

Sommersemester / Summer Term 2015

BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung
Lecture series in Ecology and Environmental Research

Donnerstag 21.05.2015, 12:00 Uhr, H6

Anschließend Postkolloquium mit Mittagsimbiss im Foyer H6

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Analysing Land Use Change in Fragmented and Varying Landscapes

Detailed information on land use and land cover is essential in many areas of environmental sciences. A constantly growing body of literature emphasizes the impact that changes in land use may have on Earth's climate, biodiversity and water cycle. Among different human land use forms, cultivated ecosystems (for production of food, feed and fibre) are particularly frequent and occupy roughly one third of the land surface. Cultivated ecosystems are frequently fragmented and undergo rapid changes in land use due to political or market influences.

In this talk, I will focus on the Haean catchment (South Korea) - a mixed agricultural and forested landscape that has been studied intensively in the TERRECO (Complex Terrain and Ecological Heterogeneity) project. The land use and land cover in this area have been documented in detail between 2009 and 2011 revealing some shift in crops. To track such land use changes, remote sensing products can be used. However, standard satellite products lack the necessary details to distinguish different crops. Therefore, we derived our own classification using two different state-of-the-art machine learning algorithms (Random Forests and Support Vector Machines). Land use and agricultural practices are closely related and affect soil and water. A typical cultivation method in Haean is ridge tillage with plastic mulch. We analysed its consequences on infiltration patterns and formation of surface run off. I will present the results of the classification and soil hydrology studies▶

Do. / Thu. 12 st
Gebäude/Building
GEO
Hörsaal/Lecture hall
H6

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The lecture series
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