



Journal Menu

[Aims and Scope](#)
[Article Processing Charges](#)
[Articles in Press](#)
[Author Guidelines](#)
[Bibliographic Information](#)
[Contact Information](#)
[Editorial Board](#)
[Editorial Workflow](#)
[Subscription Information](#)

[Open Special Issues](#)
[Special Issue Guidelines](#)

[Call for Proposals for
Special Issues](#)

Journal of Geological Research
Volume 2009 (2009), Article ID 589037, 10 pages
doi:10.1155/2009/589037

Research Article

Slope Stability and Slope Formation in the Flysch Zone of the Vienna Forest (Austria)

Birgit Terhorst¹ and Bodo Damm²

¹Institute of Geography, University of Würzburg, 97074 Würzburg, Germany

²Institute of Geography, University of Regensburg, 93053 Regensburg, Germany

Received 17 July 2008; Revised 19 January 2009; Accepted 10 March 2009

Academic Editor: Atle Nesje

Abstract

The Rhenodanubian Flysch of the northern Vienna Forest is composed of various layers of sandstones, marly shales, calcareous marls, and clay shists, which are covered by Quaternary periglacial cover beds and loess deposits. This area at the margin of the eastern Alps represents an undulating landscape of the Austrian low mountain regions. The Vienna Forest Flysch region is considered to be susceptible to landslides. Both petrography of the bedrock and soil mechanical properties of the Quaternary sediments control the current slope dynamics in the study area. In a temporal context it is evident that the stability of slopes exceeding 27° is controlled by a succession of several steps of slope formation. On the basis of field surveys, laboratory analyses, and slope stability modelling, results from investigations on recent landslides demonstrate five different phases of slope formation. In general, after passing these phases the stability of studied slopes is increased, due to the different soil mechanical properties of the potential sliding masses.

[Abstract](#)

[Full-Text PDF](#)

[Full-Text HTML](#)

[Linked References](#)

[How to Cite this Article](#)