

## FLUVIAL MORPHOLOGY AND STRUCTURE, AND WATER QUANTITY AT THE SHINJEON RIVER, HAPCHEON-GUN, KOREA

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### ABSTRACT

Flowing water is the main agent responsible for the creation of physical habitat in a river environment (FAO 1998). This study was carried out on the Shinjeon River located at Shinjeon-ri, Hapcheon-gun Province in Korea. Index degrees of river morphology and structure according to the river morphology were analyzed. As a result of an analysis about environmental factors for water quality in each surveyed sites, the most effective groups were, pH, DO, BOD, COD, SS, T-N, and T-P. Transversal & longitudinal sandbars were seven or more (score = 1). Materials of river levee at low channel width were shown artificial soil-levee (natural vegetation, lawn). The low water's edge vegetation was naturally formed a variety of vegetation communities. The mean of pH was 7.286 across stations, varying from 7.130 to 7.451. At middle section, number of flexion was four or more in this region. Bed materials were composed of sand, silt, and clay (50% >). Land uses in riparian zones within river levee were arable land, urban, residential mixed. At low section, transversal & longitudinal sandbars were seven or more (score = 1). The value for index of degree of river naturalness according to the environment factors was a mean of 4.0. The mean of pH was 7.085. The average value of DO was 5.025 mg/L. The average value of BOD and COD were 4.288 mg/L and 2.275 mg/L, respectively.

**Keywords:** Shinjeon River, river morphology, water quality.