



Ute Wollschläger
Helmholtz Centre for Environmental Research - UFZ
Halle (Saale)

Curriculum (No more than 15 lines)

Ute Wollschläger is a German soil scientist and senior scientist at the Helmholtz Centre for Environmental Research - UFZ in Halle (Saale), Germany. She graduated from the University of Kiel in 1999 with a degree in Applied Geology, and then moved to Heidelberg University, where she gained her PhD in 2003. She then continued working as a Postdoc at the Institute of Environmental Physics in Heidelberg where she worked on monitoring and modelling of unsaturated zone water as well as permafrost freeze/thaw dynamics while applying hydrogeophysical measurement techniques. In 2010, Ute moved to the Helmholtz Centre for Environmental Research - UFZ where she coordinated the field experiments in the TERENO Harz/Central German Lowland Observatory. Since 2016, Ute is the scientific coordinator of the BonaRes Centre for Soil Research within the BMBF funding initiative "Soil as a sustainable resource for the bioeconomy - BonaRes". Her current work focuses on the investigation of the influence of soil management on soil functions.

“From process understanding via soil functions to sustainable soil management - a systemic approach” (short summary)

Fertile soils are central resources for the production of biomass and the provision of food and energy. A growing world population and the latest climate targets lead to an increasing demand for both, food and bioenergy, which requires preserving and improving the long-term productivity of soils as a bioeconomic resource. At the same time, other soil functions and ecosystem services need to be maintained: filter for clean water, carbon sequestration, provision and recycling of nutrients, and habitat for biological activity. All these soil functions result from the interaction of a multitude of physical, chemical and biological processes that are not yet sufficiently understood. In addition, we lack understanding about the interplay between the socio-economic system and the soil system and how soil functions benefit human wellbeing. Hence, a solid and integrated assessment of soil quality requires the consideration of the ensemble of soil functions and its relation to soil management to finally be able to develop site-specific options for sustainable soil management. In my presentation, I will provide an overview about the BonaRes funding initiative and present the integrated modeling approach followed in the BonaRes Centre to investigate the influence of soil management on the ensemble of soil functions.