

SGSII-57 the Freshwater Pearl Mussel, Lužní potok



Ministerstvo životního prostředí

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Project name: Restoration of the Biotope of the Freshwater Pearl Mussel (*Margaritifera margaritifera*) in the Alluvial Plain of the Luzni Brook and Its Monitoring

Project Nr.: MGSII - 57

Project location: The Aš region, the catchment area of the Lužní potok

Financial support: EEA Grants, Small Grants Scheme (SGSII) entitled “Action Plans for Endangered Species II”, support area 1: “Realisation of Approved Action Plans and Management Plans for Endangered Plant and Animal Species”

Total Resources: 2,905,660 CZK incl. VAT

Financing: Financial resources from EEA Grants are assigned in the amount of 2,469,811 CZK, which is 85% of the anticipated total project expenditure. The state budget grants financial resources in the amount of 435,849 CZK, which is 15% of the anticipated total project expenditure.

Project duration: 1.1.2016 – 30.4.2017

Project partners: no partners

Project guarantee:

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Project Objective and Scope:

The aim of the proposed measures is to create a parallel waterbed to be used to produce detritus as a suitable food for populations of the Freshwater Pearl Mussel (FWPM) in the Luzni brook, and a renewal of the biotope of the FWPM.

By creating the parallel riverbed, the flow-off will become slower and there will be an important improvement in the habitat biodiversity of the Luzni brook stream. Prior to the construction works, enough sunlight must be provided for the site by removing self-seeding tree species and bushes. A suitable grass mixture will be sown along the watercourse to improve the food supply – fine detritus.

The newly proposed stream will provide enough quiet zones, pools and fish shelters to increase the rearing capacity for the whole fish fauna, especially for the Freshwater Brown Trout (*Salmo trutta morpha fario*) which is the host fish for the glochidia of the FWPM. Seven wooden stabilisation reefs will be built on the left-hand tributary in the lower part of the

Luzni brook bed, aiming to aerate the water stream in an overfall above the orifice leading into the current bed in order to allow precipitation of ferruginous compounds. Unnamed tributaries on the right-hand bank, originally drainage systems which now work as a replacement for food rills for the FWPM, will be connected to the bed.

The original riverbed of the Luzni brook will be left unchanged as a stream for the floodwater to flow off. The division of water between the original riverbed and the new water structure will be provided with a water division structure of a natural character and allowing the discharge to be regulated. The impact of the new works on the habitat quality for the FWPM will be assessed by biological monitoring – bio-indication. Another activity will consist in acquiring and installing stations for remote monitoring of the environment, which is the key factor for the site, considering its remoteness and difficult accessibility.

About the FWPM

The FWPM (*Margaritifera margaritifera*) is an umbrella species for the conservation of oligotrophic watercourses. It is highly sensitive to disturbed natural processes in the whole catchment area. This makes it an organism whose effective preservation requires the wide participation of the public and stakeholders, especially farmers, forest management staff, fishermen, local governments, etc.) along the entire catchment area where this species occurs.

In the past, the FWPM was threatened mostly by pearl pickers. The adverse impacts today are eutrophication and chemical pollution of waters, inconvenient temperature regime as a result of overgrown forest over spring areas and watercourses, erosion and sedimentation in watercourses caused by intense agricultural and forest management, unbalanced hydrological regime, calcium metabolism disorder and a lack of fish or genetically unsuitable host fish species. To mitigate these effects, broad cooperation is necessary of the many entities in the whole catchment area where the FWPM occurs. This can be assisted by the demand raised by public awareness and thus help to to preserve this interesting animal species.

Photographs:

