OnePlanet FELLOWSHIP

Building a robust pipeline of scientists leading climate change research in Africa

Candidate Profile

Terfa Meseret Tesema

2020 One Planet Laureate Candidate

Position

Associate Professor

Institution

Hawassa University

Country

Ethiopia

Education

PhD, Plant Production, Norwegian University of Life Sciences, Norway

Mentor

Dr. Tulu Degefu Abdi, Researcher, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Ethiopia

Area of research

Drought stress adaptation in crops.

Growing up in western Ethiopia as the first child in a family of four, Terfa Meseret Tesema had to deal with the pressure of setting high goals for herself and being a role model for her siblings. Looking back now, she regards that pressure as the source of her drive to excel. Terfa's selection to join the Awassa Agricultural College to study Agriculture was a big disappointment until she understood how agriculture works, which fascinated her.

She enrolled for her master's studies in horticulture at Hawassa University right after her undergraduate degree. Later, she acquired a Ph.D. degree from the Norwegian University of Life Sciences, specializing in plant production.

Terfa is an associate professor of agriculture in the College of Agriculture at Hawassa University. She is engaged in research on plant adaption to stress, particularly root adaptation to water stress, and how crops like sorghum and maize adapt to climate change.

She is also evaluating plant and community resilience to climate change. She is applying a multidimensional approach to understand Ethiopia's socioeconomic, agroecological, and agrobiodiversity factors that affect smallholder farmers' food and nutrition security situation. This research explores plant drought adaptation mechanisms at cellular and molecular levels to understand the underlying factors and extrapolate that knowledge to practical farming communities' applications. She has been a principal investigator and co-principal investigator in different countries across three continents.

Among her activities, Terfa finds teaching and student supervision the most fulfilling. She says, "I feel that my student's success is my responsibility. I consider it a personal challenge to motivate them to do their best work. My anticipation of being fascinated by their innovations motivates me to work, sometimes spending long hours there. I always feel that I will see something new."

The involvement of farmers in research is a way of validating the research process. For Terfa's institution, researchers are expected to spend ten percent of their time in community engagement. Farmers participate in trials, and their knowledge of the production systems enriches the conduct of the research.

Terfa aims to be a leading African scientist on drought adaption and create technologies for smallholders struggling with climate change adversities. Her goal is to be an essential resource in her country's broader policy framework and have her research contribute to the national mandate on food sustainability and the achievement of the Sustainable Development Goals.

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Through the One Planet Fellowship, Terfa will broaden her professional network and expose research efforts in Africa and worldwide. The Fellowship, a platform that constitutes young leading science researchers on the continent, will help transition her into the leader in science she aspires to be.

Mentoring will open her world to the possibilities available for her. She believes that African scientists should lead the science on climate change in Africa and shape the narrative because it directly affects their lives.

Terfa expects that her institution will gain from her involvement in the Fellowship. Her collaboration with researchers from other institutions and countries will bring knowledge and resources to benefit her students. She will work to establish a mentoring program to support younger scientists. She will work with colleagues to have gender mainstreamed activities with farmers and prioritize female-headed households in research.

Research work can present unique challenges when you have a young family, which is the case with Terfa. Traveling for fieldwork, mostly when the children were younger, required making arrangements with her mom to help out. Fortunately, her husband is a hands-on dad. She tries to separate work and home activities but sometimes has to bring work home, in which case she attends to her family obligations before embarking on her job.

Terfa also has to deal with limited funding and its impact on her research. Making her voice heard and her choices respected in a male-dominated department can be challenging, although things have improved slightly with more women joining her department.

Terfa Meseret Tesema is one of the growing number of candidates selected to participate in the One Planet Fellowship. The One Planet Fellowship is a career development initiative that is building a robust pipeline of highly connected, inter-generational scientists equipped to use a gender lens to help Africa's smallholder farmers cope with climate change. The One Planet Fellowship is funded by the Bill &Melinda Gates Foundation, the BNP Paribas Foundation, the European Union and Canada's International Development Research Centre (IDRC). African Women in Agricultural Research and Development (AWARD) and Agropolis Fondation are jointly implementing the Fellowship.