ADDRESSING CLIMATE CHANGE AND HEALTH IN GHANA AND WEST AFRICA

— A SUMMIT REPORT —

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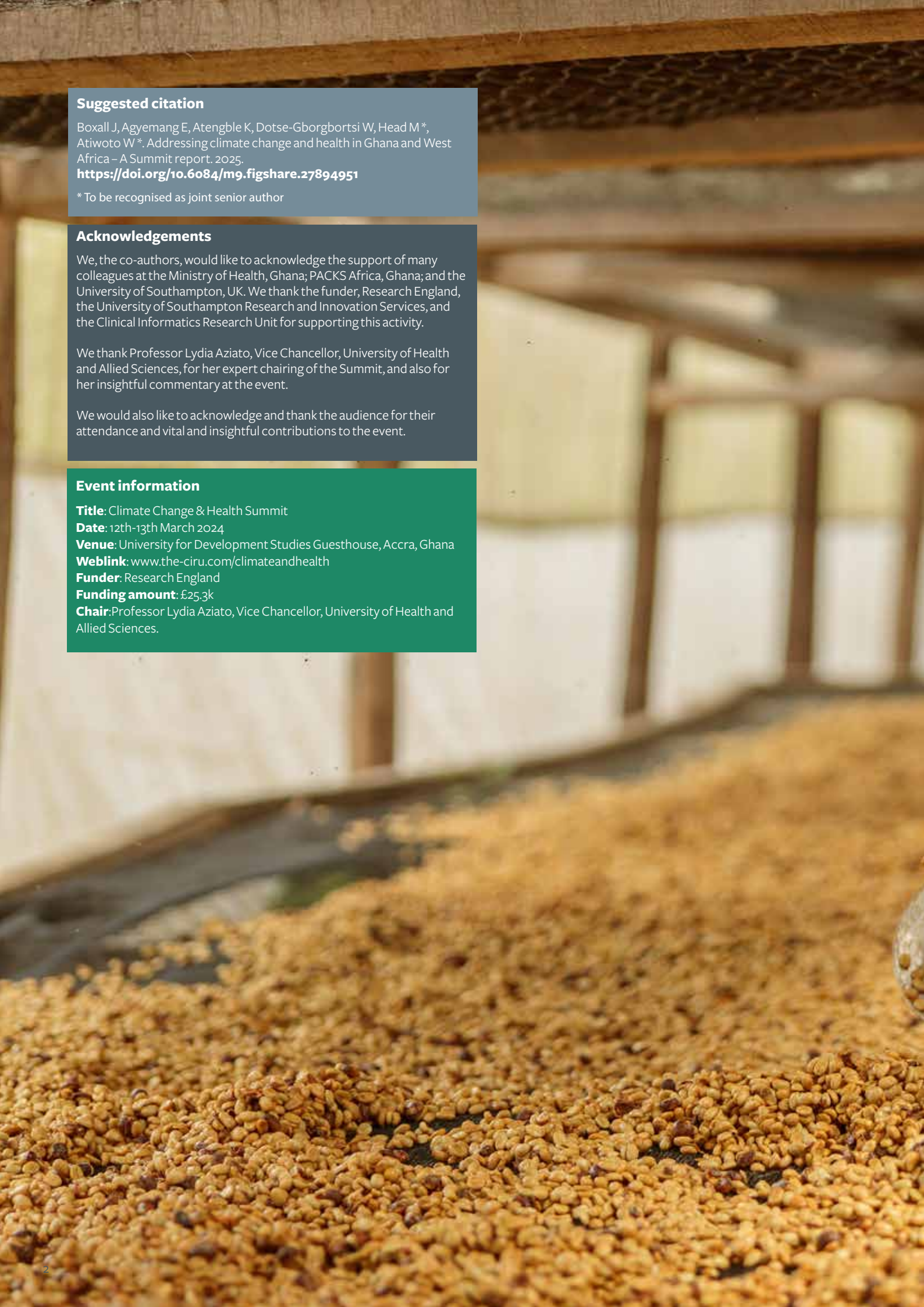

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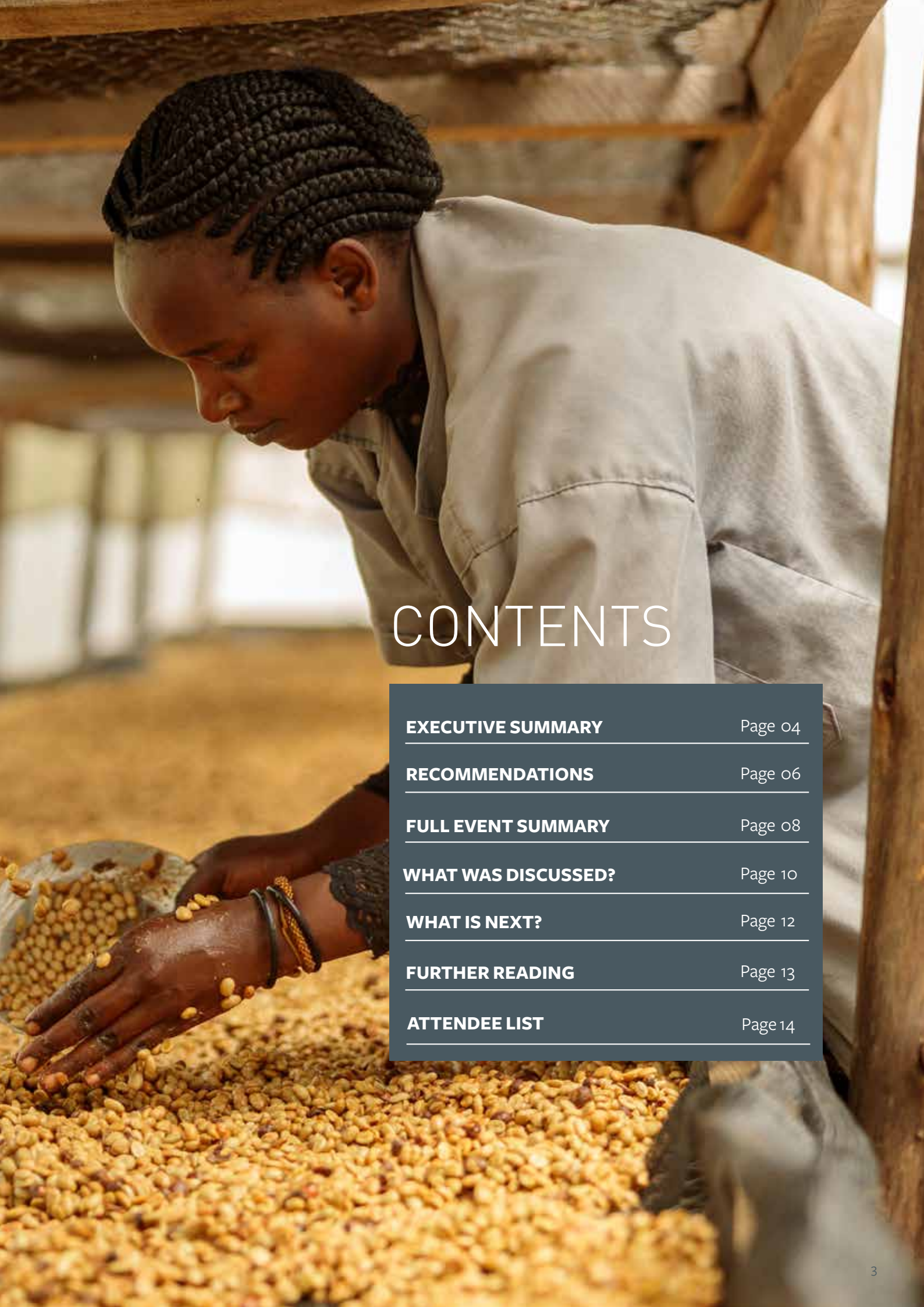
We thank Professor Lydia Aziato, Vice Chancellor, University of Health and Allied Sciences, for her expert chairing of the Summit, and also for her insightful commentary at the event.

We would also like to acknowledge and thank the audience for their attendance and vital and insightful contributions to the event.

Event information

Title: Climate Change & Health Summit
Date: 12th-13th March 2024
Venue: University for Development Studies Guesthouse, Accra, Ghana
Weblink: www.the-ciru.com/climateandhealth
Funder: Research England
Funding amount: £25.3k
Chair:Professor Lydia Aziato, Vice Chancellor, University of Health and Allied Sciences.



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EXECUTIVE SUMMARY

THE SUMMIT WAS ORGANISED AND DELIVERED BY THE MINISTRY OF HEALTH, GHANA; PACKS AFRICA, GHANA; AND THE UNIVERSITY OF SOUTHAMPTON, UK. FUNDING FOR THE EVENT WAS PROVIDED VIA RESEARCH ENGLAND.

The health and socio-economic consequences of climate change are undeniable. Ghana, and more widely West Africa, has been described by the UN Intergovernmental Panel on Climate Change (IPCC) as a hotspot of climate change, experiencing rising temperatures, erratic rainfall, and extreme weather events. The 2023 Conference of the Parties (COP) Summit introduced priorities and agreements around climate and health.

This policy brief reports on the key points raised at the one-day Summit, and the subsequent half-day roundtable discussions.

Attendees included representation from Ghana, Benin, Ivory Coast and Nigeria. The audience also represented a range of viewpoints coming from Ministries and other government agencies, academia, and civil society and NGOs.

Dr Atiwoto stressed in his keynote introduction that doing nothing is simply not an option. There will be an increase in preventable death and thus, future preventative and mitigating actions should be directed by science, rather than beliefs. Further points in the introductory session included the importance of addressing misinformation, food insecurity, the impacts of flooding on access to healthcare and a perspective around the UK government's priorities on climate change for the international community.

Discussions highlighted how "climate change is everybody's business" and thus, the issue needs an inter-disciplinary approach with a clear unified direction. Metrics needed to measure and understand the changing situation can best be integrated with other data to identify short and long-term population health priorities. Improving technical skills, geospatial and communications CPD training, is one way to increase local capacity, identify and collect high-quality data, and improve the interpretation and dissemination of findings.

To support sustainable behaviour change, it is important to educate individuals from a young age, and also incorporate a youth voice into the decision-making processes. Training for healthcare workers was also deemed necessary, as they can be trusted voices for the population. The need to communicate science and health to the population is vital, so trusted collaborations between media and subject experts must be enhanced.

Ultimately, key themes explored covered the importance of addressing climate and health, the need for high-quality data, upskilling staff across the agencies and beyond, and the importance of trust between subject experts and the wider population in Ghana and West Africa. Locally-led approaches that can be supported by the international community, rather than the other way around, are vital.


ADDRESSING

RECOMMENDATIONS

The roundtable talks separated the discussions into recommendations for a) policy, and b) research priorities

POLICY RECOMMENDATIONS

- **Best use of data** to inform policymaking. This can and must include routinely collected data and research data.
- **Improve technical skills** and implement Continuous Professional Development (CPD) training (for example, but not limited to, geospatial) for Ministry of Health agencies and other relevant stakeholders such as media and civil society groups.
- **Establish platforms** for improving communications across agencies, academics, NGOs, civic society and the wider general populations, in Ghana and across West Africa. This includes building trust between the health and scientific community, the media and other sources of public information.
- **Maximise the usefulness** and collaboration between existing cross-sector technical working groups.
- **Synergize efforts**, emphasise how a route for new knowledge to inform decision-making must also come from local communities in a 'bottom-up' approach that complements the technical working groups.

- **Establish early warning systems** that will provide the platform for surveillance to improve preparedness and minimise health and socio-economic impacts of future extreme weather events, as they become more frequent, severe and unpredictable.
- **Preparedness** can be enhanced by data-sharing across agencies to look at weather patterns, high-risk communities, the impact of events such as chemical spills, and logistics support from other resources, such as the military.

RESEARCH PRIORITIES

- **Implementation research** on
  - climate change data harmonisation and use:
    - A central resource, or database, of upcoming, ongoing and completed research may be useful to find the latest data that can then best inform new research questions, as well as policy and practice
    - Research on routine data can be relatively quick and easy, and provide valuable insight. It can also be combined with other data sources for improved analyses and interpretation.
  - Adaptation Strategies :
    - Gender and equity studies
    - Effectiveness and impact studies

- **Longitudinal research**, incorporating mixed-method approaches and knowledge surveys, can provide information about the changing needs of a population over time

- **Community and participatory research** can gain important insight to support 'bottom-up' approaches, particularly including voices from vulnerable groups such as Last Mile populations, rural women, young people, and the elderly.

- **Trust can be built by understanding local cultures and practices**; thus, research with traditional and religious leaders and their communities can be beneficial.

- **Research into preparedness** and resilience can include an assessment of the benefits, consequences and sustainability of early warning systems; for instance, in the event of a flood, people could be forewarned to make their way to a healthcare facility where food reserves and medical supplies are available.

- **Understanding the role of machine learning** and artificial intelligence in supporting quality of data and application of data.

- **Understanding the needs of displaced populations**, those who are food insecure, and the impact of mental health is crucial to inform preparation and response to climate change.

FULL EVENT SUMMARY
WHY WAS THE SUMMIT HELD?

The UN Intergovernmental Panel on Climate Change (IPCC) identified that climate change aggravates factors globally that influence food security, with Africa being particularly affected. Indeed, the Lancet Commission further highlighted how 'Africa has suffered disproportionately from the climate crisis, although it has done little to cause the crisis'. West Africa, in particular, has been described as a hotspot of climate change, experiencing rising temperatures, erratic rainfall, and extreme weather events.

Ghana is vulnerable to the effects of climate change, due to a range of factors, for example, the heavy reliance on rain-fed agriculture with subsequent impacts on food insecurity and health. High incidence of poverty, dependence on climate-sensitive activities for livelihoods and food supply, and underdevelopment mean that many Ghanaian and West African communities have less capacity to withstand climate shocks. The regular flooding from the Bagre Dam, and the unexpected flooding in 2023 from the Akosombo Dam, are examples of shocks that will have significant local, national and international impact, which are likely to become more frequent in the years and decades to come.

The evidence base around the impact of the climate on health is also increasing. For example, a 2023 study by the University for Development Studies, and the University of Southampton (UK) described how the prevalence of moderate or severe food insecurity in the rural Mion District (Northern Region) was 62%. Around 80% of people could not access a health centre due to weather-related events in the previous year, and most Mion participants perceived that climate change has already made a difference to their health.

Climate change is impacting vulnerability through conditions such as malnutrition, but it is also exacerbating vector, food and water-borne diseases, along with impacting chronic conditions such as diabetes and asthma. Climate shocks are also known to worsen mental health. There is a real need to tailor decision-making and policymaking with the aim of mitigating the impacts of climate change upon health. There is also an urgency to identify the priority areas for short- and medium-term action, and to invest in research that can fill these evidence gaps.

Therefore, Ghanaian and Southampton collaborators submitted a bid for funding to Research England, via the University of Southampton Research and Innovation Services. This bid was successful and allowed the organisation of a 'Climate Change and Health Summit': a half-day roundtable discussion, and one day of in-person geospatial training led by Dr Winfred Dotse-Gborgbortsi. These activities were directed by the Research Statistics and Information Management Directorate at the Ghana Ministry of Health, PACKS Africa and the University of Southampton.

The West African-led two-day event was held at the University for Development Studies Guesthouse in Accra on the 12th and 13th of March 2024. Delegates attended from academia, government agencies, civil society organisations, NGOs, think tanks and the media, among others. Professor Lydia Aziato, Vice Chancellor of the University of Health and Allied Sciences chaired the Summit. Dr Wisdom Atiwoto, Director of Research Statistics and Information Management at the Ministry of Health, chaired the roundtable discussion.


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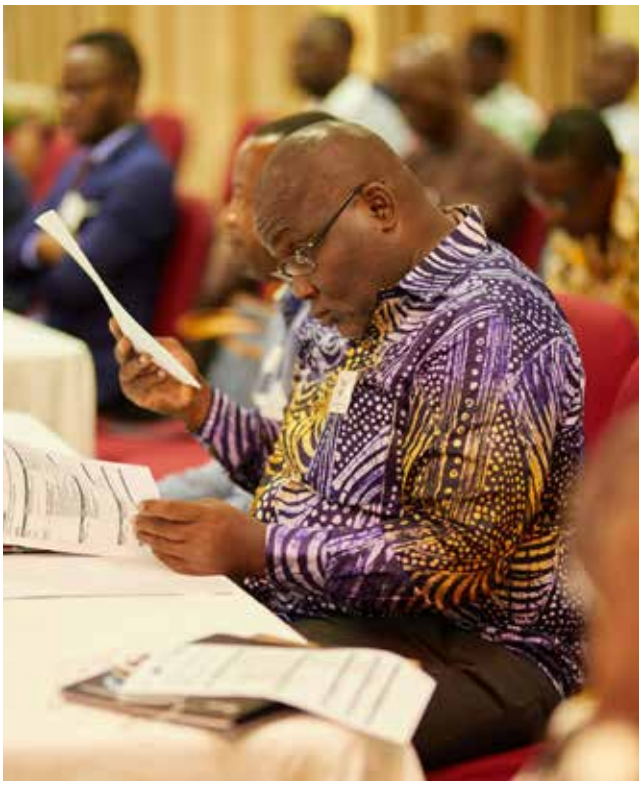

WHAT WAS DISCUSSED?

The Summit involved evidence-based presentations from Ghanaian and UK colleagues, and panel discussions that covered perspectives from across West Africa. The first keynote was presented by Dr Wisdom Atiwoto, who spoke about the need to strengthen the health system and education in light of the impact of climate change.

Dr Atiwoto stressed that if we do nothing, there will be an increase in preventable death and thus, future actions should be directed by science rather than beliefs. Presentations followed on reflections from the UK, delivered by University of Southampton colleagues and Dr Richard Sandall from the British High Commission. Topics covered included the importance of addressing misinformation, food insecurity in rural Ghana, impacts of flooding on access to healthcare and the UK government's perspective and priorities for the international community.

A panel discussion followed on 'What does climate and health look like in Ghana?', exploring the evidence base and where there are gaps for further research. As stated by an attendee, "climate change is everybody's business" and thus, the issue needs a multi-disciplinary approach with a clear direction. This climatic phenomenon will affect every person worldwide, and so requires global effort to combat. Cross-sectorial support and intervention is necessary to protect the population and prevent a worsening health crisis. One necessary approach will be to maximise the way data is used by decision-makers, such as national and regional governments. Metrics to measure and understand the changing situation need to be integrated with other big data that exists in order to look at the bigger picture. This would help identify short and long-term population health priorities. These priorities may include both physical and mental health, as impacts of climate change can manifest in lost homes and livelihoods, bereavements and post-traumatic stress disorders, among other consequences. Education and training was a key area for discussion and is arguably an important area to consider for future generations. To support sustainable behaviour change, it is important to educate individuals from a young age, and also incorporate a youth voice into these programmes. Training for healthcare workers was also deemed necessary, as they are sometimes deemed to be trusted voices for the population.

The second panel of the day discussed the evidence from the West African region, and included representatives from Ghana, Benin and Nigeria. The panelists discussed relevant interventions they had researched, witnessed or conducted to improve the environment, bring issues to public knowledge through the media, and educate young people. These spanned individual, organisational, and macro-level interventions, from both academic and industry perspectives. Governments are helping in some areas to clean up the environment and prevent further damage, but it was noted that West Africa does not sufficiently monitor air pollution and thus, cannot measure intervention effectiveness for large-scale efforts to improve air quality. Other policies such as tax on greenhouse gas emissions have also been shown to be effective. Opinion described how too often the population relies on advocacy to get governments to act. Personal behaviours also need to adapt on an individual level, to stop dumping refuse, for example, in streets and water sources, and implement other sustainable habits such as recycling and planting trees. Therefore, teaching young people how to contribute to the change that is needed, and encouraging creative solutions is critical for generational change.

The final keynote presentation was delivered by Kofi Adu Domfeh, News Editor at The Multimedia Group in Ghana. The overriding message was that public health needs to communicate science to the population in order to improve health, and so collaboration between media and subject experts is vital. Mr Domfeh discussed how best for researchers to engage with the media from the perspective of journalists, and how to bring the issues at hand to the attention of the public. It is vital that research is translated in such a way that the general population can understand and absorb the information. This comes with challenges, as research takes a long time to conduct; findings written for journal papers are often too jargonistic; and there are limited opportunities for reporters to specialise in areas such as climate change. Therefore, researchers need to be passionate and build interest in their work, and reporters need to help them frame their research as public health issues and make the public feel involved.

The second day saw a small group of stakeholders meet for a roundtable discussion, to reflect on the information from the Summit and how it can inform our next steps. Again, one of the key themes for policy priorities was training for decision-makers to make best use of data; this included geospatial and communications CPD training to boost technical skills, as well as for bolstering awareness across Ministries and within the education curriculum. With regards to the media and communications, conversation should be sustained and linked closely with health promotion and health education partners. Another key theme of discussion was synergy; knowledge needs to also come from the communities in a 'bottom-up' approach that can complement existing cross-sector technical working groups. Furthermore, surveillance and preparedness should be improved to minimise health and socio-economic impacts of future

extreme weather events as they become more frequent, severe and unpredictable. Preparedness can be enhanced by data-sharing across agencies to look at weather patterns, where communities are most at risk, conduct surveillance of chemical spills and other issues, and the use of other branches such as the military.

In terms of future research, high-quality context-specific evidence is needed to inform policy and this evidence should be utilised effectively. A compendium or database of research may be useful as a reference point for information, as well as making use of routine data as 'low-hanging fruit'. Further comprehensive research such as longitudinal studies, mixed-method approaches and knowledge surveys should build a picture of the patterns seen and the needs of the population. Community engagement on this matter is key, particularly with vulnerable groups such as Last Mile populations, rural women and children and the elderly. There is a lack of literature on issues that are affecting the community that involve female participation or that empower women to be a part of the conversation. This is despite many difficulties and climatic consequences, such as severe food insecurity, both being managed by the women of the household, and also affecting them disproportionately. Importantly, culture should not be left behind and traditional and religious leaders should also be consulted. Research into preparedness and resilience would also inform the aforementioned surveillance and preparedness policy as well as an early warning system; for instance, in the event of a flood, people could be forewarned to make their way to a healthcare facility where food reserves and medical supplies are available. Machine learning and artificial intelligence could expand on this. As climate events continue to affect the population, research into the wider determinants of health is important to understand the full impact on health. Understanding the needs of displaced populations, those who are food insecure, and those suffering with mental health issues in the aftermath is crucial. At the completion of any research, the lessons learnt at the Summit on communication and dissemination through the media should be remembered.

WHAT IS NEXT?

The two-day event provided a valuable insight into the available evidence and what needs to come next in terms of planning and research. The discussion generated from the Summit aimed to contribute to the design and priorities that will be determined in the Ministry of Health's research agenda

This report of the Summit, co-led by the Ministry of Health, PACKS Africa, and the University of Southampton, will support the integration of discussions into setting policy and practice. Outputs from this event will be Ghanaian-led and will be made available on completion. A key takeaway from the discussion was that climate change calls for interdisciplinary collaboration to both generate evidence and also to provide effective interventions. Climate change will not improve without collaborative and sustained efforts.

FURTHER READING

Five ways that climate change threatens human health
https://theconversation.com/five-ways-that-climate-change-threatens-human-health-242711

Food prices will climb everywhere as temperatures rise due to climate change – new research
https://theconversation.com/food-prices-will-climb-everywhere-as-temperatures-rise-due-to-climate-change-new-research-226345

Associations between Perceived Climate Change and Food Insecurity in a Last Mile District of Rural Ghana: A Mixed-Methods Study
https://dx.doi.org/10.2139/ssrn.4965932

ATTENDEE LIST

First name	Surname/family name	Organisation
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Gershon	Adjei	Ben Newman Hope Care Foundation
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Jessica	Adotey	Food and Drugs Authority
Abigail	Agbeka	PACKS, Africa
Lawrence Nyanor	Agyekum	Environmental Protection Agency
Edward	Agyemang	Ghana Ministry of Health
Justice	Aheto	University of Ghana
Ben	Aikins	
Belynda	Amerhu	
Bright Yammaha	Amoore	University for Development Studies
Kofi	Amponsah	Christian Health Association of Ghana
Richard	Aniagyei	Information Services Department
Samuel	Annan	Foundation for Future Christian Worker International
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Owusu	Asante	MoH
Kingsley	Asiedu	West African Science Services Centre on Climate Change and Adapted Land Use
Kirchuffs	Atengble	PACKS, Africa
Wisdom	Atiwoto	Ghana Ministry of Health
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Frank	Baiden	University of Health and Allied Sciences
Alia	Baitie	Clintons Health Access Initiative
Jess	Boxall	University of Southampton, UK
Emmanuel	Brown	Early Career Pharmaceutical group
Maxwell	Dalaba	University of Health and Allied Sciences
Isaac Kwabena	Danso	Environmental Protection Agency
Clement	Dason-Dunya	Ho Teaching Hospital
Jack James	Dawson	Association People For Practical Life Education
Kekesi	Defoe	Foundation for Environmental Watch
Kofi Adu	Domfeh	The Multimedia Group
Winfred	Dotse-Gborgbortsi	University of Southampton, UK
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Frederick	Otu-Larbi	University of Energy and Natural Resources
Allotey	Pappoe	Green Light Initiative Foundation
Abdul-Razak	Saeed	United Nations Development Programme
Richard	Sandall	British High Commission – Accra
Beatrice	Sankah	Ghana Physiotherapy Association
Abdulai	Sanni	Amal Foundation
Bernard	Senkyire	Environmental Protection Agency
Ayinau	Sumaila	Ghana Ministry of Health
Victoria Owusu	Tawiah	Clean Air Fund
Benjamin	Tsikata	Ben Newman Hope Care Foundation
Winnifred	Twum	Mental Health Authority
Lady Mae	Wright	Clintons Health Access Initiative
Phyllis	Yeboah	University of Ghana
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