



## **Selamawit AMARE**

**Home Country:** Ethiopia

**Degree:** PhD in Soil Physics and Land Management

**Expertise:** Hydrology

**Research Focus:** Reducing the Impact of Gully Erosion

**Host University:** Wageningen University, the Netherlands

**Fellowship Awarded:** 2016

Selamawit Amare was born in Dessie, a town in northeast Ethiopia. When she was a year old her family moved to a small village where her father taught mathematics. He inspired his three children to work hard at school, and they have all since graduated from university. Selamawit chose to pursue a career in science because of its ability to be used to solve real world problems. In addition she loves nature and is passionate about the use of science to mitigate damage to the environment.

Selamawit attended Wollo University, Ethiopia, where in 2011 she graduated with a BSc in Soil and Water Resource Management. Following this she joined Bahir dar University (BDU), Ethiopia, as a graduate assistant teaching hydrology and introductory soil and water management courses to undergraduate students. In 2015 she gained an MSc in Engineering Hydrology from the same University, with her thesis investigating soil erosion and sedimentation in a watershed in the Ethiopian highlands.

Gully erosion is the removal of soil along drainage lines by surface water runoff. Gullies, which resemble large ditches or small valleys, typically grow in length, cut deeper into soils, and grow wider through sidewall collapse. They can destroy agricultural land and remove water from the remaining ground. Consequences of gully erosion include reservoir sedimentation, flooding, water quality impairment and threat to aquatic life. Selamawit is using satellite imagery and aerial photographs to quantify gully changes, investigate the mechanism of gully formation, measure the impact of soil types, and test the effectiveness of reclamation measures against soil erosion. Her study, focused on the Koga catchment area, northwest Ethiopia, aims to support decision-making for improved management of the land.

Upon completion of her PhD, Selamawit plans to return to teaching at BDU, where she will share her new knowledge with students, colleagues, policy makers, land use planners and farmers. She also hopes to play a leading role in projects concerning land degradation in Ethiopia.