



Visibility	Visibility	Public
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Identification	Title	sturgeons heavy metal accumulation Lower Danube
	URL	dataportal.aquacross.eu/dataset/sturgeons_heavy_metal_lower_danube
	Abstract	The work includes results of the investigations on bio-accumulation of heavy metals in tissues of sturgeons of the North-Western Black Sea and Lower Danube River (LDR). Samples (10 . 30 gr) of liver, muscle, fat, gonads and skin tissues collected in October 2003 from 21 adult specimens of three sturgeon species: <i>Acipenser stellatus</i> (10), <i>A. gueldenstaedtii</i> (2), and <i>Huso huso</i> (9) were analysed for content in Cd, Cu, Zn, Pb, Mn, Fe and Ni, using VARIAN Spectra A100. The highest concentrations of Zn, Cu and Cd were found in liver and the smallest in muscles of sturgeons. The highest heavy metal content was detected in tissues of stellate sturgeons, followed by Russian sturgeons. In all three species Cd and Cu content of the liver as well as of the stellate sturgeon muscle surpassed the admitted limits for human consumption (Cd . 0.05; Zn - 50; Cu . 5.0; Pb . 0.3 [mg / kg wet weight]). In view of a future re-opening of the commercial fishing of wild sturgeons it is strongly recommended testing the heavy metal level prior delivering sturgeon products to the market. Avoiding human consumption of liver of sturgeons captured in the LDR is strongly recommended as well. In the case of Cd a bio-accumulation with age of sturgeons was visible. In all species males seem to accumulate more heavy metals in their tissues. We explain this as effect of more frequent spawning migration of males in the LDR, the major contamination source. Beluga sturgeons show less heavy metal bio-accumulation of tissues.
	Creation date	2013-02-14
	Publication date	2013-09-30
	Last revision date	2013-06-28
	Lineage	The work is based on the results of laboratory analyses performed on tissues harvested from sturgeons in October 2003.
	Related publications	
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Keywords	Free keywords	Biota, Species distribution, Sturgeons, Danube Delta Biosphere Reserve, Romania
	Vocabulary title	
	Vocabulary date	
	Vocabulary date type	
Classification	Topic category	Biota
	INSPIRE theme	Species distribution
	Resource type	



Spatial Information	Spatial representation type	
	Projection	
Spatial extents	Case Study 3 . Danube River Basin	
	North	50.24
	South	42.08
	East	29.76
	West	8.15
Temporal extents	Individual date	2003-10-31
	Start date	
	End date	
Distribution	URL	http://dataportal.aquacross.eu/dataset/0e7d684c-6e1f-4611-87b4-68842005d7ff/resource/f2d2cf95-55fd-40ae-bf12-29f2e2ada175/download/20170913onaraet3colab2013sturgeonsheavymetalaccumulationdbr.pdf
	Name	sturgeons heavy metal accumulation Lower Danube River
	Format	.pdf