

## **Optimisation of Recirculating Water Treatment Process for a Smart Communal Hand Washing System (additional Corona-related funding)**

Initiative: Wissen für morgen – Kooperative Forschungsvorhaben im subsaharischen Afrika (beendet)

Ausschreibung: Postdoctoral Fellowships for African Researchers in the Engineering Sciences

Bewilligung: 19.08.2020

Laufzeit: 1 Jahre 6 Monate

The overall aim of this project is to improve handwashing as a means of reducing the transmission of Covid-19 and other communicable diseases. Therefore, an optimally designed low-cost wastewater treatment system will be developed to be integrated into communal handwashing stations to ensure supply of water for handwashing in water-stressed communities. Up to now, common communal handwashing stations are associated with numerous problems including water wastage and wastewater generation. These create disposal challenges and the need for frequent refilling of water. Against this backdrop, the applicant suggests onsite treatment of the handwashing wastewater for subsequent recirculation and attaching auto-timed water and/or detergent dispensers to avoid water wastage and cross contamination. Furthermore, the incorporation of a solar photovoltaic system will ensure uninterrupted power supply to the system in any location. The innovativeness and relevance of the proposal thus lies in finding appropriate solutions to water scarcity and wastewater generation and/or disposal, by integrating an optimally designed wastewater treatment system into a handwashing station for onsite treatment and recirculation of handwashing wastewater.

### **Projektbeteiligte**

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