

Basic Research & Development Plan for Korean Active Faults Map

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Abstract

9.12 Gyeongju Earthquake (ML=5.8; 12th September 2016) was the biggest instrumental earthquake in South Korea, and the earthquake created an air of anxiety among the public. Since the event, the necessity of National Active Faults Map has strongly been raised to respond future big earthquakes. Furthermore, collecting reliable active fault data and improving our research level on earthquake and active faults are very important to mitigate potential earthquake hazards. Therefore, the Korean government launched the new project based on previous projects from other advanced countries such as Japan and USA. The main aims of this project are 1) making the Korean Active Faults Map based on investigation and research on active faults, and 2) standardization of the investigation and evaluation techniques for Korean active faults. It will take total 25 years (2017~2041, 5 stages) starting from the southeastern part of the Korean peninsula, where the 9.12 Earthquake occurred. The process of the project includes Remote Sensing Survey (LiDAR, air photos, and satellite images), Geomorphological Survey, Structural Fault Tracing, Paleoseismic Investigation and Quaternary Age Dating (C14, OSL, ESR etc.). The result of this project can contribute to releasing anxieties of citizens and earthquake disaster prevention. The main advantage of this project is predicting earthquake hazard areas based on active fault data and providing proper constructing codes for important sites such as nuclear power plants.