

Thematic Mapping for Disaster Risk Assessment in Case of Earthquake

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SUMMARY

According to statistics in recent decades earthquakes are first in damages and casualties among all natural disasters, followed by floods and tropical cyclones. The annual risk for victims of earthquakes all over the World estimates at 10 000 - 15 000 people per year. In Bulgaria the annual risk for victims of earthquakes estimates at 360 victims since 1901 until now. The number of damages and human losses depends not only on the frequency and magnitude of the earthquake but also depends on timely reaction of responsible authorities and opportune disaster management. Seismic hazard mapping and earthquake risk assessment mapping play a key role in disaster management process. Cartographic visualization of concrete phenomena, risks and hazards is important because it gives to the responsible local, regional and national authorities a clear idea for the nature, size and scope of the earthquake. The paper presents analysis of existing seismic hazard maps and maps of earthquake risk assessment. This kind of maps requires various data. Heterogeneous basic, statistical and thematic data provided by various services, agencies and organizations should be combined. This paper examines some problems that arise in thematic mapping for disaster management in case of an earthquake due to the various types, structure and classification of data provided by various organizations. In order all this data to be integrated and presented on a coherent map it should be harmonized. The paper proposes main stages for data harmonization including georeferencing the information into a geographical reference system, standardizing the object classification, standardizing the level of detail, unifying the cartographic visualization. It presents some advantages of the use of seismic hazard maps, maps of earthquake risk assessment and thematic maps for disaster management in case of an earthquake. This kind of maps aims to improve decision-making process in case of emergency and to facilitate the responsible authorities in their efforts to reduce the number of human loss and property damages.