

Foreword

The term 'gully erosion' covers several geomorphological processes modeling the slopes and floors of valleys all over the world. It is the only type of hillslope water erosion capable of creating permanent landform features. Gully erosion is also a dynamic link between slope and fluvial systems. Studies reveal a substantial impact of human activity on the character and intensity of gully erosion today and in the past. The agricultural land use is a key factor in this respect. There is not only a scientific, but also a very practical dimension of studies of gully erosion. The development of gullies generates a threat to agriculture and environment, as well as local settlement and transport infrastructure. It causes the reduction of arable land, leads to the siltation and damage of roads and possessions, and transports soil material to rivers. Hence it is crucial to perform an accurate assessment of the risks generated by gully erosion.

However, the level of understanding of this phenomenon remains still insufficient. Major challenges facing researchers include gaining an insight into the natural and anthropogenic determinants of gully erosion and the role of particular subprocesses, improving the models and methods of quantitative analysis of gully erosion, and developing methods of mitigation its negative consequences.

The last decade has seen a considerable increase of interest in gully erosion. Four international symposia have taken place dedicated exclusively to this subject: Leuven (Belgium) in 2000, Sichuan (China) in 2002, Oxford (USA) in 2004, and Pamplona (Spain) in 2007. During the latter meeting, Lublin was chosen as the venue for the 2010 conference on *Human impact on gully erosion*. The Lublin Upland comprises areas where gully density locally exceeds 10 km per km², which is an extremely high value at the European scale. At the same time, the specific and long-standing agricultural use of the area makes it an ideal site for studying the interrelations between human activity and gully erosion.

The issue of *Landform Analysis* contains papers presented or prepared for presentation during the 5th International Symposium on Gully Erosion hold in Lublin (Poland), 19–23 April 2010. Unfortunately, enormous disruption to air travel across western and northern Europe caused by eruption of Eyjafjallajökull (Iceland) limited the participation of many researchers in the Symposium. Thanks to engagement of all participants and their agreement we have a possibility to present and share their ideas and works.

Guest editors

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