



AKADEMIA GÓRNICZO-HUTNICZA
IM. STANISŁAWA STASZICA W KRAKOWIE

Issues regarding taking landslide areas into account in spatial planning in Poland

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Occurrence of natural hazards in Poland



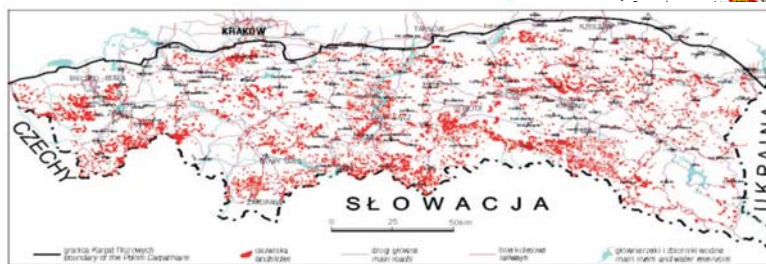
Landslide in Tenczyn

Landslide in Milówka





Localization of landslides in Poland



Polish legal documents connected with mass movements

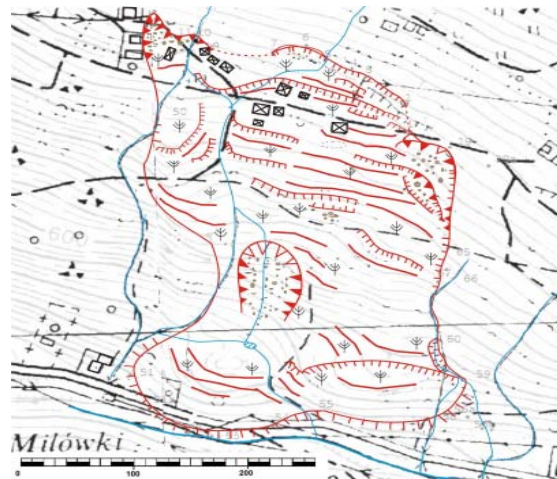
- The Act of 27th April 2001 Environmental Protection Law (Official Journal of 2001, No.62, item 627, as amended) [7],
- The Act of 27th March 2003 on Spatial Planning and Development (Official Journal of 2003, No.80, item 717) [9],
- The Act of 3rd February 1995 on the protection of agricultural and forest land (consolidated text of Official Journal of 2004, No.121, item 1266) [6],
- The regulation of the Minister of Environment of 20th June 2007 on information on mass movements of the earth (Official Journal of 2007, No.121, item 840) [3].



Records of areas at risk of mass movements

The map of landslides and risk areas

- landslides record card,
- record card of the area at the risk of mass movements



Map of landslide in Milówka



Records of areas at risk of mass movements

Monitoring

This monitoring shall include:

- - execution of a situation and elevation map,
- - detailed geological image,
- - research drilling,
- - sampling,
- - installation of instruments to observe the movement of landslides,
- - installation of hydro-geological monitoring system,
- - execution of additional tests (e.g. geophysical).



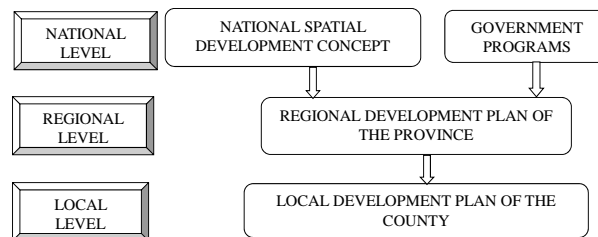
The Anti-Landslide Protection System (SOPO)



SOPO database

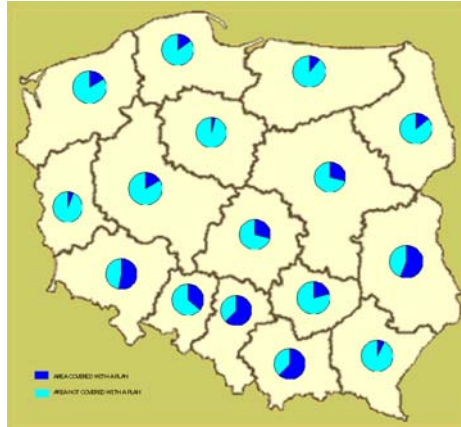


The system of spatial planning in Poland





The percentage of the province areas covered with local spatial development plans



Taking into account landslide areas in planning documents

Spatial planning at the local level takes into account both in the study and in the local plan, the areas of subsidence of soil masses. The commune is obliged to consult the records of the study, then a local plan, with the competent geological administration authority, and the changes resulting from such consultations to incorporate into planning documents.

In the absence of the local zoning plan, issuing a planning permission for investment purposes shall be carried out in agreement with the competent geological administration authority with reference to the areas at risk of subsidence of soil masses.



Summary

-The concept to create a central, unified database of landslides in Poland is appropriate. Landslide maps developed within the SOPO project will have all the necessary data needed to the study of conditions and directions of spatial development, local development plans and planning permissions.

-However, at present, starostes responsible for maintaining and updating the record of landslide areas have very limited information. They are not completely prepared substantially, technically and financially to carry out such a task.

-Another issue that has not been included in the current legislation is the frequency of updates of the basic planning documents - a study of conditions and directions of development of the commune and the local development plan.



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