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## **AIZSARGĀJAMO GLIEMENU POPULĀCIJU NOVĒRTĒJUMS NATURA 2000 VIETĀS LAIKA PERIODĀ NO 2006. LĪDZ 2013. GADAM.**

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Since 1999. the surveys and research on the freshwater pearl mussel *Margaritifera margaritifera* (Linnaeus, 1758) and the thick shelled river mussel *Unio crassus* Philipsson, 1788 in Latvia has intensified. In 2006 the broader study in the river Palsa basin in the 3 Nature Reserves with status of protected areas of NATURA 2000 was carried out as part of the Nature conservation plan (Rudzīte, Čakare 2007) Hydrochemical and hydrobiological local water ecosystem assessment takes part. The fish monitoring data are from 1996, including host fish population assessment.

In short, about NATURA 2000 monitoring data on population, data from 2009 and 2011 (Rudzīte, Rudzītis 2011). Data from 2013: repeated countings on transects used in 2006. Chemical analyses of water compared from those from 2006. Analysis carried in the Laboratory of Environment Quality and Monitoring of Faculty of Geography and Earth Sciences of Latvian University. Compared changes of mussels population density, demographic (age) structure, decreasing of water quality with increased content of phosphorus and nitrogen.

The sizes of populations are changed - population of freshwater pearl mussel is decreasing, but thick shelled river mussel increases.

About other populations: the population of pearl mussel in Perļupe is declining, aging of the all populations of both species.

Conclusions. The survival rate of the freshwater pearl mussel *Margaritifera margaritifera* in Latvia is particularly threatened, although different projects to compensate for the impact of negative factors are carried out. All populations are ageing. The survival rate of the thick shelled river mussel *Unio crassus* in Latvia is threatened because under the existing legislation is not possible to prevent any adverse effects of all populations. So shrinking and ageing of populations will continue.

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