

Pilot 2019: Start-up financing Global South - Project report

Secure Access to Renewable Energy in Sub-Saharan Africa

- **Field of expertise at the TU Berlin:** Exergy-based Methods for Refrigeration Systems
- **Partner countries:** Rwanda, Algeria, Kenya, Switzerland
- **Partner Institutions:** African Center of Excellence, Pan African University, Jomo Kenyatta University, Sustainable Development Goals Center for Africa, University of Geneva, RWI Essen
- **Priority Addressed Sustainable Development Goals (SDGs):**



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SDG 7: Affordable and Clean Energy

SDG 13: Climate protection measures

SDG 17: Partnerships to achieve the goals

The FG Exergy-based Methods for Refrigeration Systems at the Institute of Energy Technology of TU Berlin and the start-up HEDERA received start-up funding from TU Berlin in 2019 to conduct a one-week workshop with various stakeholders from the renewable energy sector from Africa and Europe. Prof. Morozuk (FG Exergy-based Methods for Refrigeration Systems) and Dr. Ing. Natalia Realpe Carillo (Start-up Hedera) planned the workshop to be able to discuss together about access to energy and to strengthen collaboration and partnerships between practitioners and scientists. The overall goal of the meeting was to develop a shared vision of collaborative research aimed at assessing and ensuring access to renewable energy in sub-Saharan Africa in an innovative and sustainable manner. Furthermore, a research consortium and a long-term research agenda should be established in order to jointly apply for Horizon 2020 with a project proposal.

The workshop (November 4-8, 2019) was held at TU Berlin with the following guests:

- Prof. Etienne Ntagwirumugara, African Center of Excellence - Energy for Sustainable Development (Rwanda)
- Prof. Chewki Ziani Cherif, Pan African University - Institute of Water and Energy Sciences (including Climate Change) (Algeria)
- Prof. John Gitonga Githiri, Jomo Kenyatta University (Kenya)
- Dr. Tekalign Tsige Sahilu, Sustainable Development Goals Center for Africa (Rwanda)
- Prof. Bernd Balkenhol, University of Geneva - Geneva Finance Research Institute (Switzerland)
- Dr. Gunther Bensch, RWI Essen (Germany)

(The participation of the representatives from Africa was supported by the start-up funding, the European partners covered their costs independently).

Under the guidance of the Dialogue Platform of TU Berlin, the different perspectives of the participating institutions regarding their research activities, demonstration and technology transfer projects were explored and discussed in order to ultimately elaborate a collaborative approach for achieving the stated goals. The project idea and elaborated considerations addressed the major challenge of making the achievements of Sustainable Development Goal (SDG) 7 Affordable and Clean Energy traceable and measurable and supporting energy access for all.

In addition, the research partners* collaborated with various organizations in Berlin and Europe. The team visited the Reiner Lemoine Institute, the TMG Think Tank for Sustainability, the Access2Energy Institute (A2EI), the Institute for Advanced Sustainability Studies (IASS) Potsdam and the Science Park Golm. In addition, discussions were held with the Department of Energy Systems at TU Berlin and another consortium to explore opportunities for collaboration on future project proposals.

The collaboration was strengthened and joint ideas were developed. In the coming months, the consortium will work on a joint research proposal to apply for third-party funding.