**Master’s Thesis Opportunity:
LCA of Circular Economy Strategies for Biogenic Waste in Bavaria**

### **Background**

Bavaria’s bioeconomy strategy aims to transition from fossil-based to bio-based economic practices. As part of this effort, a collaborative project has been launched to develop a scientifically grounded Bavarian Biomass Resource Strategy (BioReSt). The objective is to collect data on biomass flows in Bavaria and develop economically and ecologically viable approaches for their provision, utilization, and circular management. The Chair of Circular Economy focuses specifically on organic waste streams, employing methodologies such as material flow analysis (MFA), potential analysis, life cycle assessment (LCA), and strategy development.

### **Research Tasks**

Building upon the prior work conducted within the project, the student will contribute to ongoing research efforts by:

* Conducting a literature search on higher-value circular economy production processes and innovative use cases.
* Conducting a Life Cycle Assessment (LCA) to evaluate environmental impacts.
* Performing a comparative analysis of current vs. future utilization pathways for biogenic waste (e.g., composting, energetic recovery, pyrolysis, gasification).

### **Requirements**

* Background in environmental sciences, sustainability, industrial ecology, or a related field.
* Familiarity with Life Cycle Assessment (LCA) and Material Flow Analysis (MFA).
* Experience with LCA software (e.g., Brightway, Activity Browser) is an advantage.
* Student of Campus Straubing; TUM School of Life Sciences or Management.

### **Application Details**

Interested students should send their application, including a short motivation letter, CV, and transcript of records, to jan.moritz.dittmar@tum.de by Sunday, 23rd February (23.02.2024). For further inquiries, please contact:

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