

Themenübersicht zu Abschlussarbeiten am UFZ

In general, any application with a thesis proposal dealing with our research lines (see below) will be considered for support, upon an evaluation of its technical and strategic soundness, and taking into consideration the resources availability (tutors time and infrastructure) within our Department. Applications can be sent directly to the contact person of the working groups for consideration.

Moreover, the following subjects are currently open within the research projects of our Department:

"WG Systems Analysis of the Bioeconomy (SABE)" Contact: Dr. Alberto Bezama ([Alberto.Bezama\(at\)ufz.de](mailto:Alberto.Bezama@ufz.de))

M.Sc. Topic I: Characterising the leverage points and sustainability implications of green public procurement for market volume upscaling of bioeconomy products.

M.Sc. Topic II: Integrated (social, environmental) Life Cycle Assessment of selected bio-based production chains(s)

- Application of RESPONSA (social life cycle assessment) and Life Cycle Costing to selected regional bioeconomy production chains
- Integrated analysis of the achieved results: Hot-Spot-Analysis

M.Sc. Topic III: Defining the urban bioeconomy based on existing urban metabolism models

- Identification of relevant bio-based material streams on an urban level
- Identification of urban infrastructures and stakeholders relevant for the management of the identified material streams

M.Sc. Topic IV: Integrating indicators for evaluating impacts of the bio-based value chains on local society onto a regionalized social assessment framework

- Assessment of the RESPONSA framework in terms of its capacity to reflect societal impacts on a regional scale
- Critical analysis of current trends in social life cycle assessment
- Proposal for a set of socio-economic indicators for evaluating the impacts of the bioeconomy on the stakeholder category "local society" in a regional context

M.Sc. Topic V: Integrated modelling for sustainable biogas plant management in Germany

- Collecting social, ecological and economic factors that influence biogas plant systems
- Applying GIS and life cycle assessment model (LCA) for environmental impact assessment
- Application in a case study: Central Germany biogas plant systems
- Prediction of potential biogas plant suitable sites and number

M.Sc. Topic VI: Ecosystem service trade-offs assessment in bio-based products

- Reviewing and modelling major ecosystem services of bio-based product/ energy in agricultural landscape;

- Applying regional life cycle assessment model (RELCA) for environmental impact assessment (GHG emissions, biodiversity, food production, etc.)
 - Application in a case study: Central Germany bio-based products/ energy
 - provide bio-based products/ energy optimization and sustainable management guidance
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