# THE COMPARISON OF QUALITY WATER AND SEDIMENTS BETWEEN THE LAGOONS OF LEZHA

**Anilda KOKALI***
Institute of Public Health
**ALBANIA**

**Sulejman SULÇE**
Agricultural University of Tirana
**ALBANIA**

**Edjona BICI**
Institute of Public Health
**ALBANIA**

**Zaira POGA**
Institute of Public Health
**ALBANIA**

**Emanuel DUNGU**
Regional Sanitary Authority
**ALBANIA**

## ABSTRACT

The aim is to study the quality of surface water of these lagoons, analyzing the physical-chemical parameters, biological and toxicity in these waters, as well as sediment, spatial and temporal distribution of pollutants. The wetlands in the study have very precious values of biodiversity, and there is part of the Kune-Vain wetland ecosystem which lies on the Adriatic coast, on both sides of the Drini River delta. In the each lagoon, are defined and taken 4 points sampling, in which the samples were taken into the waters and sediments. The water samples, are taken during 4 seasons of 2012-2013, were analyzed for physical and chemical parameters: pH, T, EC, TDS, Salinity, DO (in situ), inorganic nutrients ($NH_4$, $NO_2$, $NO_3$, $PO_4$), COD and $BOD_5$, heavy metals. The sediment samples were taken in December 2011 and March 2013. The classification and comparison of water quality, is carried out according to the EC Directives (2000/60; 2006/44; UNECE; NIVA), and for sediments the comparison is used SQG (mg $kg^{-1}$) according to the ANZECC (ISGQ ISGQ low and high); NOAA (ERL and ERM); Standard of Florida (TEL instructions of PEL), WHO and EPA. It concluded that concentrations of heavy metals in water and sediments for the entire period in both lagoons are below the permitted values. The temperature values are almost similar in the two lagoons, the $NO_3$ values in all the surveyed period, resulted below the limit allowed. In the waters of the lagoon of Kune are found in higher average values of $NH_4$, TDS, EC, COD and $BOD_5$. In Vain Lagoon, they are easily found higher values of pH, DO, lower contents of heavy metals in water and sediments. The concentrations of heavy metals were found lower in the water than in sediments.

**Keywords:** Water quality, sediments, Lezha lagoons, classification.