

Geo-informatics System for Geo-hazards and Environmental Risk Assessment

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SUMMARY

Geo-informatics system including databases relevant to geology, subsoil, groundwater, and other geological media has been developed on the basis of geological survey in Japan. Geological Survey of Japan (GSJ) continues to obtain various kinds of geosciences information and to analyze them for publication as official geological maps. These databases were used to develop in different purpose and/or methodology that bring practical problem of lack of correlation among them. Recently an integrated system for digital geosciences maps has been modified in a form of universal grid and geographical information system. Various kinds of geosciences information, topsoil, subsoil, groundwater, 3-d structure of geology, geography, vegetation, land use, and aerial image, contains on a uniform platform. This geo-informatics system can be applied for the estimation of geo-hazards, assessment of environmental risk as well as land utilization. The advanced system coupled with geo-grid and remote sensing can be widely utilized for universal databases for completing global simulation in geo-environment. In this presentation we introduce the features of geo-informatics system, a tool for risk mitigation, some applications for numerical simulation and the future development plan for industrial and social dissemination.