

23th FEFCO

Forest Ecosystem Function Colloquium (FEFCO) は、地域や地球全体のレベルで森林生態系の機能とその持続的活用法を統合的に理解することを目的とし、研究者間の学術交流を推進します。

第23回森林生態系機能コロキウムは、アメリカ地質研究所 USGSのKenneth Bagstad先生にご講演いただきます。どなたでも参加できますので、多くの皆様のご参加をお待ちしております。京都大学農学研究科森林・人間関係学研究室がホストを務めます。

23th FEFCO
2015/6/25 16:00 - 17:30
Faculty of Agriculture Main Building, S174
Ken Bagstad, (U.S. Geological Survey)

An intelligent modeling system for mapping ecosystem service flows

Ecosystem services - the benefits that nature provides to people and society - are an area of increasing scientific interest and social importance in addressing key sustainability challenges. A large and growing number of studies have mapped and valued nature for benefits like clean air and water, disaster protection, crop pollination, and recreation. However, most of these studies have been "one-off" mapping efforts that, while locally accurate, lack the ability to be reused or applied to new contexts. In this presentation, I will introduce the Artificial Intelligence for Ecosystem Services (ARIES) modeling platform. ARIES offers several key advantages over other ecosystem services mapping and modeling methods. By using semantics, ARIES enables the reuse and recombination of new datasets and models added by a growing international research community. A rule base is used to select the most appropriate data and models for use in a particular region based on relevant biophysical and socioeconomic conditions that influence ecosystem service provision and use. ARIES accounts for spatiotemporal connections between ecosystems and people and can combine global models and datasets with more detailed and accurate local data and models to navigate across multiple scales. I will discuss past and current ARIES case studies, which have advanced our understanding of the geography of ecosystem services, as well as a current ARIES application under development in the Yahagi watershed in Aichi Prefecture, Japan.