

**Ján FERANEC, Jozef NOVÁČEK**

**THE CORINE LAND COVER DATABASE OF SLOVAKIA AND ITS CHANGES IN THE PERIOD 2000-2006**

The paper provides the basic characteristics of the *CLC2006/GMES FTSP Land Monitoring Slovakia* Project, aim of which was to update the CLC2000 database to the situation in 2006 and to identify the changes that took place in the concerned period in context of all-European activities. Derivation of the CLC2006 and CLC2000/2006-change data has been accomplished by computer-aided visual interpretation of IRS and SPOT-5 satellite images. Basic statistical characteristics of identified CLC2006 classes, as well as the trends in land cover changes in Slovakia in the analysed six-year period where changes of forest to transitional wood/scrub areas distinctly dominate are documented.

**Vladimír Falt'an, Stanislav Katina, Martin Bánovský, Zuzana Pazúrová**

**THE INFLUENCE OF SITE CONDITIONS ON THE IMPACT OF WINDSTORMS ON FORESTS: THE CASE OF THE HIGH TATRAS FOOTHILLS (SLOVAKIA) IN 2004**

The windstorm on 19 November 2004 caused a great deal of damage to forests of the Tatras National Park. It has changed the environment of the impacted areas in the High Tatras foothills for a long time. The impact of the wind calamity on various types of sites is presented in this article, on the basis of large-scale geo-ecological field research. For the first time, a generalized additive model is applied to model this event. Its results signal possible influence of site conditions on local disturbances of spruce woods and mixed pioneer woods. The results are important for the needs of integrated assessments of the research area and for forest management.

**Marian RYBANSKÝ and Miroslav VALA**

**ANALYSIS OF RELIEF IMPACT ON TRANSPORT DURING CRISIS SITUATIONS**

The goal of this paper is to identify the critical relief factors in terrain, which are important for the transportation analyses and cartographic visualization, especially for crisis situations and natural disasters such as floods, fires, storms, military operations etc. Both relief parameters and technical parameters of vehicles are important for cross-country movement analyses focused on the tracking and visualization of the shortest, fastest, or safest routes in the terrain. The paper presents results of cross-country movement analyses using mathematical and statistic methods. To verify the methods, results were used from laboratory and field tests and measurements. The tests and visualizations of research results were made with using the main military (wheeled and tracked) vehicles and the ARC GIS Software. The paper presents partial results from the defence research project "METEOR" 0801 8 6020R and from the research programme VZ FVT 0000401 managed by the University of Defence Brno.

**Andreas MAAS**

**SHRINKING CITIES IN THE CZECH REPUBLIC? – THE CASE STUDY OF BRNO**

Urban shrinkage represents one of the greatest challenges for present and future European urban development. Population decline, stagnating economic growth and a limited municipal budget are the main dimensions of urban shrinkage that require great involvement with the process to manage its potential effects. Nonetheless no such debate on East Central Europe exists at present. In particular, comparative studies are rare. This case study of Brno investigates whether shrinkage is a problem in the Czech Republic and whether the concept of shrinking cities is applicable. An indicator approach is developed in order to provide an instrument or basis for international comparison.

**Stanislav KRAFT, Michal VANČURA**

**TRANSPORT HIERARCHY OF CZECH SETTLEMENT CENTRES AND ITS CHANGES IN THE TRANSFORMATION PERIOD: GEOGRAPHICAL ANALYSIS**

The presented paper deals with a geographical analysis of main changes in the transport system of Czechia during the transition period by monitoring changes in the transport hierarchy of main settlement centres. Within the research, our attention is focused on long-term tendencies in the development of transport hierarchy, on main changes in transport hierarchy between 1990 and 2005, and on the relation between transport and complex hierarchy of settlement centres.