# SLOPE MOVEMENT HAZARDS OF THE MINING-DUMPS IN THE DOROG BASIN, HUNGARY

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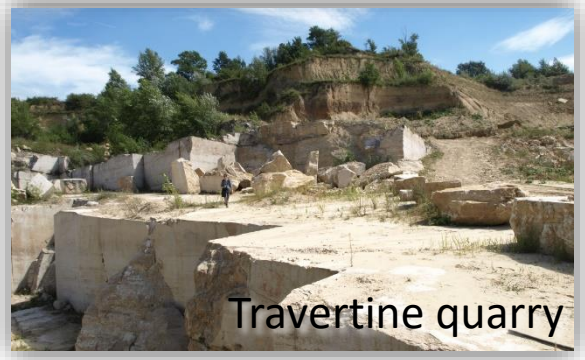
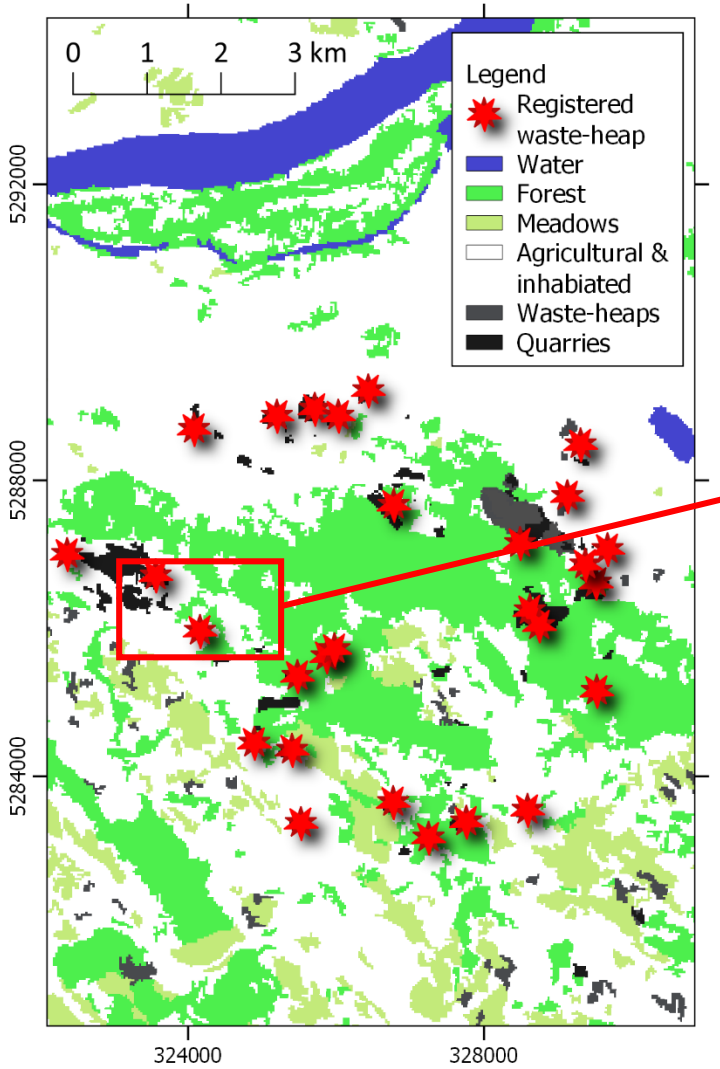
The Dorog Basin was a mining area in northern central Hungary for more than two centuries. Mining waste heaps and tailings are often adjacent to residential and agricultural areas.

E.g. (mostly): coal mines, limestone quarrying, sand-pits.

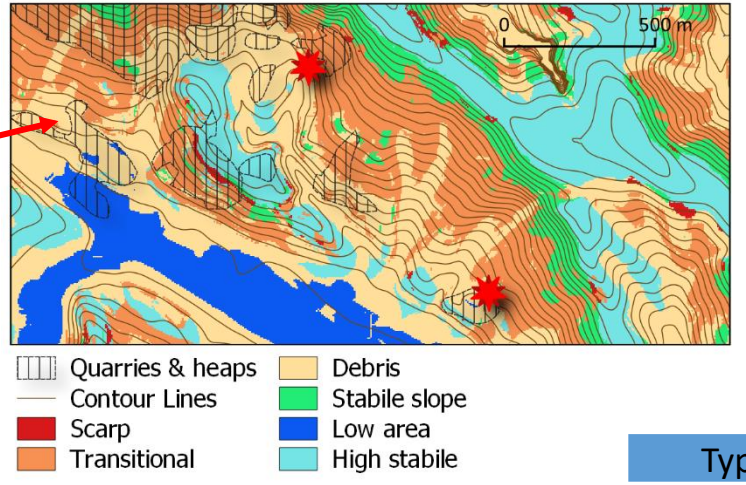




Based on Landsat image classification, and geological maps. Registered data is from the Geological Survey (MBFSZ).

AIMS: identification, categorization and de-limitation of geological hazards in the area. Problems: available data is point-like, outdated, not categorized.

## **Method 1**: RFC of slope-types (6 classes)




RFC params:
Field data (44 sites);
Variables (6): **geol, slope, pr-curv, twi, mua, normh**;
DEM: SRTM1

Mtry (2) acc: 0.86
Forest size: 500

## **Method 2**: frequency ratio analysis (waste/non-waste)

| Type | $F_{wh}/F_{nwh}$ |
|---|---|
| Scarp | 0.47 |
| **Transitional** | **1.25** |
| Debris | 1.54 |
| Stabile slope | 1.15 |
| Low area | 0.36 |
| High stabile | 0.55 |

The transitional types (slopes that are still in movement) are more likely by 25% on the waste heaps!