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Education needed to improve low levels of climate change literacy in Africa

The average national climate change literacy rate (percentage of population that has heard about climate change and thinks that human activity is wholly or partly the cause of climate change) in Africa is only 37%, with vast differences among countries. This is according to a [new study published in the journal *Nature Climate Change*](#) by researchers from the University of Cape Town (UCT) and the University of Connecticut (UConn).

With human-caused climate change expected to bring increasingly severe economic and environmental challenges, those who understand the risks will be better prepared to take action to reduce greenhouse gas emissions causing climate change and to adapt to future climate change, including finding opportunities to increase human and environmental wellbeing.

According to lead author of the study, Dr Nick Simpson from the African Climate and Development Initiative (ACDI): "The climate has already warmed by 1.1°C. By anticipating future climate change impacts when making decisions about their livelihoods, careers and investments, people can better safeguard their futures. Without climate change literacy, hundreds of millions of people across Africa will not be able to sufficiently adapt to climate change".

Simpson and co-authors set out to identify climate change literacy rates in Africa as well as its main social and environmental predictors across the continent. They found that across 33 African countries, climate change literacy varies substantially at both country and subnational levels. For example, the climate change literacy rate is 66% in Mauritius and 62% in Uganda, but only 25% in Mozambique and 23% in Tunisia. Comparing subnational administrative units across Africa, of 394 subnational regions surveyed, 8% (37 regions in 16 countries) have a climate change literacy rate lower than 20%, while only 2% (8 regions) score higher than 80%.

Their findings also pointed to higher climate change literacy rates among men, which are on average 13% higher compared to women. "These are concerning findings given that multiple socioeconomic and cultural factors mean women are often more vulnerable to

adverse climate impacts on their health and livelihoods, and have more limited resources to adapt, than men,” said Dr Talbot Andrews, co-author from UConn.

Education was found to be the strongest predictor of climate change literacy by a large margin. While wealth, mobility, living in urban areas, historical trends in precipitation, as well as perceived drought experiences were also positively associated with climate change literacy levels. However, there was no effect of changing temperatures or the occurrence of climate change related hazards like floods on climate change literacy.

People living in rural areas and those living in poverty are most sensitive to changes in the environment: they are both more vulnerable to and more likely to perceive changes in droughts and flooding. They face more exposure to climate hazards, highlighting the urgency of enabling climate change adaptation responses for these groups, including increasing access to financial and knowledge resources.

“Our findings suggest that education will be a critical tool in increasing climate change literacy across Africa and closing the climate change literacy gap in Africa between men and women,” shared Dr Christopher Trisos, co-author of the study from UCT.

The findings from this study can help policy makers and civil society target interventions to increase climate change literacy. For example, Africa is projected to undergo substantial shifts in urbanisation, education, gender equality, mobility, and income in the near future. Rates of climate change literacy are therefore likely to evolve with these processes, as well as with changing climate hazards.

Simpson explained: “A focus on climate change literacy provides a concrete opportunity to mainstream climate change into development agendas in Africa and across the Global South more broadly. Advances in climate change literacy and improved climate forecasting have the potential to work with indigenous and local knowledge practices to deliver transformative climate change adaptation action across Africa.”

[Access the study “Climate Change Literacy in Africa” online](#) (live after 17:00 SAST, 7 October 2021).

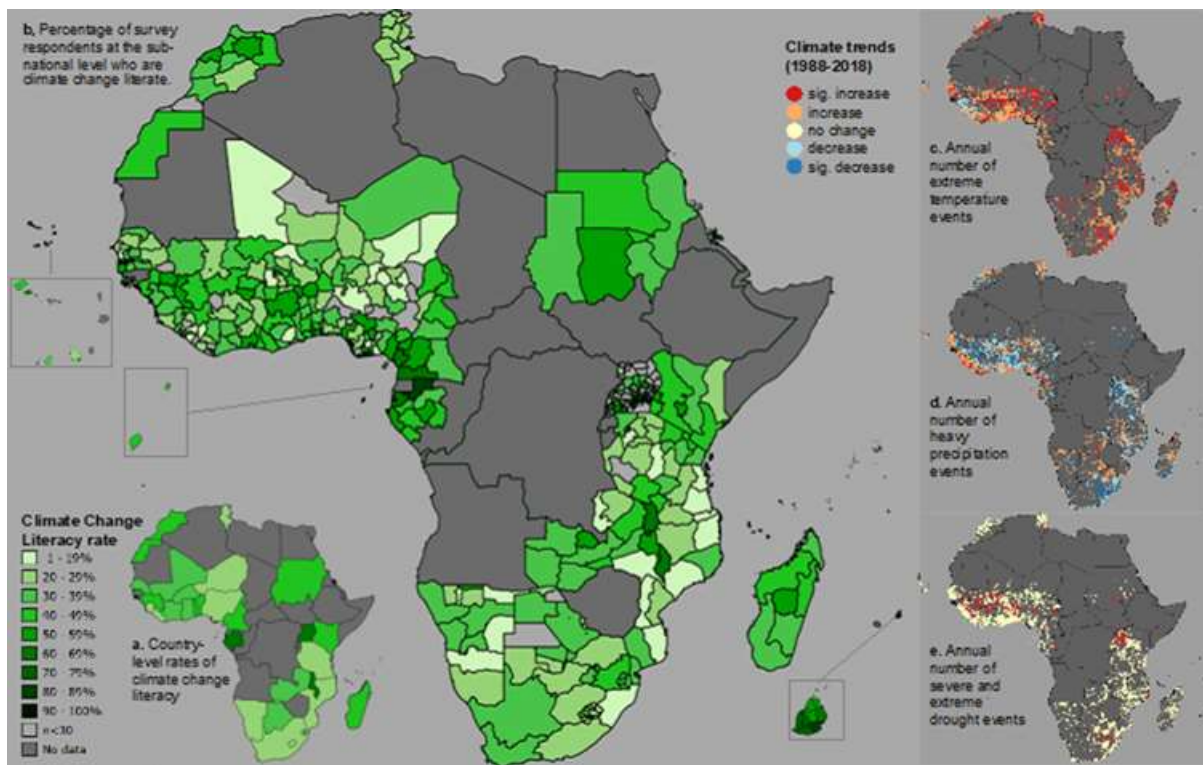


Figure 1: Climate change literacy rates across Africa. a, country-level rates of climate change literacy (that is, percentage of population that have heard about climate change and think that human activity is wholly or partly the cause of climate change) for 33 African countries. **b**, percentage of survey respondents at the sub-national level who are climate change literate. Dark grey regions had no surveyed respondents, while regions shaded in light grey had fewer than 30 respondents. Observed climate trends (1988-2018) at the location of each respondent for **c**, heavy precipitation (number of months with rainfall > 90th percentile), **d**, extreme hot months and **e**, severe drought events (number of months per year of drought).

Credit: Simpson et al. 2021, DOI: 10.1038/s41558-021-01171-x

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