

3D GIS Integrated Natural and Man-made Hazards Research and Information System

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3D GIS Research and Information System developed by World Agency of Planetary Monitoring and Earthquake Risk Reduction (WAPMERR) for the purposes of reducing risk due to natural and man-made hazards and for rescue planning after disasters.

These goals are achieved by advancing methods of real-time modeling and loss assessment, by estimating the extent of future disasters in scenario mode, by calculating of risks, by characterizing the nature of the building stock in cities at risk, and through monitoring by satellite images.

Basic functions of 3D GIS System:

- The global-area coverage;
- The full three-dimensionality and manipulation with 3D models of buildings;
- The possibility for the Earth surface zooming at any point you need;
- The digital cartographic base design with the use of satellite images, digital; elevation and bathymetry models;
- The possibility for manipulation with the point, raster and vector data layers;
- The availability of data analyzing and processing plug-ins;
- The software for numerical modeling of geophysical processes and phenomena;
- The software for loss assessment from natural and man-made hazards;
- The database management system intended for visualization and handling of historical data for hazards.

Keywords: Natural hazards; man-made hazards; tsunami; earthquake; 3D GIS; numerical modeling; loss assessment; forecast; historical data collection.

References

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