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Dykes with woody vegetation in Bavaria/Germany – Design, experiences and research

ABSTRACT

Recent flood events in Bavaria in the years 1999, 2002 and 2005 resulting in damage caused by dyke failures emphasized the need for refurbishment measures of flood protection dykes on rivers. As woody vegetation on dykes has to be accepted in rural as well as in urban areas, design criteria and structural methods have to be applied to ensure an adequate degree of protection. In the following, German technical specifications are presented and compared with international standards, particularly regarding woody vegetation on dykes. Moreover, a brief summary of recently carried out and of actual research activities is given.

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Dr. Ronald Haselsteiner currently serves as project engineer for RMD-Consult in Munich, where the primary focus is on flood protection measures, dam and dike design, water power and geotechnical issues. Prior to this position, Dr. Haselsteiner was working on his Doctoral Thesis as a research engineer for the Institute and Laboratory of Hydraulic and Water Resources Engineering at the Technical University of Munich. His thesis was titled "Seepage Flow Through Flood Protection Dikes Along Rivers." He also received a diploma degree in Civil Engineering from the Technical University of Munich where he specialized in the subjects of hydraulic and water resources engineering, and construction and process management.

From 2003 until 2005, Dr. Haselsteiner participated in a research and development project involving rehabilitation of dikes. He then became involved in another research project regarding the application of geosynthetics for the increasement of the erosion resistance of dikes and the impact of sealings in case of overtopping.

Dr. Haselsteiner is a member of two work groups: "Flood Protection Dikes Along Rivers" group of dwa-organization and "Sealing Systems in Dikes" group of dwa-organization.