



Zürich, June 2020

Vacancy for a PhD student in Hydrology

Starting date: as soon as possible (summer 2020)

We have an open position for a PhD student within the project

Mountains: Water towers for food production?

at the University of Zurich, Department of Geography, Unit Hydrology & Climate (<http://www.geo.uzh.ch/h2k>).

Runoff originating in mountain areas has high significance for lowland hydrology and water resources – this is why mountain areas are symbolically called “Water Towers”. The importance of mountain runoff is especially high for irrigated agriculture downstream, which is the biggest user of water resources worldwide. Because of the far-reaching impacts of changes in climate and water consumption, it is critical to reduce the uncertainty surrounding the current and future availability of mountain runoff and particularly its importance for irrigated food production downstream.

The PhD project will develop a model framework to quantify the contribution of mountain areas to lowland irrigation and food production. The framework departs from existing global models for hydrology, glaciers and crop growth, and combine them to make targeted assessments under present and projected future conditions. This will involve development and testing of a model coupling, using a few study basins for in-depth analysis and discussion of results in regional context.

Applicants should have a diploma or MSc degree in hydrology, geography, earth sciences, environmental sciences or in a closely related field. An affinity to programming is a prerequisite since the project involves coding (mainly in Python and R), and familiarity with hydrological modelling is a further decisive asset. Furthermore, experience in evaluating and visualizing spatially distributed data (R, ArcGIS) is important, as well as enthusiasm for tackling questions of global water resources and food security. We encourage applications from dedicated individuals with good oral and written communication skills in English, who enjoy working in a team.

The Department of Geography offers an interdisciplinary, international work environment and a formal PhD program (<http://www.geo.uzh.ch/en/graduate-school>). The Unit Hydrology & Climate has strong expertise in hydrological modeling and in experimental hydrology. The salary is competitive and according to the salary scale of the Swiss National Science Foundation¹.

Please send your application including cover letter, CV, relevant diploma, an example of your own scientific writing (if available) and the names and contact details of two to three potential references in one single pdf-file (not larger than 3 MB, otherwise use a file transfer service) to Daniel Viviroli (daniel.viviroli@geo.uzh.ch). Please write ‘Application Water Towers’ in the subject line. Review of applications will start on 15 June and continue until the position is filled.

For questions, please contact PD Dr. Daniel Viviroli (daniel.viviroli@geo.uzh.ch) or Prof. Dr. Jan Seibert (jan.seibert@geo.uzh.ch).

¹ www.snf.ch/SiteCollectionDocuments/allg_doktorierende_e.pdf