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Pollutant Loading and Distribution of Aquatic Plants in the Watersheds of River Mankeong-gang and River Youngsan-gang

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To investigate the relationship between pollutant loading and distribution of aquatic plants in the watershed of River Mankeong-gang and River Youngsan-gang, land use pattern of watershed, water quality and species diversity were determined in 9 tributaries. Watershed area and river length were high in Jiseok-chon and Whangryong-gang and were low in tributaries of River Mankeong-gang. Forest areas were high in Gosan-chon and Soyang-chon of River Mankeong-gang. Housing areas were very high in Chonju-chon, Iksan-chon and Kwangju-chon near large city. Species diversity indices were above 2.0 in Gosan-chon of River Mankeong-gang and Jungam-chon, Whangryong-gang and Jiseok-chon in River Youngsan-gang and were significantly correlated with forest area or housing area at the 5% level. The results indicate that forest area should be increased and housing area as a cause of pollutant loading should be decreased for an improvement of water quality and a maintenance of high species diversity in polluted watersheds.

Keywords: Pollutant loading, Aquatic plants, Watershed, Species diversity