

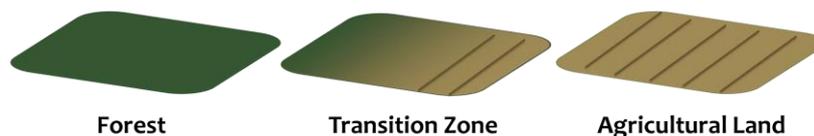
Master Thesis

Measurement of Carbon Stocks in Transition Zones between Forest and Agricultural Land

Background

In the Anthropocene, the area of contiguous intact forest has been decreasing due to deforestation and intrusion of agricultural land. Concomitant fragmentation of landscapes largely changes its properties and functioning by mixing zones of different habitat quality and ecological features.

Fragmentation causes biome-patches with zones of transition between them. The conditions in transition zones change microclimate which leads to changes in abundance and diversity of plant communities. Transition zones are of active and passive exchange of matter and energy and have different properties than native forest or plain pasture or agricultural land. Within transition zones matter cycling is altered by microclimate.



Tasks

It is hypothesised that the microclimatic stress in transition zones lowers the crop growth. According to that a gradient in soil as well as in the vegetation carbon compounds should be measurable into two directions from the transition zone – into the forest and the agricultural land. For a master thesis, the following things should be tackled

- Literature research on the particular topic
- Determine soil carbon content in vegetation and soil
 - Soil sampling in the field
 - Forest inventory
 - Yield measurements at agricultural land
- Analysis and presentation of the results

The field work will be guided and the theory supported by a PhD student from ZALF. The work on the thesis could start in April 2016 at the earliest. Please feel free to contact us for further information.

Contact

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