

Bio for Katarena Matos –

I am a Ph.D. student in Hydrologic Sciences with a research focus on how vegetation-water interactions shape ecosystem function and resilience in dryland landscapes. My current project, Soil Moisture Dynamics and Their Impact on Evapotranspiration in the Great Basin, investigates how long-term restoration treatments in sagebrush ecosystems, such as conifer removal and invasive grass management, affect soil moisture, evapotranspiration, and vegetation water stress. By integrating in situ soil moisture measurements with NASA remote sensing products, I aim to identify spatial and temporal patterns in water availability and land surface response to management interventions across the Great Basin. These insights will support land stewardship and test applications of NASA tools in dryland monitoring and decision-making.

My broader academic goal is to advance understanding of how hydrological processes influence ecosystem dynamics, particularly in water-limited regions undergoing ecological change. I plan to pursue a career as a professor and research scientist, contributing to both applied and theoretical knowledge in ecohydrology and land-atmosphere interactions. This research aligns with NASA Earth Science priorities to track and predict Earth system variability and supports efforts to translate satellite-based observations into actionable information for managing western U.S. landscapes under climate stress.