In this study, concentrations of heavy metal ions such as Cd, Cr, Cu, Fe, Mn, Pb, Zn, Al and Ni were determined in Myriophyllum verticillatum (plant), Dreissena polymorpha (mussel) and Potamon fluviatilis (crab) by using ICP-OES in different seasons. Many taxa are benthic, therefore closely related to sediments and they accumulate metals and tolerate up to low-moderate concentrations. Average annual rate of the accumulated heavy metals in Myriophyllum verticillatum plant was found as Al>Fe>Mn>Zn>Ni>Cr>Cu>Pb>Cd. Al, Fe and Mn were deposited in a high percentage, but the plant could tolerate this level of values. In Dreissena polymorpha, annual rate of the accumulated heavy metals in the muscle tissues was found as Al>Fe>Zn>Ni>Mn>Cr>Cu>Cd>Pb and Al>Fe>Mn>Zn>Ni>Cr in the shell part. Al, Fe and Mn were also accumulated in a high proportion in invertebrate organisms. The rate of heavy metals accumulated in Potamon fluviatilis was found as Al>Fe>Mn>Zn>Cu>Cr>Ni. However a significant correlation was observed between certain heavy metals in each season, no heavy metal concentration reached to the toxic level for living organisms.

Keywords: Myriophyllum verticillatum, Dreissena polymorpha, Potamon fluviatilis, Heavy metals, wetland.