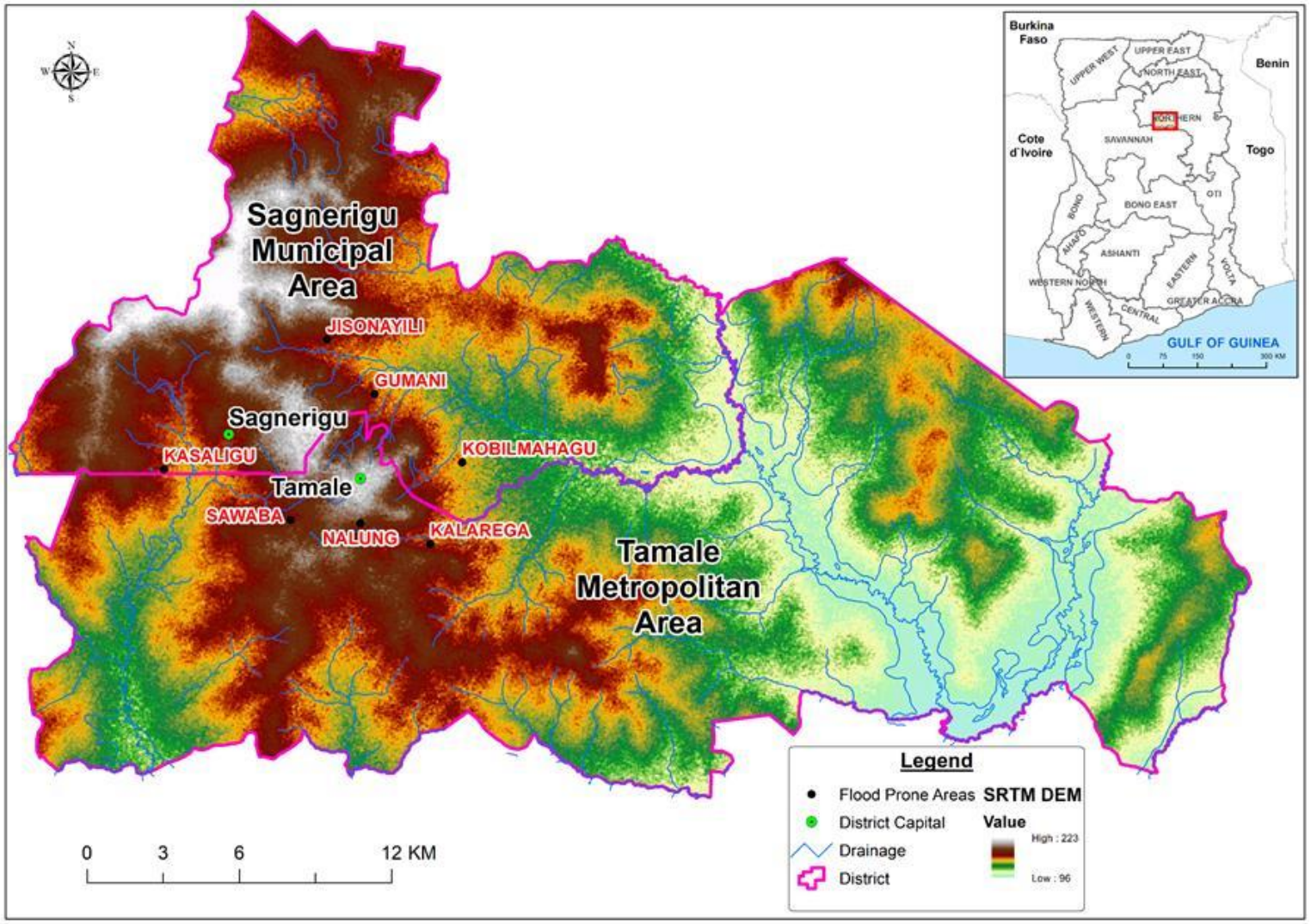
- Flooding happens when excess water overflows onto land that is normally dry.
- It is driven by a combination of natural and man-made causes.
  - Natural courses include heavy and intense rainfall, low-lying and flat topography, loss of natural infrastructure and wetlands/retention points etc.
  - Man-made causes are poor urban planning and haphazard construction, choked and inadequate drains, dam spillages etc.

Flooding in Tamale and Accra

- Key Objectives include:

1. Characterizing Floods
2. Analyzing the incidence of diseases during and after floods
3. Examining the pathways linking floods and disease
4. Evaluating current adaptation measures to address floods

Flooding in Tamale



Citizen Scientists and Measurement Campaigns

Engaging a sampled household head at Kalariga

Installation of water level sensor holder at Kalariga

A signage and a metre-stick nailed to a school building at Koblimahagu

Demonstration Workshop at Kalariga

Water level sensors for flood monitoring

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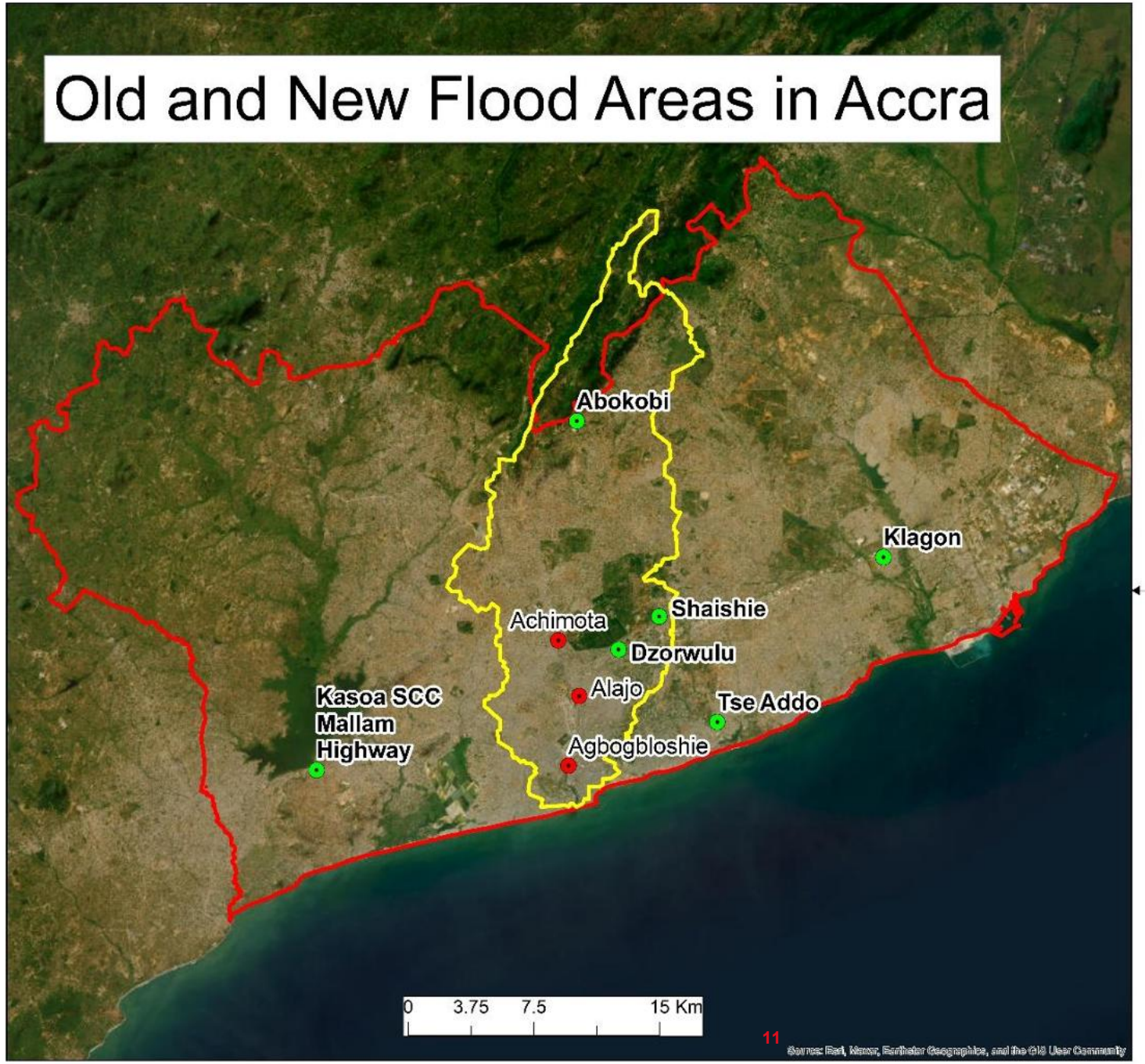
Old and New Flood Areas in Accra



Legend

- Old Flooded Area
- New Flooded Area
- Odaw Basin
- GAMA Boundary

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24/10/2026

June 2026 Floods in Accra

- According to data from the Ghana Meteorological Agency, June 2026 recorded the highest rainfall since 1995.

- Key rainfall figures are:
  1. **Monthly Total**: 593.2 mm for June 2026 (the highest monthly total on record)

  2. **Single-Day Peak (June 29, 2026)**: 169.2 mm within 24 hours, marking the fourth-highest single-day rainfall toral recorded in Accra since 1995.

  3. **Comparison with Prior Years**: In comparison, Acccra recorded roughly 85 mm in June 2024 and 172 mm in June 2025.

  4. **Affected Persons**: Approximately 38,802 people were initially reported affected in Greater Accra.

CLARITY Africa

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Thank you

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