

# Geochemical map of the Ima-river and Harai-river basins in the eastern part of Fukuoka Prefecture

# Masaki Yuhara[1]; Nozomi Takamoto[1]; Naomichi Furukawa[2]

[1] Earth System Sci., Fukuoka Univ.; [2] Earth Syetem Sci., Fukuoka Univ.

We collected stream sediments from the Ima-river and Harai-river basins in the eastern part of Fukuoka Prefecture, and made geochemical maps, in order to make environmental assessment. In this area, the Triassic Tagawa metamorphic rocks (mainly psammitic - plitic schist), Cretaceous granitoids, late Miocene to early Pliocene Kitasakamoto Formation (andesitic - dacitic lava and tuff breccia), early Pliocene Hikosan Volcanics (andesitic lava and tuff breccia) and Quaternary system. The Cretaceous granitoids are divided into the Asakura Granodiorite (medium-grained porphyritic hornblende biotite granodiorite), Soeda Granodiorite (medium-grained massive hornblende biotite granodiorite), Masaki Granite (medium-grained porphyritic biotite granite) and Yusubaru Granite (fine-grained biotite granite). Sample collection was performed by method of Tanaka et al. (2001). The collected samples (88 stream sediment and 20 rock samples) were analyzed for 26 elements (Si, Ti, Al, Fe, Mn, Mg, Ca, Na, K, P, Ba, Co, Cr, Cu, Ga, Nb, Ni, Pb, Rb, S, Sr, Th, V, Y, Zn, Zr) by X-ray fluorescence spectrometry, and 14 stream sediment samples were mineralogical analyzed by X-ray deffractmeter. Major rock-forming minerals (biotite, hornblende, pyroxene, plagioclase, K-feldspar) separated from some stream sediment and rock samples were also analyzed. The distribution patters of each elements on the geochemical maps are explained by difference of geological background and accumulating process of rock-forming minerals. Thus, obvious anthropogenic contamination is not detected in this area, excepting Pb enrichment at one point.