

Master Thesis on water treatment modules in developing countries

Description

AUTARCON GmbH is a young and innovative enterprise based in Kassel, Germany. As pioneers in the field of sustainable and autonomous drinking water treatment AUTARCON develops, produces and sells solar driven systems for safe drinking water supply in rural- and peri-urban areas, the tourism sector and post-disaster regions. Within different funded research project AUTARCON and its partners continuously operate decentralized treatment and disinfection units in different developing countries. The units have different treatment perspectives, among others, e.g. the removal of:

- Pathogens (India, Nigeria, Tanzania, Kenia)
- Ammonium and DOC (India, Nepal, Vietnam, Tanzania)
- Emerging contaminants (India, Spain, Germany)
- Fluoride (Tanzania, India)
- ...

For a detailed performance analysis and the optimization of the develop treatment modules, we are looking for students willing to closely monitor and operate such stations for a period of at least 3 months (preferably 6 months). Alternatively new treatment modules, fitting into the by AUTARCON offered technologies can be developed and tested. Within a Master Thesis water quality data has to be evaluated and recommendations for the optimization of system performance derived.

Tasks

- Development and test of new innovative treatment modules for the decentralized treatment of drinking water and or wastewater
- Continuous operation of the water treatment stations/modules
- Frequent maintenance and system adjustments as per requirements
- Water sampling and analysis
- Reporting and evaluation of system performance in close communication with AUTARCON staff

Requirements

- Study course in Environmental Engineering, Water Technologies, Hydrology, Chemistry or similar
- Interest in water, environmental, energy related technologies and development cooperation
- Practical experience in working on technical systems and interest in practical / field work
- Readiness to travel under time consuming circumstances and willingness to bear occasional discomfort
- Readiness to live in simple conditions especially during field visits
- Good communication skills and flexibility on working time
- Physically and mentally resilient and talent for improvisation
- Fluency in English
- Experiences in use of statistical software tools (an asset) and skilled in computation (MS Office)
- First experiences abroad, preferably in a developing country

What we offer

- Close supervision in a “real” and interesting field by AUTARCON staff
- Stimulating working environment in an aspiring, innovative and international operating enterprise
- Entry into the field of development cooperation
- Coverage of subsistence expenses and travel allowance
- Training in Germany prior to departure

Interested applicants should please contact Philipp Otter at [otter\(at\)autarcon.com](mailto:otter(at)autarcon.com) or call +49 (0)561 – 506 186 892