



COLLEGE OF AGRICULTURE & LIFE SCIENCES

Soil, Water and Environmental Science



SWES Colloquium Series 2016-2017
Department of Soil, Water and Environmental Science

“Plant contributions to methane emissions from topical peatlands”

Tropical peatlands and seasonally flooded areas have a great potential to impact the global carbon and, in particular, methane budget. Rapid conversion of peatlands to palm oil plantations in SE Asia has released massive amounts of CO₂ into the atmosphere. Furthermore, the annual variability of global atmospheric CH₄ has been suggested to result from tropical wetlands emission changes. Recent discoveries of extensive peatlands in the Amazon (2009) and Congo (2016) basins suggest that tropical peatlands require further study in the dynamics of carbon cycling and CH₄ emissions. In the Pastaza-Maranon basin of eastern Peru, we have been measuring the dynamics of several peatlands ranging from strongly ombrotrophic to minerotrophic to understand the amount of carbon stored in these systems as well as their CH₄ emissions. In particular we have focused on the emissions of CH₄ by palm and tree species, since some of these can act like straws to bypass methanotrophic bacteria on the peat surfaces. In my talk, I will present data collected from both peatland and varzea (flooded) forests and discuss some of the drivers of the CH₄ emissions from plants and how ecology plays an important role in the overall ecosystem emission dynamics.

Joost van Haren
Assistant Research Professor
Biosphere 2, Honors College, SWES
University of Arizona

Monday, February 13, 2017 -- 3:00pm

Marley 230
Refreshments at 2:45



School of Earth and Environmental Sciences