



Woody Vegetation on Levees? – Research Experiences and Design Suggestions

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Recent flood events in Austria have reawakened practical and scientific interest in the stability of levees. One focus amongst others has been taken on the relationship between vegetation and levee stability with special reference to the role of woody plants. The effects of woody plants are undoubtedly manifold: On the one hand they can potentially have a negative influence and endanger levees, which is why many guidelines ban woody vegetation to preserve stability, visual inspection and unhindered flood-fight access. On the other hand woody vegetation can have several positive impacts on soil stability and which effects prevail depends largely on types and characteristics of plants. This shows how controversially woody plants on levees can be discussed and the strong need for further research in this field.

In order to obtain new insights and widen horizons for this controversial issue, a research project carried out by the Institute of Soil Bioengineering and Landscape Construction – at the University of Natural Resources and Life Sciences, Vienna – was launched. This project deals with several aspects of effects of woody plants have on levees and focuses particularly on shrubby woody plants. The examined vegetation type is a dense stand of willows – Purple-Willows (*Salix purpurea* L.) – commonly used for stabilization of river embankments.

The proposed contribution discusses the gained results with reference to levee stability and existing levee vegetation guidelines and gives design suggestions for compatible woody vegetation on levees.