

Austrian Partnership on Risk Management for Gravitational Hazards in Spatial Planning: A policy process in a vague legal framework

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RISK MANAGEMENT IN SPATIAL PLANNING: PROBLEMS AND CHALLENGES

The Alpine regions in Austria are subject to multiple risks by mass movements and slope processes. Spatial information on hazards related to rock fall, debris flow, avalanches, erosion and landslides is of paramount importance, as well for the safety of existing living space as for future regional development. Hazard mapping concerning these natural processes aims at three major tasks: (a) Provision of information for citizens, governmental decision makers and economic entities, concerning the risk for human life and health, environment, economic activities and cultural heritage; (b) Steering of spatial development in exposed areas away from potential hazards/risks; and (c) restrictions for building in areas with high and medium risk. Risk management in spatial planning based on hazard maps ought to minimize the risks for land use and regional development and balance disparities concerning risks and costs for protection. As areas with no or low risk are rare in the Austrian Alps, regional development in rural areas suffers from limited availability of construction sites and industrial estates. Resulting disadvantages for the development potentials of these regions bring about negative socio-economic trends like relocation of enterprises, loss of jobs, declining attractiveness of the region, capital flight and finally rural exodus. This proof the key role of integrated risk management for a sustainable regional development in regions exposed to natural hazards.

HAZARD MAPPING CONCERNING MASS MOVEMENTS: AUSTRIAN DEFICITS

While several European states (e.g. Switzerland, France, and Italy) already provide hazard maps for rock fall, landslides or debris flows on slopes and have issued applicable legal regulations and technical guideline, in Austria – except from some pilot activities on provincial level – no common method for this specific hazard mapping was established until now. The Austrian constitution restricts the federal competence for hazard zone mapping to floods, torrents and avalanches, for other natural hazards no nationwide legal basis is available. Apart from that also most Austrian provinces have omitted to issue regulation on mass movement related hazard mapping and only rudimentarily take into account these risks in spatial planning/building law. Consequently the information on natural hazards provided in spatial plans – especially in supra-local area planning programs and communal area zoning plan – is fragmentary and even biased towards risks by floods and avalanches. Another deficit is the prevalent sectorial approach of authorities and experts (geologists, risk managers, spatial planners, architects, and building owners) to risk related problems, mainly focused on single types of natural hazards or restricted to partial interests. Finally geologists working in the field of risk assessment argue that available methods for detailed hazard mapping concerning rock fall and landslides fail due to insufficient data, unreliable process models and small numbers of documented events.

These limits and shortcomings obstruct the establishment of an integrated risk management in spatial planning concerning mass movements/slope processes and hamper the cooperation across borders of competence and expertise. Austrian municipalities are “long-suffering victims” of these deficits as fragmentary information on natural hazards/risks induces incomprehension/confusion among building owners/investors and restricts local economic development. Example cases where active mass movements threaten existing settlement areas in Austria (e.g. Gschliefgraben, Sibratsgfäll, Eiblschrofen, Höhenberg landslide) have

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increased dramatically in the last decade and uncovers maldevelopments in local spatial planning/development due to missing information on hazards and risk (location, intensity, frequency, spread) by rock fall, landslides and debris flows on slopes.

AUSTRIAN PARTNERSHIP FOR RISK MANAGEMENT IN SPATIAL PLANNING

The Austrian Concept on Spatial Development (ACSD), which is a strategic instrument for federal policies in regional development, seriously takes into account the challenges by natural hazards and risk. Based on this governmental document a new initiative was started by the Austrian Conference for Spatial Planning (ACSP) establishing strategic partnerships in order to foster the development of policies for key issues in an interdisciplinary forum.

The ACSD-partnership for “Risk management in spatial planning concerning mass movements and slope processes” was established in 2012 to bridge the gap between hazard mapping, risk management and spatial planning for these relevant hazards on Alpine slopes in order to establish an integrated risk management. The partnership provides, for the first time, a forum where experts from geology, forestry, torrent control, spatial planning as well as representatives of provinces, municipalities and traffic operators are able to discuss the topic in a comprehensive and interdisciplinary way, unconstrained by political interests and away from the federal division of competences. The partnership is aiming at three major outcomes:

- Establishment of an integrated procedure for assessment and mapping of hazards related to mass movements and slope processes
- Standards for cartographic display of hazards on different levels of precision, corresponding to the accuracy requirements of spatial planning on provincial/regional/local level
- Harmonized regulations and standards for the implementation of hazard maps and information on risks in planning and building laws as well as regional development

The ACSD-partnership, in action at least until end of 2014, must not be understood to replace the regulation competence of Austrian provinces in spatial planning, but it is an appropriate instrument to bridge the gap between the sectorial approaches of geologists, risk managers and spatial planners and will pave the path to a common understanding of hazards and risk, concerning the intensity and frequency, as well as of the content and accuracy of different types of hazard maps. Furthermore beyond the partnership, a policy process for federal harmonization of risk management in spatial planning concerning the relevant natural hazards shall be initiated.



Fig. 1 Settlement areas in Alpine valleys exposed to multiple hazards related to mass movements and slope processes

Keywords: Risk management, hazard mapping, mass movements, spatial planning