



SPRINGS

BRIDGING CLIMATE, HEALTH, AND POLICY: HOW RESEARCH CAN STRENGTHEN AFRICA CDC'S STRATEGIC RESPONSE TO CLIMATE-SENSITIVE DISEASES



KEY MESSAGES

Climate change and health impacts: Increasing floods, droughts, and extreme weather events are facilitating the spread of climate-sensitive diseases across Africa. Waterborne diarrhoeal illnesses remain a leading cause of child mortality and highlight the urgent need for action.

Africa CDC's strategic framework: The Climate Change and Health Strategic Framework offers a comprehensive roadmap for resilience for challenges at the intersection of climate and health, emphasising strong governance, institutional coordination, equity, and cross-sectoral collaboration.

Waterborne diseases as a priority: Recognised as one of the framework's five priority vulnerabilities, waterborne diseases require integrated WaSH and health interventions, climate-resilient infrastructure, strengthened surveillance and community engagement.

The role of research: Projects like SPRINGS demonstrate how research can operationalise strategic frameworks, offering predictive models, economic analyses, and locally grounded approaches that support evidence-based policy and emergency preparedness.

Bridging strategy and action: Bridging research and policy enables African governments to transform high-level guidance into concrete interventions, strengthen health systems, and protect the most vulnerable populations from climate-driven health risks.



LINKING CLIMATE AND HEALTH: AFRICA CDC'S STRATEGIC RESPONSE

Climate change is already shaping the health landscape across Africa. Increased extreme weather events are driving the spread of climate-sensitive diseases, including waterborne diarrhoeal illnesses, which remain a leading cause of death among children under five. These health impacts disproportionately affect populations who have contributed least to global emissions, highlighting a stark equity challenge. There is an urgent need to protect communities, strengthen health systems, and align interventions with evidence-based strategies.

In response, the Africa Centre for Disease Control and Prevention (Africa CDC) has launched its Climate Change and Health Strategic Framework. This framework presents a comprehensive roadmap for Member States to enhance climate resilience and mitigate health vulnerabilities.

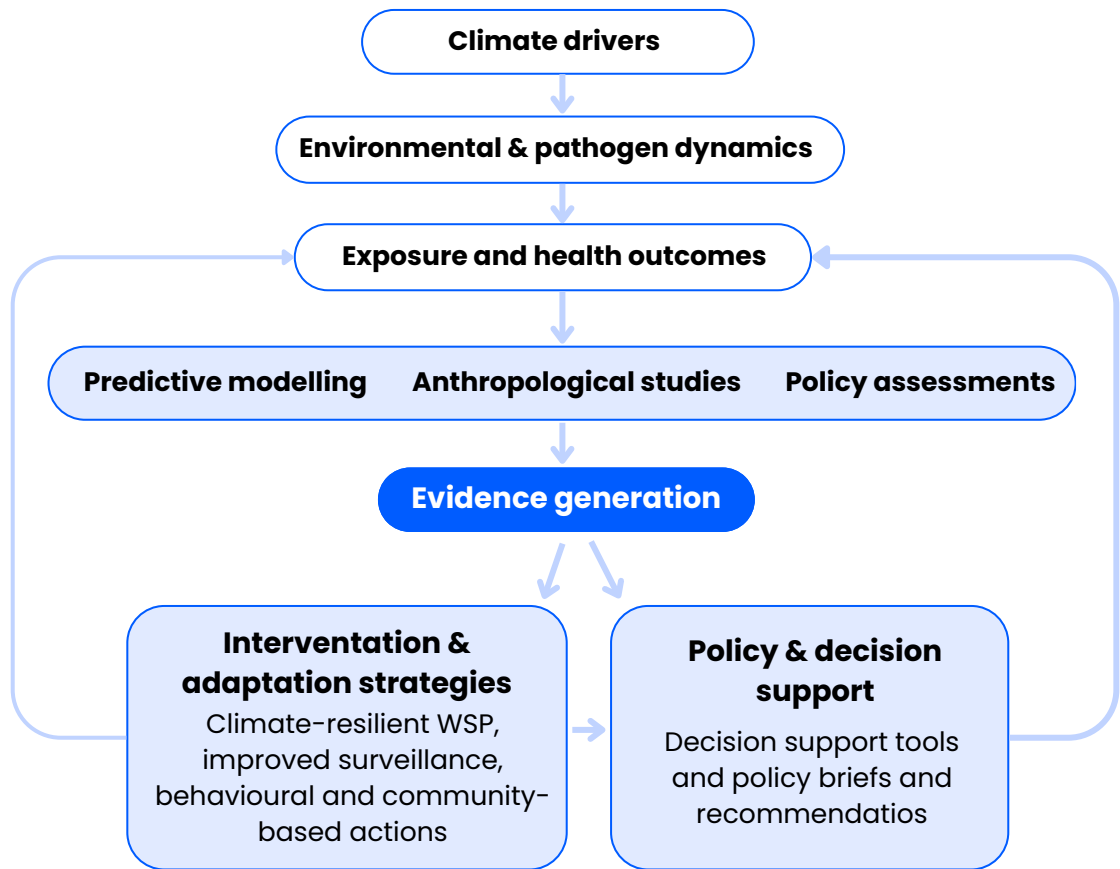
The Africa CDC framework takes a **holistic, integrated approach to climate and health. It adopts a One Health perspective**, linking human, animal, and environmental health, and stresses cross-sectoral collaboration across health, agriculture, environment, finance, and civil society. **Equity and inclusion** are central, with a focus on vulnerable populations, and **community engagement** is emphasised for sustainable interventions. Monitoring, evaluation, and adaptive management mechanisms support accountability, learning, and coordinated action across national, regional, and technical levels.

Waterborne diseases are one of five priority climate-sensitive vulnerabilities. Their heavy burden, sensitivity to climate variability, and links to gaps in water, sanitation, and hygiene (WASH) make them a critical focus. **The framework promotes multi-sectoral prevention, integrating WASH programs with health services, investing in water quality monitoring, supporting emergency preparedness, risk communication and strengthening health education.** Key actions include improving climate-resilient water infrastructure, disease surveillance, and community risk communication. The framework also calls for standardised monitoring, early warning systems, evidence-based investment, regional coordination, and targeted budget support to ensure rapid response.

SPRINGS: OPERATIONALISING THE FRAMEWORK



SPRINGS FRAMEWORK



The EU-funded SPRINGS project provides a concrete example of how research can complement and operationalise such a framework. By integrating epidemiological data with hydrologic-hydraulic measurements, climate observations, and remote sensing of land use and flooding, SPRINGS develops **predictive models** of diarrhoeal pathogen dynamics under climate variability in Ghana. These models identify potential outbreak hotspots in data-poor catchments and feed into early warning systems, enabling authorities to pre-position medical supplies, alert communities, and coordinate multi-sectoral responses, directly **supporting the framework's emergency preparedness and risk communication pillars**.

In addition to predictive modelling, SPRINGS incorporates **anthropological research** to understand local communities' behaviours, perceptions, and practices regarding water, hygiene, and climate risks. These insights guide interventions to be culturally appropriate, socially acceptable, and tailored to local needs, operationalising the framework's emphasis on equity, inclusion, and community engagement.



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SPRINGS also conducts economic evaluations, drawing on Health Technology Assessment (HTA) methods, to compare interventions for climate-sensitive diarrhoeal diseases. These assessments combine health-system costs, economic and social impacts and projected climate-driven incidence to compare interventions. **This evidence helps policy-makers prioritise and justify investments based on cost-effectiveness and equity criteria.** SPRINGS also emphasises participatory dissemination, working with local partners, policy-makers, and communities to ensure that research findings are actionable and culturally appropriate. In this way, SPRINGS operationalises the framework's call for research, innovation, and data integration to support evidence-based decision-making.

BRIDGING RESEARCH AND POLICY

The alignment between Africa CDC's framework and SPRINGS shows the potential of bridging policy and research. Where the framework sets the agenda, research provides tools, evidence, and mechanisms to achieve it. SPRINGS' predictive models enhance surveillance; its policy and economic analyses inform prioritisation; and its locally grounded case studies ensure interventions are tailored to specific contexts. By integrating these insights, governments can strengthen national WASH programs, improve access to safe water, and prevent disease outbreaks.

This alignment also highlights opportunities for partnership and capacity building. Co-production of knowledge with African institutions ensures research is contextually relevant, while training and infrastructure development strengthen technical capacity for climate-health monitoring. Collaboration with the private sector, through public-private partnerships, can mobilise additional resources, one of the main constraints in the implementation of such frameworks. These approaches help translate political will and strategic frameworks into measurable health outcomes, ensuring that investments are effective and sustainable.

Africa CDC's Climate Change and Health Strategic Framework offers an evidence-based, integrated strategy to build climate-resilient health systems through coordination, investment, and inclusive engagement. Projects like SPRINGS reinforce this vision by translating evidence into practical tools and strategies, helping African countries anticipate and respond to climate-related health impacts while protecting vulnerable populations and strengthening resilience.



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Funded by
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