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GOVERNANCE | CLIMATE | PUBLIC SYSTEMS

CLIMATE ACROSS SYSTEMS · EDITION 7

Hotter homes and the race for electricity

21 October 2026

African research on heat and rain
meets a global demand for power
and industrial technology

ahmednadhira.com/climate/no-7

Housing, health, electricity and industry



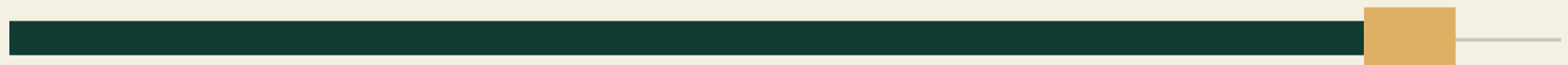


GREATER CAIRO · BUILDING RESEARCH

Prolonged heat builds up inside homes

Association with cumulative indoor heat

Heatwave duration



$r = 0.87\text{--}0.93$ across modelled scenarios

Mean daily maximum temperature



$r = 0.35$ in the 2021 simulation

Eldeeb, Abdin and Mohamed · 14 Oct 2026

Field-calibrated simulations in one neighbourhood.



ETHIOPIA · STATION OBSERVATIONS

Warmer nights reduce
the relief between hot days

160 stations

Daily maximum and minimum temperatures

1991–2020

2021–2025

Climatological baseline

Recent comparison

Tofikk Redi · Discover Atmosphere · 14 Oct 2026

Regional differences matter. No clinical outcome measured.





WEST AFRICAN SAHEL · RESEARCH

Drought and heat
can move together

More than 2,500 events tracked

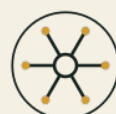
Stress in one grazing area

Stress across alternative destinations

Sabut and colleagues · 14 Oct 2026

Event movement, rather than human migration.

Regional validation remains important.





SOUTHERN AFRICA · MODELLING

Extreme rain-band swings
become more frequent

About 1 in 22 years

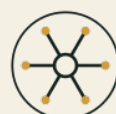
Twentieth century

About 1 in 10 years

Twenty-first century · high emissions

Wang and colleagues · 20 Oct 2026

South Indian convergence zone. Conditional long-term
model comparison, separate from seasonal forecasts.





INTERNATIONAL ENERGY ANALYSIS

Who pays for electricity a customer never uses?

A large new customer can support investment

The network is built before
the final demand is known

Connection milestones and tariff terms
allocate the cost of unused capacity

International Energy Agency · 14 Oct 2026

More than 34 jurisdictions, about 90% of capacity.





EUROPE · INDUSTRIAL SUPPORT

Carbon-market revenue
backs new industry

€3.4 billion

77 selected projects · 23 countries

Selection precedes grant agreements,
payment and successful operation

European Commission · 19 Oct 2026
African market effects remain prospective.





TERRITORIAL EVIDENCE

Different places, different research scales



Greater Cairo

Local building
simulations



Ethiopia

National station
research



Kenya

Earlier digital proposals



South Africa

Earlier industrial
context

Regional research: Sahel; southern Africa–Indian Ocean

21 Oct 2026 · Primary sources; Natural Earth.
Neutral outlines locate sources, not hazard severity.





NEXUS DEEP DIVE

How cooler buildings change the demand for power

The building

Heat gain determines how much cooling is needed

The electricity system

Connections determine capacity and who pays

Local industry

Testing and skills determine what can be maintained

Interpretation across this edition's evidence.
Tenure, affordability and maintenance affect access.





FUTURE BUILD · A KENYAN PROPOSITION

Cooling public buildings at a cost they can sustain

One willing county · ten public facilities

Existing budgets, procurement and building
responsibilities

100 DAYS

Building baseline, user consultation and
costed specification

THREE YEARS

Indoor conditions, electricity,
maintenance and total cost

BY 2035

Tested specifications, capable local firms
and wider learning

Web edition, short briefing and PDF
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