**Modeling Ecosystem Services for a New Education Paradigm**

There is an increasing call for understanding and operationalizing the concept of landscape sustainability and enhancing learning about this crucial concept. Deterministic models from regular software are helpful but are not easily understood and operated by a wider range of audiences. The nature of these tools is disengaging and may not facilitate deep learning postulated in bloom’s high level of learning taxonomy. The complexity of ecosystem service trade-offs exacerbated by human landscape interactions and spatial heterogeneity further complicates the clear understanding of ecosystem service trade-offs which is crucial for gaining critical insights into the challenges of ecosystem sustainability. Due to the potential of digital game-based learning tools to diminish these barriers, they have been suggested as an effective alternative for understanding eco-system service trade-offs and hence the concept of ecosystem sustainability. However, there is little consensus about their potential to improve cognitive performance and motivation. Besides, the extant DGBL tools are depauperate with many useful sustainability concepts. This limit learning to a narrow set of concepts. My research intends to address both these gaps by using a land-use simulator tool: People in Ecosystem and Watershed Integration (PEWI). I intend to add new simulation models about pollination and greenhouse gas dynamics critical for understanding the challenges, core scientific concepts of ecosystem/landscape sustainability and the impacts of different management practices.