



## Land sliding in the area of the town of Ocna Mures

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Situated near the center of Romania, the town of Ocna Mures, Alba county, once was considered a health resort. Positioned on the left bank of the river Mures, it has a most important natural asset - that is salt. This town began its growth around the year 1896 when the Sodium Product Plant came into being. From the salt extracted as brine they obtained different chlorine-sodium products.

On the morning of December 22, 2010, a landslide occurred in the area close to the center of the town, causing a release of a great deal of salty water that soon formed a lake. During that day the big supermarket that was situated on the back of the sliding area collapsed into the crater of the newly formed salty lake.

Due to this sliding the main road began to present huge cracks and it sank into the ground around 3 meters, along a length of 100 meters. Thus the asphalt wrinkled as a result of the landslide and one can no longer use the road.

Together with my students I went to that area in order to study the alterations that were produced in the ground and to observe the efforts of the specialized workers trying to avoid a catastrophe. Thus we learned that a variety of corrections were needed:

- The design and the installation of a barrier around that area in order to prevent more plain water to enter;
  - Stopping excavations of pebbles from the river Mures over an area of 5 kilometers up- and down-river of the town area;
  - The removal of the other salty lakes from the town area;
  - The new design of the sewer system of the town using resistant materials;
  - Increased capacity of the sewer system for industrial water and drainage from the abundant rains;
  - The planting of trees in the area in order to fix the ground and prevent new landslides;
- In order to establish the safety coefficient to protect the salt reserve due to its ubiquity they have to consult seismology specialists. Therefore they have to do all the necessary efforts in order to urgently stop the landslide phenomena.

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