

In this study, ecosystem quality of Emet Stream Basin was evaluated by investigating some water quality parameters and trace toxic element accumulations. According to data observed, the contaminated areas had much higher concentrations, an average of 20 times for water and 40 times for sediment in terms of arsenic and 30 times for water and 10 times for sediment in terms of boron than the uncontaminated areas. The amounts of arsenic in muscle tissues of *Squalius cij*, *Capoeta tinca* and *Barbus oligolepis* were much higher and the amounts of zinc in muscle tissues of *C. tinca* and *B. oligolepis* were higher than the limit values of Turkish Food Codex. According to results of factor analysis, three factors named as 'mining, agricultural and climate factors' explained 75.41% of the total variance and according to results of cluster analysis, three statistically significant clusters named as 'low, moderate and high polluted areas' were formed.