

WESA

Water and Energy Security in Africa

The project aims to support the development of PAUWES by enhancing its research activities in water and energy sciences. The project focuses on the development of innovative scientific research methods, which are adapted to local contexts and applicable in the areas of water and energy security in Africa. It is the first step towards the realization of a research agenda at PAUWES and at the same time offers PAUWES graduates the opportunity to conduct PhD studies. Another important objective is to establish PAUWES as a Pan African (and beyond) hub/platform on the topic of energy, water and climate change.

RESEARCH FOCI AND CASE STUDY

Energy Policy and Engineering

- Design of hybrid power plant with policy and regulatory frameworks formulation for renewable energy intervention in Africa.
- Analysis of standards for energy distribution systems and disaster risk reduction.
- Managing the dynamics of electricity supply and demand during power shortages.
- Energy transition, technological and regulatory strategies for the deployment of renewable energies.
- Exploring the feasibility and potentialities of hydrogen production coupled with solar energy.



Water Policy and Engineering

- Impact of land use change and climate change on water balance and sediment yield.
- Integrated water resource management in transboundary river basins.
- Integrated water resources management and improvement of basin functionalities.

OUTPUT

Key Activities and Events

- Support 8 PhD students at PAUWES to pursue doctoral studies in water and energy (Engineering and Policy) in collaboration with partners.
- Research and case studies.
- Online and face-to-face events to strengthen cooperation with PAUWES and contribution to Agenda 2063 of the African Union.

Expected results

- Graduation of PAUWES PhD researchers in Water and Energy (Engineering and Policy) and further support to use the skills in the African region to respond to societal challenges in water and energy.
- Advancement of knowledge in water, energy and climate change through the research conducted in various Africa countries.
- Integration of PAUWES into scientific networks and emergence of PAUWES into a Pan-African and global hub/platform for water and energy and climate change research and practice.

FACT SHEET

Sector: Water & Energy (Engineering and Policy)



Countries and Territories: Algeria, Germany



Period: 1 Nov 2016 - 30 Sep 2020



Budget: Approx. Eur 2,650,000

CONTACT PERSONS



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WEBSITE <https://ehs.unu.edu/research/water-and-energy-security-for-africa-wesa.html#outline>

CONTRIBUTION TO SUSTAINABLE DEVELOPMENT GOALS



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