

FLUVIAL MORPHOLOGY AND WATER QUANTITY AT THE IMGJ STREAM, GIJANG-GUN, KOREA

Man-Kyu, Huh
Dong-eui University
SOUTH KOREA

ABSTRACT

Rivers play an important role in the sustenance of life systems of nature. This study was carried out on the Imgi Stream located at Imgi-ri, Busan-ci province in Korea. Index of degree of river structure according to the river morphology was analyzed. Transversal & longitudinal sandbars at upper section were absent and velocity of flood was very fast. The low water's edge vegetation and flood way vegetation at upper section were shown naturally formed vegetation communities. At middle section, the average value of biological oxygen demand (BOD) was 3.048 mg/l. The average value of dissolved oxygen (DO) was 6.085 mg/L. The average value of chemical oxygen demand (COD) was 5.148 mg/l. Mean total suspended solids (SS) was 26.425 mg/L. Total phosphorus and nitrogen were 2.225 mg/L and 0.253 mg/L, respectively. At low section, number of flexion was one in this region and transversal & longitudinal sandbars were four. Bed materials were composed of sand, silt, and clay (50% >) and diversity of channel width was slight. The mean of pH was 6.963. The average value of DO was 5.123 mg/L. The average value of BOD and COD were 5.115 mg/L and 6.805 mg/L, respectively. BOD and COD values of water sample from the Imgi Stream were found to be within the limit (Current National Recommended Water Quality Criteria). The agricultural sector with its fertilizers and manure enrichment of soil increases the concentrations of nutrients (nitrates, ammonium and phosphorus) in water.

Keywords: Biological oxygen demand (BOD), Imgi Stream, river morphology.