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Climate Information Services: training and tools to boost uptake across Africa

The African continent will be one of the hardest hit by the impacts of climate change, threatening economic growth and eroding advances in poverty reduction. Accurate and timely climate information - tailored to the end-user and packaged up ready for application - can help countries make well-informed, evidence-based decisions to safeguard socio-economic gains and take action to minimise damage from climate-related disasters.

With timely information about excessive rainfall and drought, farmers can prevent damage to crops, and even stabilise or improve productivity by deciding which crops to plant and when to harvest; rural communities can avoid loss of life and protect livelihoods by planning for extreme weather events including storms, heatwaves and floods; with tailored weather information, the private sector can make climate-smart business decisions - for example, wind outlook data for a particular location can assist entrepreneurs in investing in wind energy; and last but not least, policymakers

can take action to mitigate climate related shocks - such as climate proofing investments in critical infrastructure including housing, office buildings, roads, railways, bridges or dams. They can also use current and future climate variable trends when drafting long-term national or regional development strategies.

But from the grassroots to government, there is low awareness of the tangible benefits of climate information, and uptake and use across Africa is low.

Key terms

Climate information: reliable, relevant, accessible, useable, credible and understandable information about the weather or climate

Climate information services: tools and processes that enable decision makers and user communities to assess, and prevent or prepare for, the potential impactful weather or climate events.

A comprehensive, multi-faceted training programme rolled out by the African Climate Policy Centre (ACPC) of the United Nations Economic Commission for Africa (UNECA) in collaboration with United Nations Institute for Training and Research (UNITAR) under the Weather Information and Climate Services (WISER) is designed to raise awareness of how data on variables such as temperature, rainfall, wind, humidity and sunshine hours, can be analysed, packaged and applied to inform crucial decisions in policy, planning and practice.

Tailored workshops, a manual toolkit and a hands-on, interactive online module have been designed to build understanding of the different types of climate information and services, and show how these can be used for critical decision making in key development sectors such as agriculture, water, energy, transport and disaster risk reduction.

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Tailored training for key actors

The training initiative is targeted at key actors, each with a specific role in raising awareness of the urgent need for climate information and climate information services across Africa:

Legislators: advocating for climate information uptake in policy and law

Reliable production and delivery of climate information requires weather stations equipped with high quality observational equipment to capture climate data - and the right software to analyse it. Most African countries have seen chronic underinvestment in national and local weather stations. This has led to obsolete and defective infrastructure that generates poor quality data with major gaps. Meanwhile, insufficient resource allocated to the technical and analytical expertise needed to manage weather information systems further compromises the quality of data.

Legislators have a crucial role in tackling this major weakness in the system - at the very source. At ministerial level, championing climate information as a tool to support national development goals can help ring-fence budget for critical infrastructure - more powerful computers, more sophisticated satellites, more advanced rain gauges - and help secure crucial human resource.

Legislators can also push for laws that consider the adverse effects of changing climate and weather conditions. When legislation is backed up by reliable climate information, it can bring significant national and local co-benefits including improved food security, increased access to sustainable energy, more effective water management, better health and cleaner air. Such laws can also support countries' disaster risk reduction strategies, helping to build climate resilient communities.

Also critical, are laws and policies that recognise climate information as a public good, where access is free and unrestricted. Across many African countries, national hydro-meteorological services charge for

Effective production, delivery and use of climate information and services

1

Policy and laws can address weaknesses in generation of climate information at source

2

Accurate forecasts

3

Information tailored to user groups

4

Information accessed and understood by user groups

5

Effective uptake of climate information

6

Socio-economic benefits

their climate data to support the costs of running their weather services. Legislators can advocate for laws that make climate information freely available by demonstrating how socio-economic returns of investing in climate information (disaster risk reduction, food production, health risk management) far outweigh the costs to produce the data. Such costs can also be offset by integrating climate information services to all the sectors of the economy.

Civil Society Organisations: bridge to the grassroots

There is limited understanding of the benefits of climate information at the grassroots of African society. Coupled with scepticism about reliability, timeliness and how it can be applied,

demand for climate information at the local level is low.

Civil Society Organisations (CSO) are the bridge to the grassroots, showing how climate information from national hydro-meteorological services, when localised, can bring tangible benefits to individuals and communities on the ground.

CSOs can show smallholder farmers how accurate rainfall predictions can help them reap bigger and healthier harvests and how fishermen and women can avert loss of life if warned about violent incoming storms; they can take the message to women in rural households of how to prepare for climate-related floods and fires that damage their homes



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and critical assets; CSOs can educate parents and teachers on how to take action to protect children – it is children who bear the greatest disease and injury burden from climate-related threats such as natural disasters and heat stress.

And while reaching out to local actors, conveying the benefits of climate information, CSOs can channel users' needs back to the producers of climate information to ensure it is tailored appropriately. For uptake at community level, climate information must be relevant, culturally sensitive, communicated in the correct language and delivered via platforms that work for local people – whether by SMS updates, radio weather forecasts, community meetings, outreach through schools or hospitals, or via extension services. In this

context, CSOs are the mouthpiece for local actors, ensuring their voice feeds into climate research and the generation of climate information.

CSO can also demonstrate to communities how indigenous knowledge of weather and climate – which can be a powerful tool for predicting climate change – works hand in hand with climate science. If local people understand the synergies between indigenous and scientific knowledge, they are more likely to trust climate information.

Media: taking climate information to the masses

The media sits at the interface between the climate science community and the general public. As skilled communicators,

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they have an integral role in unpicking the complexities of climate information and translating the benefits to the wider population. For millions of Africans, the consequences of climate change are an everyday reality. But very little is known about how climate information can help them adapt to increasingly dramatic shifts in weather. The media has the influence to change this.

Working closely with climate scientists, the media can show how climate science can be turned into locally relevant, practical information, such as daily weather forecasts, seasonal outlooks, weather warnings and alerts. Such reporting has potential to stimulate effective response to climate change among the wider population: pastoralists and fishermen, village elders and business executives, women and men, young and old, Africa's bustling urban populations and those in remote rural communities.

Youth: harnessing the energy of Africa's younger generation

With the biggest stake in Africa's future, youth have a major role to play in shaping a prosperous, climate-resilient continent. Sustainable, economic growth hinges on whether Africa's young generation, can embrace climate information to curb the adverse impacts of climate change on climate-sensitive sectors such as agriculture, forests and fisheries.

Working closely with climate scientists, the media can show how climate science can be turned into locally relevant, practical information

Sustainable, economic growth hinges on whether Africa's young generation, can embrace climate information to curb the adverse impacts of climate change on climate-sensitive sectors

Africa's vibrant youth have the energy and power to raise awareness in their communities of the need for robust climate information, and to urge their governments to implement policies that support uptake.

They also have the entrepreneurial spirit, the brains and technical know-how to explore how climate information can be used to help Africa's core industries adapt and thrive – for example, how climate information can be localised and used very specifically in different parts of the supply and production chain.

Africa is experiencing a rapid rate of urbanisation, more than any other global region. This is generating an upsurge in hotels, restaurants and driving an expanding fast-food industry, which in turn is generating emerging opportunities for trade in agricultural products.

Young people are tapping into this growth – and not in the conventional ways. Kenya, for example, is seeing a younger generation beginning to venture into agriculture by growing produce in greenhouses on the peripheries of major cities like Nairobi. These young entrepreneurs are growing short-cycle



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crops such as tomatoes, lettuce and vegetables to supply direct to hotels and restaurants. Greenhouse farming can be done year round, and so avoids the restrictions of seasonality and uniformity as in traditional market gardening.

However, production in such an enclosure has its own challenges and special needs for climate information services in managing operational practices and quality standards; planning irrigation, pest and disease controls, ventilation and relative humidity all require climate information. Harvesting, refrigeration and cold storage, commensurate with health and safety standards, can only be managed with better understanding of climate information services. De-risking the investments of these young entrepreneurs and out-scaling and up-scaling market gardening must be underscored with training in climate information services.

Training of trainers: building a critical mass of climate information champions through a hands-on, interactive online module

The “Training of trainers” (ToT) aspect of the learning programme has been designed to ensure that the importance of climate information has the widest possible reach.

This element brings together delegates from African parliaments, media training institutions, CSO and youth training institutes who have existing experience



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in training and communication. Bespoke workshops build their skills in how climate information services can be mainstreamed into development policy, plans and processes.

Trained delegates will, in turn, train other representatives from their own jurisdictions – legislators, policy makers, the private sector, and local communities including women and youth. This ripple-effect learning framework will be rolled-out through workshops at national level across the African continent with the goal of reaching 2,000 beneficiaries by 2019.

The Training of Trainers workshop is based on the toolkit 'Mainstreaming/ Integrating Climate Information Services into Legislation, Development Policies, Plans and Practices'

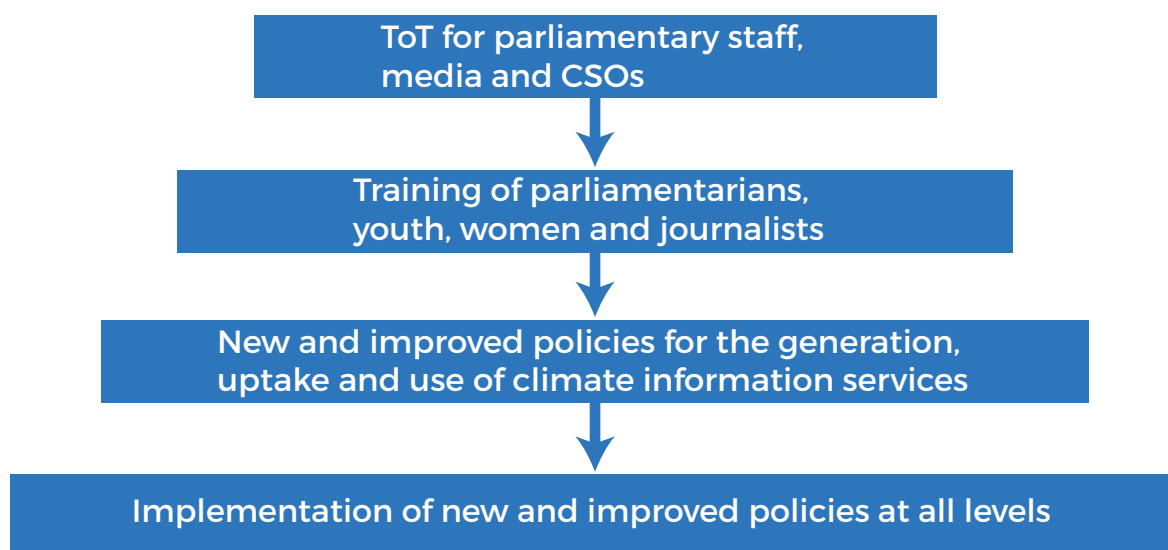
Trainers running these national workshops use an online module – a

practical, step-by-step guide that explains the critical role of effective, timely climate information.

Specifically, the module:

- builds understanding of how climate information can be used to assess the nature of climate risks and how this can help evaluate investment decisions
- demonstrates how climate information can climate-proof development plans and how predicting climate variability for different sectors presents opportunities
- illustrates how climate information can be incorporated to make informed decisions about ways to reduce vulnerabilities and impacts of climate-related disasters such as floods or wildfires

Democratizing CIS through training and policy formulation to support CIS generation, uptake and use



- explores how climate information can help analyse how climate change risks can impact decisions for long-term projects such as infrastructure investments or insurance schemes.

The open-access, user-friendly learning tool is easy to navigate and can be tailored to learners' needs. To enhance the learning experience, it includes interactive elements such as 'hot-spot reveal screen' and 'drag and drop' and multiple-choices questions throughout

to test the learners' knowledge. It also features a comprehensive glossary of terms as well as a list of resources and useful links. An offline version of the module is also available.

To learn more, the e-learning module can be accessed at: <https://unccelearn.org/enrol/index.php?id=32>

Further information on WISER is available at: www.uneca.org/wiser

About ACPC

The African Climate Policy Centre (ACPC) is a hub for demand-led knowledge on climate change in Africa. It addresses the need for greatly improved climate information for Africa and strengthening the use of such information for decision making, by improving analytical capacity, knowledge management and dissemination activities.

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