



Marine Biodiversity
Conservation Center
AQUARIUM BOKA

AdriBioPro2019 | 7-10 April
International Conference: | Kotor
Adriatic Biodiversity Protection | Montenegro

Book of Abstracts



INSTITUT ZA
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International Conference
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Institute of Marine Biology,
University of Montenegro

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THE CONFERENCE

The 2019 International Conference: Adriatic Biodiversity Protection – AdriBioPro2019 provided updated scientific, decision-making and policy-relevant information across a broad array of different Adriatic issues, marine biology and related scientific disciplines. Emphasis will be on how state-of-the-art research on Adriatic biodiversity protection, conservation of coastal and marine areas and sustainable use of marine resources can contribute to policy- and decision-making. Particular focus was put on the development opportunities which marine biotechnology can offer in the Adriatic. Organized to include plenary and breakout sessions covering both disciplinary and interdisciplinary perspectives, Conference results will be used in shaping future marine science priorities and policy in Montenegro and other Adriatic countries.

Background

The Institute of Marine Biology of the University of Montenegro is granted by the Norwegian Ministry of Foreign Affairs to implement a project “Marine Biodiversity Conservation Center “Boka Aquarium” (MonteAqua)” in cooperation with the Center for Fisheries and Biodiversity Conservation of Inland Waters, Institute of Biology and Ecology, Faculty of Science, University of Kragujevac. The International conference “Adriatic Biodiversity Protection” is final project event, dedicated to gather all relevant national and regional stakeholders and to secure closer regional cooperation in the Adriatic Sea region.

According to the UNEP, the Mediterranean Sea is subject to tremendous pressure from multiple human uses and climate change. Recent research results indicate the cumulative impacts of human activities in the Mediterranean, ranking it as a hotspot of marine biodiversity, and one of the most heavily impacted marine regions worldwide. One of the most intensely used and severely degraded regions of the Mediterranean is the Adriatic Sea. It implies a necessity of developing appropriate and effective policy-responses including adaptation actions, enhancement of resilience and implementation of mitigation activities. The Conference will address alterations of Mediterranean ecosystems, with particular focus on the Adriatic Sea and its biodiversity and analyse widespread conflict among marine users. By presenting the latest science, the Conference will facilitate, synthesize and summarize the science-policy dialogue.

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Presentation title

Metal content in muscle, gills and liver tissues of the northern pike *Esox lucius* (L. 1758) of three age classes in the irrigation channel of the Danube river – case study

Abstract

Northern Pike is the top piscivore and phytophilic species strongly dependent on backwaters and vegetated river areas for spawning and recruitment. The aim of the present study was to examine dependence between metal concentrations (As, Cr, Cd, Co, Cu, Fe, Sr, Pb, Zn, Hg) and examined fish tissues, as well as of fish age. In June 2013, 26 samples of pike have been collected using electrofishing (HONDA 1,2kW, 6 A). Collection was performed in irrigation Channel Vizelj, runs through the suburban section of Belgrade. The content of heavy metals was determined in samples of fish tissues of different ages using inductively coupled plasma mass spectrometry (ICP-MS). Age analysis indicated that fish belonged to age classes from 0+ to 2+. Metals As, Cd, Co and Pb were not detected in analyzed fish tissues, and Cu was not detected in muscle tissue of 2+ and 1+ specimens. The majority of the analyzed elements were found in minimal concentrations in the muscle, except 0+ specimens with high Fe concentrations. Gills of all analyzed age classes were loaded with very high concentrations of Fe and Sr. In gills of 1+ and 2+ fish were also detected high Zn concentrations while in 0+ fish were detected Fe. The highest concentrations of Cu were detected in liver of all fish age classes. The youngest age class (0+) was differentiated by higher concentrations of Cr, Cu, Fe, Sr and Zn in muscle tissue, while the oldest age class was mainly differentiated by higher concentrations for Zn and Hg in gills.