

National geochemical baseline mapping in Korea : the present and future

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"National Geochemical Mapping Program" was initiated in 1997 to get new data sets for establishing multi-purpose geochemical baselines over the entire country. During 1997-2000, the program conducted a systematic geochemical coverage for the western half of the country, totally 47,000 km². The fraction of sediments finer than 150 μ m was collected from 11,000 streams, of 1st- and/or 2nd-order, in Kyonggi, Chungchong and Cholla provinces. An average sampling density is 1 sample per 3 km² except for the western flat areas where natural drainage systems are poorly developed. Analysis was done employing alternative multi-element schemes for 10 major elements and 26 trace elements based on XRF, ICP-AES and NAA methods.

Geochemical maps and related information are compiled for desired units such as Province, County and/or topographic map, and all data are available as digital image maps and tabulated files on diskettes with published explanatory texts. The additional mapping program will be continued for the remaining 50,000 km² of the eastern half of Korea. Geochemical baselines established for different geological units will make a great contribution to the management and legislation for natural environment and resource in Korea.