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THE DISTRIBUTION OF METALS IN WATER, SEDIMENTS, AQUATIC PLANTS AND FISH FROM SNAGOV LAKE, ROMANIA

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Abstract

This paper presents the studies regarding metal ions distribution in water, sediments, aquatic plants and different tissues of fish from Snagov Lake, Romania. The Snagov Lake is a natural lake situated 25-30 kilometers North from Bucharest, capital of Romania. The concentration of several metal ions (Li, Ba, Al, Pb, As, Se) was measured in three places of the lake, namely receiving-input, middle and discharging-output ponds. The samples were collected during spring time from water, sediments, *Ceratophyllum demersum, Phragmites australis* reed, and *Scardinius Erytrophtalmus* fish. The ecological risk, the toxicity class based on the concentration of toxic metals into sediments, according to the Sediments Quality Guidelines (SQGs) and bio-concentration factor, (*BCF*), of metals in anatomical tissues of studied fishes were assessed. Experiments have shown that aluminum and barium had the highest concentration in water, sediments, aquatic plants and fish samples. Also, the metals bio-concentration is increased in branchiae and scales, compared with muscles and bones.

Key words: aquatic plants, fish, metals ions distribution, sediments, Snagov Lake

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