Study of usinge water and waterfowl organs for evaluation of metal pollution (case study: Miankaleh and Gomishan international wetlands)

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Abstract
This study investigate the levels of cadmium, lead, chromium, zinc and iron in the kidney, liver, and pectoral muscle of mallard (*Anas platyrhynchos*) (n=30, 15 male and 15 female) and pochard (*Aythya ferina*) (n=30, 15 male and 15 female) and water as indicator of metals pollution from southeastern Caspian Sea in winter 2012. In specimens, concentrations of metals were determine by atomic absorbtion spectrophoto meter. In all water stations, concentrations of metals exceeded the thershold level of metals for live aquatic organisms. Lead conccentrations in 1, 2, 6 and 7 stations, cadmium in 1 and 6 statoins, chromium in 6 station, zinc in 1, 6 and 7 stations and iron in 1 station were significantly higher than other stations (P<0/05). Mean metals concentrations in the liver and pectoral muscle, and kidney of mallard follows the sequence: Fe>Zn>Pb>Cd>Cr; Fe>Zn>Pb>Cr>Cd, respectively, while in liver, kidney and pectoral muscle of pochard, the distribution follows the order: Fe>Zn>Pb>Cd>Cr. Gender related and inter specific variations of metals concentrations in analyzed tissues were observed (P<0.05). The levels of metals significantly differed among different tissues in each species (P<0.05). The result of this study can use for monitoring coast of southeastern Caspian Sea.

Keywords: Pochard, Mallard, Water, Miankaleh, Gomishan, Metals.