

Ph.D position
Global agricultural green and blue water consumptive uses and virtual water flows in the context of water scarcity and climate change

The Department of Systems Analyses, Integrated Assessment and Modelling, at the Swiss Federal Institute for Aquatic Science and Technology (Eawag) would like to appoint a Ph.D candidate to undertake the research on the above captioned project funded by the Swiss National Science Foundation. The research is an integral part of the current efforts in the department in examining water-food-trade relations and their environmental implications at different geographical scales around the world.

The overall objective of the project is to take a green and blue water perspective in the investigation of water-food-trade relations across different geographical regions and on a high spatial resolution with a global coverage (starting in Africa). The major research tasks include: 1) investigation into green and blue water consumptive uses in food production with a focus on major staple food crops in the past 15-20 years. Impacts of blue and green water variability on crop yield and food production will be examined; 2) assessment of virtual water flows and relations with green and blue water availability in food importing and exporting countries, taking into consideration other natural and socio-economic factors influencing virtual water trade; 3) projection of impacts of climate change on food production and virtual water flows under the IPCC climate and socio-economic scenarios with a focus on water scarcity and temporal and spatial variations.

The Ph.D candidate is expected to hold a Master's degree in one (or more) of the following disciplines: agricultural economics, geography, hydrology and environmental management. He/she should possess good skills of programming and modeling and GIS. A good command of English language is necessary. Good knowledge of the EPIC model and the SWAT model is also very important.

The position is available immediately. The location of the position is at the Swiss Federal Institute for Aquatic Science and Technology (Eawag), Duebendorf, Switzerland. Please submit your application (attach your most recent publications if any) to Dr. Hong Yang (email: hong.yang@eawag.ch), SIAM, EAWAG, Ueberlandstrasse. 133, 8600 Duebendorf, Switzerland.