

TECO Mobility grant

Sustainability of natural water treatment systems in coastal and hilly rural areas of India

Beneficiary of the grant - Fabian Musche
Home Institution/Company (EU) - University of Applied Sciences Dresden, Germany
Host Institution/Company (INDIA) - Anna University, Department of Geology
Period of the stay in India - 22.08.17 – 29.09.17



TECO Project

*Technological Eco-Innovations for the Quality Control
and the Decontamination of Polluted Waters and Soils*

Tel: +39 06 9067 2741

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Objective of the project

- Adaptation of simple and robust probe for sampling critical inorganic parameters to Indian conditions
- Development of methods to check the watertightness of well elements



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Activities carried out during the period of the grant

- Initial assessment of water quality at potential riverbank filtration (RBF) / managed aquifer recharge (MAR) sites by the application of a direct push technique in riverbeds and shallow aquifers.
- Tracer test to determine the travel time of flood water into RBF-well
- Development and test of method to check the watertightness of flood-proof well head



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Main outcomes

- The direct push technique is useful to identify water quality problems in advance at potential MAR- /RBF-sites
 - Improve water sampling probe for silty conditions
- Travel time of flood water is insufficient to remove pathogens
 - preferential flow paths
 - contamination of the abstracted water would take place
 - Sealing of subsurface with clay is mandatory
- Using existing air pressure in the well casing to determine non-watertight points at well head



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