

Postdoc position on water productivity

The challenge

Freshwater scarcity is an increasing concern, in specific regions where water supplies fall short, but also at the global level because of international dependencies. With agriculture being the largest water user, the interest in increasing water productivities, both in rain-fed and irrigated agriculture, is growing. Interest comes from governments, farmers, as well as food and beverage companies that depend on a sustainable supply of crops. Recent developments in water balance and crop growth modelling at a high temporal and spatial resolution and in remote sensing allow us to estimate water productivity in crop production at increasingly accurate levels. In addition, advanced models allow us to formulate water productivity benchmarks based on the use of different irrigation techniques and agricultural management practices. The Water Management Group of the University of Twente has an internationally recognized research record in the field of globalization of water, water productivity, water footprints and water scarcity. We have an opening of a new postdoc position, specifically dedicated to studying water productivity in crop production.

The position

The postdoc will particularly contribute to two projects. The first is a project on land and water productivity funded by the Netherlands Organization for Scientific Research (NWO). Together with researchers in Brazil, this project aims to study land and water productivity of different agricultural systems in the cerrado area in Brazil, based on a combination of modelling and field data. The second project focuses on assessing water productivity in Africa and the Middle East and is funded by the Food and Agriculture Organization (FAO) of the United Nations. As part of a Dutch-Belgian research consortium, the work at the University of Twente focusses on assessing the quality of near real-time remote sensing products of evapotranspiration and biomass production, at resolutions ranging from 250m to 30m. This will be done by analyzing the consistency between the water productivity estimates from remote sensing and estimates from modelling using FAO's AquaCrop model. The position will also include lecturing a few classes to Master students and guidance of Bachelor and Master students in their thesis stage.

Our offer

We offer a challenging fulltime position for two years in an inspiring multidisciplinary and international environment. In accordance with the Collective Labour Agreement for Dutch Universities the gross monthly salary will range from € 3.044,- to € 3.997,- and will depend on experience and qualifications. Additionally, the University of Twente provides excellent facilities for professional and personal development, a holiday allowance, an end-of-year bonus and a number of additional benefits.

Your profile

We are looking for an enthusiastic postdoc with experience in water balance and crop growth modelling and acquaintance with using GIS. A PhD degree is a prerequisite, as well as strong communicative qualities and excellent comprehension of English, both in spoken language and in writing.

Information and application

For more information please contact dr. Maarten Krol, phone +31 53 4892615, or prof.dr.ir. Arjen Hoekstra, +31 53 4893880. The appointment is as soon as possible. Your written application, with a CV and, if applicable, a list of publications and references should be sent **before 15 May 2016** through the vacancy website of the University of Twente: <http://www.utwente.nl/vacatures/en>. Candidates expecting to graduate soon are also invited to apply.

The organisation

The **University of Twente** stands for life sciences and technology. High tech and human touch. Education and research that matter. New technology which drives change, innovation and progress in society. The University of Twente is the only campus university in the Netherlands; divided over six faculties we provide more than fifty educational programmes. The University of Twente has a strong focus on personal development and talented researchers are given scope for carrying out pioneering research.

The **Faculty of Engineering Technology (CTW)** is one of the six faculties of the University of Twente. CTW combines Mechanical Engineering, Civil Engineering and Industrial Design Engineering. Our faculty has approximately 1800 bachelor and master students, 300 employees and 150 PhD candidates. The departments of the faculty cooperatively conduct the educational programmes and participate in interdisciplinary research projects, programmes and research institutes.