

Climate adaptation in Ghana

RAIN – Sustainable technologies and services for climate change adaptation in flood and drought-prone settlements in Ghana



Ghana as well as the whole African continent, is affected by climate change. Temperatures in Ghana will continue to rise in the future, the amount of rain in the rainy season and the dryness in the dry season will increase and it will cause socio-economic damage. The RAIN collaborative research project wants to develop strategies and water treatment practices to reduce vulnerability and increase resistance of communities to the effects of climate change and this way make sustainable water use possible.

Ghana and especially the northern savannah, is affected by floods, droughts and bush fires. The rainwater runs off unused into the underground. The urban regions, including the capital Accra in the south of the country, suffer more and more often from heavy rainfall.

The climate change adaptation guidelines and documents written by the Ghanaian government in the past years ask for actions to work on the challenges. The RAIN project wants to strengthen Ghana's climate projects and helps with the realisation of the climate adaptation goals defined by the government.

Goal of the project

In the joint project RAIN, the project group wants to combine a flood early warning system with intelligent water management and supply concepts. In addition, it is planned to realise training and education courses for population groups and decision-makers and to identify potentials for sustainable water use.

An urban and a rural pilot region (Accra – urban; surrounding area of Kumasi – rural) will be analysed to make it possible to transfer the methods and conclusions to the WASCAL/SASSCAL regions. Valid data will be

collected in a local data collection and based on this, a forecast model for local meteorological effects of climate change will be developed. It will then be tested as an early warning system for natural disasters. The group wants to calculate relevant forecast scenarios for flood and drought adaptation actions. For a sustainable flood protection and water management, which supports water-saving handling and reuse of treated water, a concept with the best modelled actions will be developed. This includes a multi-stage treatment chain from the treatment of rainwater and water from retention areas to water-saving distribution. The technical potential of the treatment chain will be demonstrated on a pilot basis in the pilot regions with the participation of the local population. The partners involve local decision-makers in finding the best technical solution.

Knowledge transfer

The project group will train exemplary experts in planning, administration, plant operation and affected water user groups about adaptation to climate change and sustainable water use. The new knowledge will be used for educational modules and will be part of educational programs PAUWES and WASCAL. Therefore, the transfer of knowledge and the exchange of experience between the research institutions and the population beyond the region is increased.

Weitere Informationen zum Projektverlauf auf <https://www.bmbf-client.de/projekte/rain> und unter <https://www.bmbf-rain.net>

Project overview

PROJECT TITLE

RAIN – Sustainable technologies and services for climate change adaptation in flood and drought-prone settlements in Ghana

PROJECT PERIOD

06/2019 – 12/2022

PROJECT PARTNERS

Institute for Urban Water Management and Environmental Engineering at the Ruhr University Bochum; Aqua-Technology irrigation systems GmbH & Co. KG +5 more ghanaiian partners

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