Advancing Climate Information Services to Strengthen Health Resilience in Africa

Report on Roundtable and Panel Discussions Held on September 8, 2025, on the Sidelines of the 2nd Africa Climate Summit (ACS2), in Addis Ababa, Ethiopia, Focused on Enabling Climate Information Services (CIS) for Enhanced Health Resilience in Africa

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Enabling Climate Information Services (CIS) for Enhanced Health Resilience in Africa

An Africa-led initiative is needed to lay down a tailored plan for resilience against climate-driven health risks. With limited resources and increasing vulnerabilities, Africa's best adaptation strategy is to develop climate and weather based early warning and early action plans.

Timely, reliable, and accessible weather and climate information services (CIS) are essential for understanding climate change as a health risk multiplier and for guiding early warning, anticipatory action, and surveillance. Yet Africa faces major barriers, including severe climate data gaps, the world's least developed observation networks, limited modelling and computing capacity, weak climate–health data integration, and insufficient multisectoral coordination. In efforts to address these challenges, the Science for Africa Foundation (SFA Foundation), African Centre of Meteorological Applications for Development (ACMAD), Wellcome, the Brown Pandemic Centre, and the Rockefeller Foundation convened a high-level roundtable during the 2nd Africa Climate Summit in Addis Ababa, with support from Wellcome. The dialogue called for a regional, multisectoral, interoperable data ecosystem integrating climate, health, agriculture, and food systems, while ensuring inclusive data sharing and valuing community and local knowledge. Sustaining such an ecosystem will require strengthened technical capacity, coordinated multisectoral mechanisms, strong leadership, and large-scale blended financing from governments and philanthropy.

Dr Ousmane Ndiaye, Director General, ACMAD

Executive Summary

The SFA Foundation, ACMAD, Wellcome, the Brown Pandemic Centre, and the Rockefeller Foundation convened a high-level roundtable and panel discussion on *"Enabling Climate Information Services for Enhanced Health Resilience in Africa"* at The Second Africa Climate Summit (ACS2), held from 8–10 September 2025 in Addis Ababa. As climate change increasingly acts as a health risk multiplier, timely and accessible climate information has become essential for early warning, anticipatory action, and informed planning across the continent. Climate Information Services (CIS) are key in strengthening the resilience of Africa's health systems, improving health outcomes, and supporting climate decision making in health-extended sectors such as agriculture, water, and urban development.

The dialogue brought together 31 senior experts from African governments, regional bodies, UN agencies, research institutions, and philanthropy to examine the continent's CIS landscape. Opening remarks from the Ministry of Health & Social Action, Senegal, delivered in collaboration with ACMAD, called for urgent action to address major CIS gaps by strengthening cross-sectoral collaboration between meteorological, health, and research institutions. The message stressed the need to integrate climate information into all levels of planning and ensure it is accessible as a public good, especially for vulnerable and last-mile communities disproportionately affected by extreme weather events. From the World Meteorological Organization, it was emphasised that climate services must extend beyond forecasts to provide actionable intelligence that protects lives, and that current weaknesses, such as, limited data, inadequate sharing mechanisms, weak meteorology–health linkages, and insufficient community access, continue to limit impact. The call to action urged transforming early warning systems into formats that reach all users, strengthening governance, and prioritizing the connection between climate and health data to reduce disease and prevent avoidable deaths.

Contributions from Wellcome highlighted more than two decades of climate–health research and the ongoing need for investment in evidence, capacity strengthening, and Africa-led initiatives. Wellcome's approach centers on funding research on impacts and adaptation, supporting ecosystems, and using catalytic financing to unlock further investment, particularly from governments. Their capacity-building efforts aim to prepare African experts for policy engagement, including at UNFCCC COP processes, while fostering dialogue and collaboration to grow the climate and health field. The Africa CDC reinforced the urgency of a continental climate and health strategy grounded in strong governance, robust capacity, and African ownership, noting that data and financing are central to driving effective, sustained action across the region.

Participants underscored that Africa faces persistent barriers to effective climate services, including severe climate data gaps, underdeveloped observation networks, limited modelling capacity, gaps in the integration of climate and health datasets, and fragmented multisectoral coordination. Beyond the health sector, CIS supports smarter planning in agriculture, water management, and urban development, helping communities address the long-term pressures that shape health and wellbeing. The need for an Africa-led regional, interoperable, and multisectoral data ecosystem was highlighted. This would link climate, health, agriculture, food systems, and community knowledge, supported by stronger technical capacity, clear institutional roles, coordinated science-policy-practice mechanisms, and large-scale blended financing from governments and philanthropy to ensure long-term sustainability.

This report summarises the outcomes of the roundtable and outlines key recommendations and a pathway for strengthening Africa-led investment and collaboration to build resilient, climate-informed health and health-related systems across the continent.

1. Introduction

The Second Africa Climate Summit (ACS2), held from 8-10 September 2025 in Addis Ababa, Ethiopia, brought together ~ 25,000 delegates, including policymakers, practitioners, businesses and civil society, from across Africa and the globe, under the theme *Accelerating Global Climate Solutions: Financing for Africa's resilient and Green Development*. ACS2 sought to secure bold financial and political commitment for climate adaptation, mitigation and green growth while empowering communities and fostering equitable partnerships and multilateral cooperation.

The summit provided the opportunity to advance conversations among stakeholders on increasingly important priority areas for Africa, including Climate Information Services (CIS) for strengthening the resilience of health systems, health outcomes and health adjacent sectors across the region. Thus placing health at the centre of climate change action. Timely, reliable, and accessible CIS are critical for understanding climate change as a health risk multiplier, influencing disease prevalence, distribution, and other health vulnerabilities.

The SFA Foundation, ACMAD, Wellcome, and Rockefeller Foundation participated in the Summit to:

1. Co-host a high-level roundtable on *"Enabling Climate Information Services for Enhanced Health Resilience in Africa."*
2. Facilitate a panel discussion to socialise the outcomes of the roundtable and to enhance awareness of the importance of CIS in building health systems resilience in Africa, including challenges and opportunities for interlinkage with other related sectors.

The roundtable convened 31 high-level experts from African ministries of health, national meteorological services, United Nations agencies, intergovernmental bodies, regional and Pan-African institutions, funders and philanthropic organisations, and leading research and academic centers. The dialogue explored challenges, opportunities, and mechanisms for catalysing CIS enhanced health resilience in the region.

Expected outcomes:

1. An enhanced awareness of the importance of CIS in building health systems resilience in Africa, including challenges, opportunities for interlinkages with other related sectors.
2. Identification and prioritization of priority strategies and scalable solutions and practices for co-creating, accessing and sharing climate data and information among cross-sectoral stakeholders.
3. Establishment of mechanisms for creating synergies for science-policy-practice engagements in CIS for health solutions in Africa.
4. Identify opportunities for unlocking funding avenues for equitable, inclusive, Africa-led investment in the CIS ecosystem.

2. Roundtable Discussion

The roundtable discussion began with opening remarks, followed by a series of guiding questions (Annex 2) that were designed to explore challenges, opportunities, and mechanisms for integrating CIS into health resilience efforts in the region.

Opening remarks:

Dr Ibrahima Sy, Minister for Health & Social Action, Senegal and Africa Ministerial Champion of Climate & Health

The Minister's speech, read by Dr Ousmane Ndiaye, the Director General of ACMAD, called for urgent action for Africa to overcome significant gaps in CIS by establishing robust cross-sectoral collaboration between meteorological, public health, and research institutions to enhance health resilience. He emphasised the critical need to integrate climate information smartly into all decision-making processes, ensuring it is a readily accessible public good, not a privilege, particularly for vulnerable populations and the "last mile" communities disproportionately affected by extreme weather events. The key to success lies in coordination and bridging science, policy, and implementation to facilitate anticipatory actions and accelerate progress towards the Sustainable Development Goals, a commitment reiterated by African health ministers led by African institution in collaboration with Global Partners (see Annex 1).

Prof Celèste Saulo, Secretary General of the World Meteorological Organisation

Prof Celeste Saulo in her speech emphasised that millions across Africa are already facing significant climate driven risks, including heat and malaria burdens. She defined Climate Information Services (CIS) as crucial beyond mere forecasts, providing the foundational data for decision-making, and stressed that CIS "must be translated into health protection that saves lives". While acknowledging that climate intelligence exists to anticipate and reduce excess mortality, Prof Saulo highlighted persistent gaps, including the need for better data and data sharing, the weak connection between meteorologists and health experts, and the lack of last-mile access for communities. She called for transforming early warning services into accessible formats, like voice messages, and issued a clear call to action: "Let us go the extra mile to ensure people are protected. When we connect climate information and health data, we reduce disease, prevent deaths, and build resilience" (see Annex 1).

Presentations:

Dr Madeleine Thomson, Head of Climate Impacts & Adaptation at Wellcome

Dr Madeleine gave a historical perspective from her over 20 years' experience in climate and health research and translation, referencing the 2005 launch of ClimDev Africa and the very first climate and health meeting hosted in 1999 by the International Research Institute for Climate and Society (IRI), Columbia University, underscoring the ongoing need for engagement and solutions. She presented Wellcome's approach to supporting climate-health initiatives, which involves funding research on impacts and effective adaptation, investing in ecosystems, and catalysing the broader climate-health ecosystem through projects. Dr Thomson emphasised that Wellcome's funding priorities are infectious diseases, mental health, and climate and health, and they utilise catalytic funding to stimulate further investment, particularly aiming to unlock government funding. A core aspect of their strategy also includes supporting African led and owned initiatives, ensuring that solutions are contextually relevant and driven by local expertise and priorities.

Dr Modi Mwatsama, Head of Field & Capacity Building at Wellcome

Dr Modi emphasised Wellcome's, support for evidence generation, capacity building for African climate and health experts to support UNFCCC COP negotiations and support to regional networks for generating evidence and linking to policy frameworks through Wellcome;s focus on catalytic funding. This approach aims to stimulate growth and innovation rather than simply providing ongoing operational support. She further emphasised Wellcome's commitment to creating and exploring new opportunities for conversation, fostering dialogue and collaboration among stakeholders to advance climate-health resilience.

Dr Yewande Alimi, One Health Unit Lead at Africa CDC

Dr Yewande outlined the urgent and clear call for a continental strategy on climate and health. Africa CDC's strategy is underpinned by a comprehensive framework of six pillars, specifically including capacity building and governance, to ensure robust and sustainable action. A central theme is the imperative for Africa to take ownership of its climate and health agenda, with the strong message that *"We don't need to wait to be told what to do."* Key priorities for this self-driven approach involve data, which is recognised as central to guiding policies and actions, and financing, emphasising the need to raise resources collectively to fill critical gaps across the continent. This perspective highlights the need for proactive, coordinated, and resource-mobilizing approach to building climate-health resilience in Africa.

Presentations:

Prof Wilmot James, Senior Advisor and Professor of Practice at the Pandemic Center, Brown University, Providence, Rhode Island

Professor James showcased scalable practices in climate and health from Kenya and South Africa. He emphasised the crucial role of integrated data platforms and robust governance structures in enhancing climate and health resilience across Africa. He highlighted that climate change is a fundamental health crisis, yet critical climate and health data often remain siloed, creating an urgent need for data sharing and integration to address climate-sensitive infectious diseases. The presentation asserted that data platforms can effectively be integrated across sectors to improve accessibility, and, when linked to governance, enable earlier, more trusted, and inform actionable decisions. Drawing on findings from the *Advance Warning and Response Exemplars (AWARE)* project in Kenya and South Africa, Prof James showcased how countries are successfully integrating climate and environmental data into early warning systems, citing Kenya's Surveillance Health Information Exchange Linkage Data (SHIELD) platform for data exchange and South Africa's efforts to integrate data across disease control programmes and sectors. The presentation concluded that embedding integrated data platforms within strong governance frameworks is key to building trust and actionability, driving preparedness and resilience against climate-health challenges across Africa.

*AWARE is a project hosted by the Brown University Pandemic Center partnered with in-country researchers in Brazil, South Africa, Kenya and Vietnam. AWARE is funded by Wellcome and the Gates Foundation.

3. Summary of Key Discussion Points

Presentations:

The roundtable discussion highlighted several critical challenges that impede effective climate information services and enhanced health resilience in Africa. Key concerns include:

1. Mistrust of data, which could be addressed by integrating data platforms within robust governance structures to foster trust and actionable insights.
2. Unfamiliarity of health professionals in using climate information, as climate and health data streams frequently remain siloed, necessitating improved accessibility and integration for more actionable decisions.
3. Limited awareness on use climate information at the local level, particularly gaps in the uptake and delivery of climate information services by “last mile” communities.
4. Lack of coordinating mechanisms, that manifest in fragmentation, duplication, and inefficiency in the current efforts to integrate climate and health data across sectors and
5. Unsustainable funds: unlocking domestic resources and the role of financial support from partners for these initiatives are critical to enabling the use of CIS for health.

The panel discussion also highlighted a critical need for integrated, multi-sectoral action, particularly within the African context. While Africa benefits from strong technical support from organisations like the Africa CDC, FAO, and WMO, there is a felt need for a continental coordinating unit, possibly mandated by the African Union Commission (AUC), to align and scale actions across sectors at a national and regional levels. Governments are urged to take a leading role in coordinating these efforts, creating integrated data platforms, and mandating cross-departmental collaboration to ensure a unified efforts and approaches. The importance of advocacy driven by strong community voices and the crucial role of private sector engagement in scaling solutions were also emphasised.

Opportunities and scalable practices for effective data and CIS infrastructure/systems

This segment explored opportunities within current data systems in Africa. It probed systems, governance, policies, mistrust, and funding as the primary drivers. A key opportunity lies in identifying and scaling successful, evidence-based practices from initiatives like Enhancing National Climate Services (ENACTS) and Advance Warning and Response Exemplars (AWARE). Specifically, the approach pioneered by ENACTS, blending historical records with current climate models, offers a scalable model for improving data quality and availability. Similarly, AWARE provides a framework for strengthening the evidence base for early warning systems in resource-constrained settings that can be widely adopted.

Additionally, Dr Martin Krause, Director, Climate Change Division at United Nations Environment Programme (UNEP) pointed out the strength and opportunities under UN systems under the *Early Warning 4 ALL*, which can help address the challenges of fragmented systems and actions, and emphasised the need for institutional strengthening to enable systems to "speak" to each other at different levels, *i.e.* national, regional and global. He highlighted that UN bodies are collaborating under the umbrella of *Early Warning 4 ALL,* which has 4 pillars: Disaster risk knowledge; detection, observation, monitoring, analysis, forecasting; warning dissemination and communication and; preparedness and response capabilities. He made a call to action *"Issuing early warnings is not enough, we need means to act".*

Key Insights:

- Prof James emphasised four key priorities for resilient climate services for health: integrated data systems, capacity accelerator, coordinating center and leadership and governance framework.
- He also emphasised the importance of engaging high-level political leaders such as Prime Ministers or at presidency levels to ensure political buy-in and authority across ministries and designate one ministry as main coordinator. A designated ministerial office will be essential to provide operational support and day-to-day oversight.
- Effective digital platforms enable integration and data sharing across entities and systems.
- Data at all levels needs to be of a quality and ensure integration across sectors such as health, agriculture and climate to provide tools for decision making.
- Emerging models show promise for scaling across Africa.

Examples/Evidence Shared:

- Case studies from South Africa and Kenya showcased best practices in early warning, data sharing, and governance for actionable climate-health solutions. Effective collaboration across government departments for health, environment, and weather ensures timely data access and implementation.

Science–policy–practice linkages

Under this theme, discussions focused on how to strengthen the science-policy-practice interface to ensure CIS informs health decision-making effectively, and what governance frameworks are needed to establish climate information as an accessible, trusted public good in health and related sectors. Furthermore, participants underscored the need for improved early detection through digital platforms, better understanding of health sector data requirements, and the integration of political considerations into research.

Key Insights:

- Creating a policy framework, network of regional institutions for generating evidence is essential.
- Strong institutional collaboration and monitoring mechanisms will be essential to ensure evidence sharing and accountability in the implementation of climate and health action plans.
- Social studies will be important to identify the social determinants and understanding demand from the community. Thus, we should advocate for innovative interdisciplinary research, combining social science and climate science.
- Designing curricula to embed climate in health education for students in all health-related fields of study.

Community and last-mile perspectives: equity, local ownership, and inclusivity

This area explored how to ensure CIS are responsive to the needs of women, youth, and vulnerable communities. It also considered how communities, as first responders, could be supported to lead in designing credible, trusted, and locally owned information systems, and the role of indigenous knowledge in shaping actionable climate-health services. Dr Judy Omumbo, Head of Partnerships & Resource Mobilisation at Science for Africa Foundation said, *"Communities already know their solutions, they must be empowered to apply them".* In the panel discussion priority actions were proposed. These include building strong monitoring systems with active community engagement, mobilizing parliament and communities to advocate for systemic integration, and leveraging existing partnerships, such as the Wellcome–Rockefeller Foundation collaboration, to improve data and seek advice on engaging other philanthropic partners.

Key Insights:

- Desta Lakew, Director of Partnerships and External Affairs, Amref Health Africa posed three important questions: How do we value community knowledge and surveillance? How are we engaging communities in design and response? and How do we equip communities with tools (e.g., mobile solutions) to protect themselves? Mrs. Lakew stressed the inclusion of community at every steps of climate service production for them to trust and use the information. Additionally, suggested to invite community representative in the future meetings to include their voices.

- Establish collaborative and coordinated mechanisms responsible for planning, day-to-day monitoring, and implementing action plans that close communication gaps. Clear roles and responsibilities within these coordination structures are essential to ensure that no one is left behind.

- Irene Amuron, Head of Anticipatory Action Programme at IFRC-RC Climate Centre, emphasised that new approaches to climate-health solutions require a collaborative ecosystem of stakeholders, that includes health actors and development agencies, to address the challenge of reaching last-mile communities. Key to success is building trust and accessibility by providing information in user-friendly formats and actively involving communities in the entire process. The goal is to empower these communities to understand climate impacts and guide the design of effective information services.

- Dr Maryam Diarra, Research Assistan at Institut Pasteur de Dakar shared best practice from Senegal on how communities are involved in using heat early warning data. The communities are involved in climate information services through a participatory approach. Early warnings are issued by the government and then scaled down to the district level. At this local level, user engagement sessions are held to explain the specific risks and provide actionable advisories, ensuring communities are better protected through this participatory dissemination of information. The tool is developed in the local language.

Partnerships and funding: African-led ownership and pathways to sustainability

Under this theme the roundtable discussion revolved around financing models for sustainable national investment in Africa's CIS ecosystem and how partnerships with governments, philanthropy, and the private sector could be structured for long-term sustainability and equity, including examples of existing successful partnerships. In the panel discussion, Wellcome's role was also presented as a UK-based philanthropic entity focused on catalytic funding for research to drive innovative climate and health solutions, particularly through its partnership with the Rockefeller Foundation. The foundation supports capacity building, partnerships for scale, and policy engagement, but does not provide direct funding for implementation. Its overarching goal is to foster ecosystems that effectively connect research, on-the-ground for community impact, and policy. Additionally, the panel discussion raised the importance unlocking government funding and the role of a continental center in advancing collective efforts.

Key Insights:

- Irene Amuron, Head of Anticipatory Action Programme, noted the importance of collaboration among all stakeholders, including ministries, meteorological departments, NGOs, and academic institutions, to build a strongly integrated system and a robust ecosystem capable of driving effective anticipatory action.
- Collaboration and create coordination mechanism that will responsible for all planning and day to day monitoring and implementing action plans that can bridge gaps in communication. Clear roles, and responsibilities of coordinating mechanisms are vital to ensure no one is left behind.
- Catalytic funds and domestic finances would be important for sustainable development and use of CIS.
- With Innovative partnership models can enable access to private sector funding.

Innovation and the future

Participants discussed the potential of digital infrastructure, Artificial Intelligence (AI), and other emerging technologies to accelerate CIS-health integration in Africa. They also stressed that use of new technologies such as AI are data driven and therefore their relevance and effectiveness can only be harnessed if informed by quality data.

Dr Tufa Dinku, a climate scientist based at the IRI and working with Ethiopia's National Meteorological and Hydrological Services, emphasised the crucial need for collaborative efforts to improve data infrastructure in Africa. His work focusses on enhancing and integrating local observations with global data with global observations to generate higher-resolution climate data, specifically aimed at developing usable products and building capacity within the health sector to understand and apply this information.

Dr Dinku highlighted a significant challenge: data access is often difficult despite its availability, and that relevant institutions, including national meteorology departments, are frequently not open to integrating and sharing data, a barrier that needs to be addressed. Furthermore, he stressed that while technologies like AI are promising, they are inherently data-dependent, underscoring the necessity to strengthen data systems to effectively leverage the power of AI and other advanced technologies. Additionally, Jente Broeckx, Program Manager at VITO also emphasised that AI requires strong data systems and foundations.

Key Insights:

- Surveillance data using DHIS2 has been strengthened in many African countries and there are initiatives to integrate climate data.
- AI could be leveraged in increasing observation of climate data.
- Data quality need to be ensured to leverage new technologies like AI and machine learning.

4. Key Recommendations

Key recommendations from the roundtable and the panel discussion centered on the African region needs to build an integrated and interoperable data ecosystem and platforms that would combine climate, health and associated sectors, such as agriculture and food systems, into a shared framework while ensuring seamless sharing and exchange of data across sectors. The ecosystem needs to foster open access and catalyse community inclusion. This could leverage local data systems such as ACMAD's cloud-based climate data. The following critical actions will be crucial to enable the ecosystem:

Evidence, data and infrastructure/Systems

- **Create a unified data platform:** Develop a unified data platform that integrates systems across sectors, such as climate, health, agriculture, and water management, by enabling seamless data collection, integration, and analysis from diverse sources, such as remote sensing, public health, and socioeconomic indicators.
- **Utilize integrated datasets:** Use comprehensive datasets to create vulnerability maps and "hotspot" analyses to pinpoint populations most susceptible to climate-related health risks.
- **Integrate climate information into existing health surveillance systems:** Enhance and utilise existing platforms such as DHIS2 to ensure the collection of high quality disease surveillance data. This data should be integrated with climate information to develop robust early warning and response systems for climate-sensitive diseases.
- **Build capacity across the health system:** It is crucial to invest in building a workforce with the skills needed for data analysis and understanding the connections between climate and health. Design trainings for co-training of climate and health experts to enable mutual learning from each sector. The aim is to build and scale up essential knowledge and technical and institutional skills and capacity rapidly.

Science–policy–practice linkages

- **Integrate social sciences:** combining social and climate science will be vital to address complex community challenges.
- **Build strong institutional collaboration and monitoring mechanisms:** It is important to invest in institutional capacity and of networks to ensure evidence sharing and accountability.
- **Curricular design:** imbedding climate at all levels of education curriculum will foster student's capacity in different field of study.

Communities and last-mile perspectives: equity, local ownership, and inclusivity.

- **Foster community engagement:** For climate information services (CIS) to be effective and trusted, they must be relevant to the communities they serve. This requires a two-way dialogue that values and integrates local knowledge and indigenous practices into adaptation strategies.
- **Implement participatory approaches:** Use community-based methods like Participatory Scenario Planning (PSP). This empowers community members to contribute actively, which builds trust and ensures culturally appropriate interventions.

ACMAD as the only operational Africa Regional climate center could host a regional data repository, equipped with analysis tools to support the data needs of Africa's climate sensitive sectors.

Key Recommendations Continued

Partnerships and funding: African-led ownership and pathways to sustainability.

- **Build a capacity accelerator that rapidly strengthens technical and institutional skills** while developing interoperable climate–health data platforms, enabling timely, reliable insights to drive evidence-based health resilience.
- **Develop a robust governance framework and coordinating mechanism:** establish a robust governance framework that guides the integration of climate and health data by strengthening interministerial and intersectoral coordination, creating cross-sectoral working groups, and defining clear roles and responsibilities to ensure collaboration, accountability, and effective implementation of climate action plans.

  The coordinating mechanism would act as a think tank to drive integration and standardisation of climate and health data systems. This would enable interoperability, transparency, and timely knowledge-sharing, while fostering multisectoral and cross-institutional engagement in co-creating health solutions. The mechanism would play an important role in convening stakeholders, enhance capacity for data-driven decision-making, and promote collaborative research, innovation, and policy action to address interconnected climate and health challenges.
- **Leadership and champions:** Strong political leadership is essential, including buy-in at the presidency and establishment of parliamentary standing committees to champion appropriate legislation for cross-sectoral coordination and policy synergies, influence government budget allocations and provide strategic oversight, ensuring government efforts are aligned, effective and accountable.
- **Develop a strong M&E framework:** A robust monitoring and evaluation (M&E) framework is needed to track the progress of national action plans and measure their effectiveness.
- **Funding:** Transformative and sustainable interventions demand large-scale and longer-term funding powered by catalytic co-funding that leverages both government and philanthropy.

Innovation and the future

- **Leveraging innovation and technologies**: leverage innovation and emerging technologies, particularly Artificial Intelligence (AI), to enhance CIS by improving the accuracy of climate forecasts, enabling predictive analysis of climate-sensitive disease outbreaks for timely health interventions, and making complex scientific data accessible through AI-powered and mobile tools that translate information into user-friendly formats and local languages for rural communities and decision-makers.

In summary the above recommendations align with African Union, African Leaders Addis Ababa Declaration on Climate Change and Call to Action, which emphasises the need to fill climate data gaps, strengthen scientific capacities and establish a continent-wide data ecosystem that will drive transformative information sharing and co-creation of climate responsive solutions.

5. Annexes

Annex 1. Opening Speeches

Opening Statement by H.E. Dr Ibrahima Sy, Ministry of Health and Social Action, Republic of Senegal and Champion of Climate and health for Africa

Your Excellencies, Honorable representatives of climate and health sectors

Excellencies distinguished guests, ladies and gentlemen,

I would like to present my apologies for not being present with you in Addis Ababa as I have another important activity which was already planned before your invitation.

It's a great honor to be able to address this honorable audience present in Addis Ababa in the Second Africa Climate Summit (ACS2)

I would like to thank the organizers Dr Ousmane Ndiaye and Dr Judy Omumbo, for their initiatives and inviting me.

As a Champion of Climate and health for Africa, it's very gratifying to appreciate African institutions leading such initiative, I meant The African Centre of Meteorological Applications for Development (ACMAD), and the Science for Africa Foundation (SFA Foundation), working with high-level stakeholders from across the climate science, health, agriculture, disaster risk, and donor ecosystems and I can name our faithful partners Wellcome Trust and Rockefeller foundation.

I am delighted to be part of this Roundtable on: Enabling Climate Information Services for Enhanced Health Resilience in Africa which main objective is to explore actionable strategies for closing the climate services delivery gap in Africa and to identify priority actions needed for national and regional climate services to support African on delivering on national climate commitments.

With the last IPCC report predicting extreme events as the first-rank risk among the risks to be experienced during the next decade, it is important to smartly integrate climate information in all our value chain of decision making and ensure climate information is not a privilege but a public good, available and openly accessible to all, especially those most affected by climate change.

Despite growing investments in climate adaptation and early warning systems, major gaps persist in the uptake and delivery of climate information services, particularly reaching the "last mile," where the absence of timely, accessible, and actionable data disproportionately affects rural communities, women, and marginalized groups. It is never been more urgent to build strong meteorological and public health services working closely and exchanging information both supported in their information services delivery by evidence from a dynamic research institution in Africa.

If we achieve such cross-sectoral collaboration, we then would accelerate progress towards the Sustainable Development Goals. Fragmentation, duplication, and inefficiency are undermining our progress. The key words are coordination, cross-sectoral collaboration that bridge science, policy, and implementation for better anticipatory actions.

I am pleased to note that you are already looking forward to working with African institutions, communities, and global partners to build the knowledge systems and delivery mechanisms needed to integrate climate science into health sector action at every level.

I once again thank the Wellcome Trust and Rockefeller for their financial support, and the World Meteorological Organisation (WMO) and World Health Organisation (WHO) for the technical and political leadership.

Lastly, I wish to reiterate my personal commitment and on behalf of the ministers of health in Africa to support the implementation of this initiative.

Thank you so much and together we can make a difference.

I wish all of you a productive discussion and pleasant stay in Addis Ababa.

I thank you!

Annex 1. Opening Speeches

Speech by Prof Celeste Saulo, the Secretary General of the World Meteorological Organisation (WMO)

Dr Ousmane Ndiaye, DG of ACMAD, Dr Judy Omumbo,

Excellencies, colleagues and friends, as we meet here in Addis Ababa, millions across Africa are already facing the health risks of extreme heat, malaria, and malnutrition intensified by climate extremes. But sometimes, the smartest solutions are also the simplest. Climate information is not a forecast; it is a first aid kit for public health. When we share data, we save lives. When we localize services, we build trust. When we act early, we protect the future.

From rainfall to resilience, from maps to medicine, Africa is showing the world how climate and health can work as one. My message today is clear: climate information must be translated into health protection that reaches the very last mile, because data alone does not save lives, action does. Imagine a future where a child born in Accra, in Zanzibar, or anywhere on this continent, grows up in a healthier Africa, one where climate intelligence strengthens every life.

Excellencies, the WMO Community has a wide range of services which inform climate sensitive sectors like health. For example, seasonal outlooks help health managers anticipate and prepare: an above average rainfall forecast can signal a rise in vector and water borne diseases, while below average rainfall may point to risks of under nutrition and respiratory problems. These regional outlooks are translated into national and local forecasts, turning global science into practical guidance. In doing so, they save lives and protect livelihoods on the ground.

WMO recently forecast that there is a 60% chance of La Niña emerging by October. From experience, we know that La Niña has a major, but varied, impact on rainfall and temperature patterns across the continent. We have the necessary climate insights and intelligence to anticipate these impacts and to act decisively.

Extreme heat is increasingly emerging as the silent killer. And especially in developing countries where we don't have the reporting mechanisms to measure the excess mortality. Without data we are blind. We need more data, and we need to share it. Heat-health early warning systems are gaining ground in many parts of the world. But in Africa, we still need to make much more progress. All too often there is no connection between national meteorological services and health authorities. This must change. And even where warnings exist, they do not always reach the last mile. But in Senegal, there is a powerful example of how this challenge can be overcome. And we have here Dr Ndiaye from Senegal, where the National Meteorological Agency joined forces with the public health sector to design a heat–health warning system. Then, together with civil society and the University of Dakar, they worked to refine it. Along the way, they uncovered a barrier: many vulnerable people could not read the SMS alerts. Instead of stopping there, they found a solution. They transformed the same warnings into voice messages, delivered in local languages.

Excellencies, no costly technology. No complicated systems. Just a simple, inclusive approach, one that put science directly into people's hands. This is innovation. This is resilience. And this is the kind of leadership Africa is offering to the world.

Excellencies, friends, at the heart of effective climate services lies the decision-making context and the needs of users in climate-sensitive sectors. In this regard, there are many important initiatives: Enhancing National Climate Services (ENACTS) works with National Meteorological Services in Africa to improve the availability and quality of climate data by blending available historical records with current climate models and observational data. Such initiatives offer valuable lessons and opportunities for scaling up integrated climate-resilient health solutions. We must ensure that climate and health systems are actionable, delivering timely information that practitioners can readily use to protect health. Information must be adapted so it reaches the right person, in the right way, at the right time. It's not about just issuing an alert, it's about engaging with the final user to make sure that the alert will be useful. Let us go that extra mile to ensure it is user-tailored and that it speaks the language of communities. WMO stands ready to support and scale such human centered innovations, through inclusive codesign, accessible delivery, and community-led early-warning systems across Africa and beyond.

Excellencies, friends, climate information is not a luxury, it is a lifeline. When we combine climate services with health services, we get: fewer disease outbreaks, less crowded hospitals, healthier children in school. Africa has the talent and the tools.

Early warnings. Early action. Healthy futures. Let this be our shared promise.

Annex 2. Guiding questions

Category	Goal	Questions Posed
Evidence, Data and Infrastructure/ Systems	**To identify current gaps, challenges and opportunities in Africa's Systems**	Beyond governance, policies, mistrust, and funding gaps, what are the most pressing challenges we face in integrating climate and health information across Africa?
		What are the scalable lessons from these, or similar initiatives, that we can leverage to better integrate climate data with health information nationally and regionally?
		How do we ensure the credibility, trust, and accessibility of climate–health data across different user groups?
Science–Policy–Practice Linkages:	**To understand the governance and decision-making barriers and provide solutions from best practices from other countries**	What are the most effective ways to strengthen the linkages between science, policy, and practice to ensure that CIS actively informs health decision-making in our countries?
		"What governance frameworks are needed, or need strengthening, to establish climate information as a trusted public good, not just for health but across related sectors?"
Communities and last-mile perspectives: Equity, local ownership, and inclusivity.	**To explore how to meaningfully engage communities**	How could communities be supported to lead in designing credible, trusted, and locally owned information systems?
		What role do indigenous knowledge and other knowledge systems play, or should play, in shaping actionable climate–health services?
		What financing models could unlock sustainable national investment in Africa's CIS ecosystem?
Partnerships and funding: African-led ownership and pathways to sustainability.	**To explore how to create an African-Led and owned initiatives to ensure sustainability**	How can partnerships (with governments, philanthropy, and the private sector) be structured for long-term sustainability and equity?
		Are there examples of where such partnerships are happening?
		What about digital infrastructure, AI, and emerging technologies? How could these accelerate CIS-health integration in Africa?
Innovation and the future.	**To get consensus on action points for future and utilizing new technologies**	What about digital infrastructure, AI, and emerging technologies? How could these accelerate CIS-health integration in Africa?
		What would success look like in a decade for CIS-enabled health resilience in Africa?
		Based on today's discussion, what is one practical commitment or priority action you would like to see taken forward from this Summit?

Annex 3: List of participants

1. Steering Committee Members
Dr Ousmane Ndiaye, Director General, Africa Centre for Meteorological Applications for Development (ACMAD)
Dr Judy Omumbo, Head of Partnerships & Resource Mobilisation, Science for Africa Foundation
Dr Madeleine Thomson, Head of Climate Impacts & Adaptation, Wellcome
Mr Ben Ryder, Research Manager, Climate Impacts & Adaptation, Wellcome
Prof Wilmot James, Senior Advisor & Professor of Practice Pandemic Center, Brown University, Providence, Rhode Island
Mr Erick Omollo, Senior Programme Officer, Science for Africa Foundation
Mr Greg Kuzmak, Director, Health, The Rockefeller Foundation

2. Government Representatives		
Name	**Role**	**Organisation**
1. Hon Dr Ibrahima Sy	Minister for Health & Social Action	Republic of Senegal
2. Katiellou Gaptia Lawan	Director	Niger Meteorological Services
3. Lucy Mtilatila	Director	Department of Climate Change & Meteorological Services, Malawi

Annex 3: List of participants

3. United Nations & Intergovernmental Organisations		
Name	**Role**	**Organisation**
1. Celeste Saulo	Secretary General	World Meteorological Organisation (WMO)
2. Martin Krause	Director, Climate Change Division	United Nations Environment Programme (UNEP)
3. Brama Koné	Technical Officer, Climate Change & Health	WHO Africa Regional Office
4. Waqo Gufu Boru	Senior Medical Epidemiologist	Intergovernmental Authority on Development (IGAD)
5. Paulino Omay	Climatological Specialist	IGAD Climate Prediction & Applications Center (ICPAC)
6. Mariane Diop Kane	Programme Manager, Regional Office for Africa	World Meteorological Organisation (WMO)

4. Regional & Pan-African Institutions		
Name	**Role**	**Organisation**
1. Ousmane Ndiaye	Director General	Africa Centre for Meteorological Applications for Development (ACMAD)
2. Godefroid Nshimirimana	Senior Climate Expert	ACMAD
3. Wendlasida Combere	Climate Services Technical Communication Expert	ACMAD
4. Yewande Alimi	One Health Unit Lead	Africa CDC
5. Merawi Tegegne	Head of Surveillance & Disease Intelligence	Africa CDC
6. R. Hyacinthe Zabre	Data Analyst	Africa CDC
7. Meleake Serawit	DHIS2 Collaboration with Africa CDC	DHIS2
8. Hamidou Lazoumar	Coordinator, Health-Environment-Climate Epidemiological Unit	Centre for Resource Management and Environmental Studies (CERMES)
9. Judy Omumbo	Head of Partnerships & Resource Mobilisation	Science for Africa Foundation
10. Erick Omollo	Senior Programme Officer	Science for Africa Foundation

Annex 3: List of participants

5. Funders & Philanthropic Organisations		
Name	**Role**	**Organisation**
1. Madeleine Thomson	Head of Climate Impacts & Adaptation	Wellcome
2. Modi Mwatsama	Head of Field & Capacity Building	Wellcome
3. Jess Ayers	CEO	Quadrature Climate Foundation

6. Research & Academic Institutions		
Name	**Role**	**Organisation**
1. Prof Wilmot James	Senior Advisor & Professor of Practice	Pandemic Center, Brown University, Providence, Rhode Island
2. Tufa Dinku	Senior Research Scientist	International Research Institute for Climate and Society, Columbia Climate School
3. Fionne Marshall	Africa Regional Lead	UK Met Office
4. Shaban Mawanda	Africa Region Lead	IFRC-RC Climate Centre
5. Irene Amuron	Head of Anticipatory Action Programme	IFRC-RC Climate Centre
6. Sokhna Thiam	Associate Research Scientist	African Population & Health Research Center (APHRC)
7. Maryam Diarra	Research Assistant / Biostatistician	Institut Pasteur de Dakar
8. Jente Broeckx	International Business & Project Manager	VITO

6. Community & Civil Society Representatives (TBC if any)		
Name	**Role**	**Organisation**
Desta Lakew	Director of Partnerships and External Affairs	Amref Ethiopia

7. Other		
Name	**Role**	**Organisation**
Hiwot Teka	Consultant	

Annex 3: List of participants

Time	Activity	Presenter /speaker
12:15 – 12:25 **(10 mins)**	**Remarks by co-organizers** • Objective and scene setting: Science for Africa Foundation & ACMAD	• Dr Ousmane Ndiaye, DG ACMAD & Dr Judy Omumbo, SFA Foundation
12:25 – 12:35 **(10 mins)**	**Opening remarks:** • Government of Senegal • World Meteorological Organisation	• Hon Dr Ibrahima Sy, Minister of Health and Social Action, Senegal • Prof Celeste Saulo, Secretary General, WMO
12:35 – 12:45 **(10 mins)**	**CIS for Health resilience in Africa:** • A brief history • A funder's perspective	• Prof Madeleine Thomson; Head Climate Impacts and Adaptation at Wellcome • Dr Modi Mwatsama; Head of Field & Capacity Building
12:45 – 13:00 **(15 mins)**	**Presentation of case studies:** • The AWARE project findings from Kenya and South Africa: Showcasing best practices that advance early warning, data sharing and governance of actionable climate-health solutions for Africa.	• Prof Wilmot James; Professor of Public Health; Brown University, Providence, Rhode Island
13:00 – 13:05 **(5mins)**	Africa CDC Climate and Health Strategy	• Dr Yewande Alimi; One Health Unit Lead; Africa-CDC)
13:05 – 13:40 **(35 mins)**	**Discussion:** • Enabling CIS for Enhanced Health Resilience	• All (Hiwot Teka: Moderator)
13:40 – 13:50 **(10 mins)**	• Way forward and closing remarks	• Prof Wilmot James, Dr Ousmane Ndiaye and Dr Judy Omumbo


ACS 2

Report on Roundtable and Panel Discussions Held on September 8, 2025, on the Sidelines of the 2nd Africa Climate Summit (ACS2), in Addis Ababa, Ethiopia, Focused on Enabling Climate Information Services (CIS) for Enhanced Health Resilience in Africa

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BROWN Pandemic Center

The Rockefeller Foundation