



“Gheorghe Asachi” Technical University of Iasi, Romania



THE EVALUATION OF HEAVY METALS CONCENTRATION DYNAMICS IN FISH MEAT FROM THE BLACK SEA COASTAL AREA: AN OVERVIEW

Ira-Adeline Simionov*, Victor Cristea, Ștefan-Mihai Petrea, Elena (Bocioc) Sîrbu

*“Dunărea de Jos” University of Galați, Department of Aquaculture, Environmental Science and Cadastre,
47 Domnească Street 800008 Galați România*

Abstract

Contamination of the marine environment induced by metals has risen in recent years due to the global population increase and it affects the aquatic ecosystem via food chain. The current paper aims to present information regarding the heavy metals accumulation in fish from the Black Sea West, South and South-East coastal areas. Therefore, various databases were revised and the relevant information was centralized, in order to obtain a clear view on the concentration dynamics and accumulation tendency of several heavy metals, as follows: Pb, Cd, Fe, Zn, Cu, Hg, Ni, Cr and As. As a conclusion to this research, we can state that the highest concentrations of heavy metals in fish meat was encountered in case of red mullet (*Mullus barbatus*, Linnaeus, 1758), followed by bluefish (*Pomatomus saltatrix*, Linnaeus, 1766). The upwarding scale of heavy metals concentration, reported in the analysed studies was found as follows: Cr < Ni < Hg < Cd < Pb < As < Cu < Fe < Zn. Both West part (Romanian and Bulgarian marine coastal areas) and Central South part of the Black Sea (Turkish marine coastal area, represented by the perimeter situated between the Kizilirmak and Yeşilirmak rivers) have proven to be the most polluted in terms of heavy metals accumulation in fish meat.

Key words: Black Sea, heavy metals, water pollution

Received: June, 2016; Revised final: February, 2017; Accepted: June, 2017
