

Cultivation abandonment and environmental conditions: an analysis with GIS

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<http://giswin.geo.tsukuba.ac.jp/sis/>

Farmland in Japan has been rapidly abandoned and decreased since 1980s. Abandonment of cultivation has spread and increased not only in hilly or mountainous areas but also in flat farming areas. The abandonment relates to conditions of natural, economic, social, and political environmente in rural areas. Research on the relationships between the abandonment and environmental conditions is an important theme to consider the conditions for sustainability of rural areas.

The authors clarified the distribution of cultivation abandonment with the rural community statistics of the Agricultural Census held in 1975, 1980, 1985, 1990, 1995 and 2000. The rural community statistics is very useful to analyze the relationship between the abandonment and environmental conditions in detail, and is very suited to analysis with GIS. It is small area statistics in which average-sized one rural community contains less than one hundred farm households.

The research area covered Shiga, Kyoto, Osaka, Hyogo, and Nara prefectures, namely a part of Kinki Region in Japan. We made the maps of abandonment, and examined the geographical relationships between the ratio of abandonment and altitude, slope of farmland, and distance to urban centers.

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