African researchers have a shared commitment to improve the use of climate information in decision-making.

As part of these efforts, the African Institute for Mathematical Sciences (AIMS) through its Next Einstein Initiative has partnered with other research and multilateral institutions engaged in enhancing adaptation and climate-resilient operations to implement a project dedicated to build a critical mass of mathematical scientists to contribute to climate change solutions for Africa.

Key to this initiative which is being implemented in six African countries including Cameroon, Ghana, Kenya, Rwanda, Senegal and South Africa during the initial phase is to ensure African scientists have an important contribution to make in understanding the scope and scale of these problems and developing innovative solutions for policymakers and practitioners.

Research uptake into policies

Dr Mouhamadou Bamba Sylla, Research Chair in Climate Change Science at AIMS told reporters that major focus will be on building climate-resilient society in Africa, with long-term adaptation plans.

Latest estimates show that existing climate research funding for Africa is mainly allocated by overseas donors whose priorities are not necessarily in line with national and continental development plans.

In the latest Intergovernmental Panel on Climate Change (IPCC) landmark report, researchers warned that the temperature increases due to human-caused climate change are detected across Africa and many regions have warmed more rapidly than the global average.

The scientific report shows that a signal of increased annual heat wave frequency has already emerged from the background natural climate variability over the whole continent where many regions lack regularly reporting and quality-controlled weather station data.

At a workshop attended by scientists in Kigali, Dr Sylla highlighted the financial needs for African countries to foster fundamental research uptake into policies and practices.

“We need to mobilize domestic resources to support African researchers to come up

with evidence-based information that is required to tackle climatic hazards on the continent," said Dr Sylla.

While boosting investments in climate research is key to improve countries' resilience to climatic hazards, scientists are convinced that better packaging of research results is another important factor for facilitating the uptake of research in policymaking.

AIMS, through its Mathematical Sciences for Climate Resilience programme, is currently helping address the climate data gaps in Africa, but scientists say more needs to be done.

Mathematical tools

Dr Andre Kamga, the Director General of the African Centre of Meteorological Applications for Development (ACMAD) said that said that the use of research evidence in policymaking is a critical point for African countries to achieve climate resilience.

"Many countries still lack appropriate response to address hazards because the existing national weather agencies are only providing seasonal predictions model for short-term forecasting," Dr Kamga said

Both Dr Kamga and Dr Sylla are convinced that building mathematical tools is critical to address specific climate problems in Africa in order to provide solutions.

At a time climate services are now seen to offer benefits across a range of sectors in Africa, scientists emphasize to use mathematical science in providing solutions to cope with current effects of extreme climate events.

However, scientific evidence, according to researchers can also misinterpreted by policymakers, especially when they are incomplete, inconsistent, or inconclusive

"It remains crucial to translate all scientific findings using common jargon to better communicate climate science with policy makers," said Dr Sylla.

Adds Prof. Sam Yala, Centre President at the Rwandan based African Institute for Mathematical Sciences (AIMS), useful climate information released by scientific community can be used by everyone.

“Scientific knowledge remains critical for policymakers in responding to climate hazards,” Prof. Yala said.