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MCC Press Release

Africa needs country-specific narratives for a clean energy future

A study co-authored by MCC in the top journal Nature Energy analyses the situation in the continent's 54 countries. Focus on Ethiopia, South Africa, Mozambique, and Burkina Faso.

Berlin, 25/10/2022. Ahead of the upcoming world climate conference COP27, academics from 50 institutions have called for a shift in how politicians, funders and researchers think about the clean energy transition in the African continent, as a new study highlights radically different energy needs across countries. Published in world-leading journal *Nature Energy* today, the research was carried out by a team of 40 African researchers and co-authors from institutes including the Berlin-based climate research institute MCC (Mercator Research Institute on Global Commons and Climate Change), University College London, the UN Economic Commission, the Climate Compatible Growth Programme and the University of Oxford.

"COP27 is Africa's COP," emphasises Jan Steckel, head of the MCC working group Climate and Development and a co-author of the study. "It is vital for us to listen and learn from African energy innovators and to then prioritize energy access, justice and investment in on- and off-grid energy devices to reach the UN's Sustainable Development Goals and economic progress. We hope this research will accelerate that."

Until now, the authors maintain, the Global North has both dominated African energy conversations and tended to think of the continent as a homogenous collective with similar energy needs and net zero paths. By exploring the energy systems of four exemplar African countries – Ethiopia, South Africa, Mozambique and Burkina Faso – the authors spell out how wrong that assumption is. For example, In Burkina Faso, where electricity access is below 5 percent in rural areas, hybrid solar photovoltaic-diesel systems can offer a cost-efficient avenue to support development. On the other hand, Ethiopia is already a green growth powerhouse with 90 percent hydropower and cheap solar and wind resources to support further development. The research reveals very different energy systems and needs across Africa.

A further analysis of all 54 African countries highlights that each nation faces different starting points, solutions and uncertainties for using renewables or fossil fuels to meet development objectives, and will therefore have a different pathway to success. "Today's global debate is characterized by unhelpful generalizations," says Youba Sokona, Vice-Chair of the Intergovernmental Panel on Climate Change (IPCC), and an author of the study. "Our research highlights that to achieve development and climate objectives in Africa, the international community needs to embrace and support nuance and country-specific analysis. Pathways to get to clean energy systems depend a lot on how feasible they are in each African country."

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The authors point out that research has consistently shown that renewable energy offers huge benefits in Africa and around the world, including growth and job creation, improved climate change resilience and better public health. Natural gas investments, on the other hand, have substantial risk of creating future stranded assets for African countries, with little research on the extent of their impact or potential mitigation strategies. "With several African countries, including Mozambique, on the brink of making long-term natural gas commitments, it is vital that national leaders have the information they need to make informed choices about economic, social, and environmental goals," says Philipp Trotter, from the University of Wuppertal and the Smith School of Enterprise and the Environment, University of Oxford, "Currently, this isn't the case. Decisions these countries may now have implications for decades down the line."

"Country-specific, evidence-based energy options and pathways for implementation are now urgently needed across Africa," says Yacob Mulugetta, Professor of Energy and Development Policy at the University College London and lead author of the study, "This will require national leadership as well as international funding, research support and tailor-made finance and investment. We hope this research will encourage African governments to take greater ownership of their energy decisions and take a longer-term view of their energy system, to make sure their energy future is in their hands and serves the needs of their citizens."

Reference of the cited article:
Mulugetta, Y., Sokona, Y., Trotter, P., et al., 2022, Africa needs context-relevant evidence to shape its clean energy future, *Nature Energy*
https://go.nature.com/3MXV0sM

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