



Biomass development of soil bioengineering structures

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Soil bioengineering is a traditional construction technique focusing on living plants as construction material. Therefore, the development of plants, used in soil bioengineering constructions, plays a key role in their ecological and technical performance. Diverse constructions with the purpose of river bank stabilization have been studied in order to find out the long term vegetation development and suitability. The documented and analysed biomass records collected in the field are directly connected to the different parameters and site factors such as altitude, orientation, construction type, surrounding vegetation and distance to river bank. Consequently, the influence of the different parameters on biomass development can be presented. The study addresses the biomass calculation along with the suitability understanding of the most relevant plant species integrated in soil bioengineering constructions as well as the dominating vegetation at the end of the succession. Soil bioengineering constructions are believed to be more eco-efficient than conventional constructions. Thereby, the study provides worthwhile information demonstrating the ecological viability of these measures and their positive mitigation effects on carbon neutral construction style.