

Integration of bioenergy in a sustainable energy concept: choice of location and assessment of environmental effects

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In the context of an energy-mix for a sustainable energy supply and climate protection, bioenergy is ascribed to have a big potential. Thus, the aim is to analyze the contribution of biomass, and to assess economical and ecological aspects. Under consideration of overhead and transport costs depending on regional raw material production, optimal capacities are calculated and the choice of location for bioenergy processing plants is optimized. Thereby, regional changes in land-use are estimated in an iterative process with the agricultural sector model RAUMIS. Secondly, impacts of an increasing use of biomass are analyzed and assessed using assessing-indicators for environment.