



# FINAL REPORT ON ECOSYSTEM FUNCTION RESTORATION



LIFE for LASCA Project  
December 2022





Authors:

*Kaja Pliberšek and Tone Tavčar*

Picture on the cover: Adult Lasca specimen (*Protochondrostoma genei*). Author: Jurij Mikuletič.



## Content

<b>Preface.....</b>	<b>4</b>
<b>Activities and results achieved.....</b>	<b>5</b>
<b>Methods and methodologies used.....</b>	<b>7</b>



## **Preface**

This report is the Final report of LIFE for LASCA project on Ecosystem function restoration. It presents activities, methods used and results achieved under the project action D2: “Assessment on the ecosystem function restoration”. Key activities that contribute to the restoration of ecosystem functions will continue and they are predicted in After Life plan and Action plan delivered by the project.

## Activities and results achieved

Under the action D2: “Assessment on the ecosystem function restoration” we firstly defined Lasca distribution area within Slovenia (figure 1). Assessment based on fish community surveys and data from literature on past Lasca findings in Vipava river basin. Basic Lasca distribution area was determined by Common nase distribution, since, due to literature, the species shared the same habitat. In this way, we defined the narrow target area of field work. Afterwards, inside the determined areas, we actively supported ecosystem function restoration.

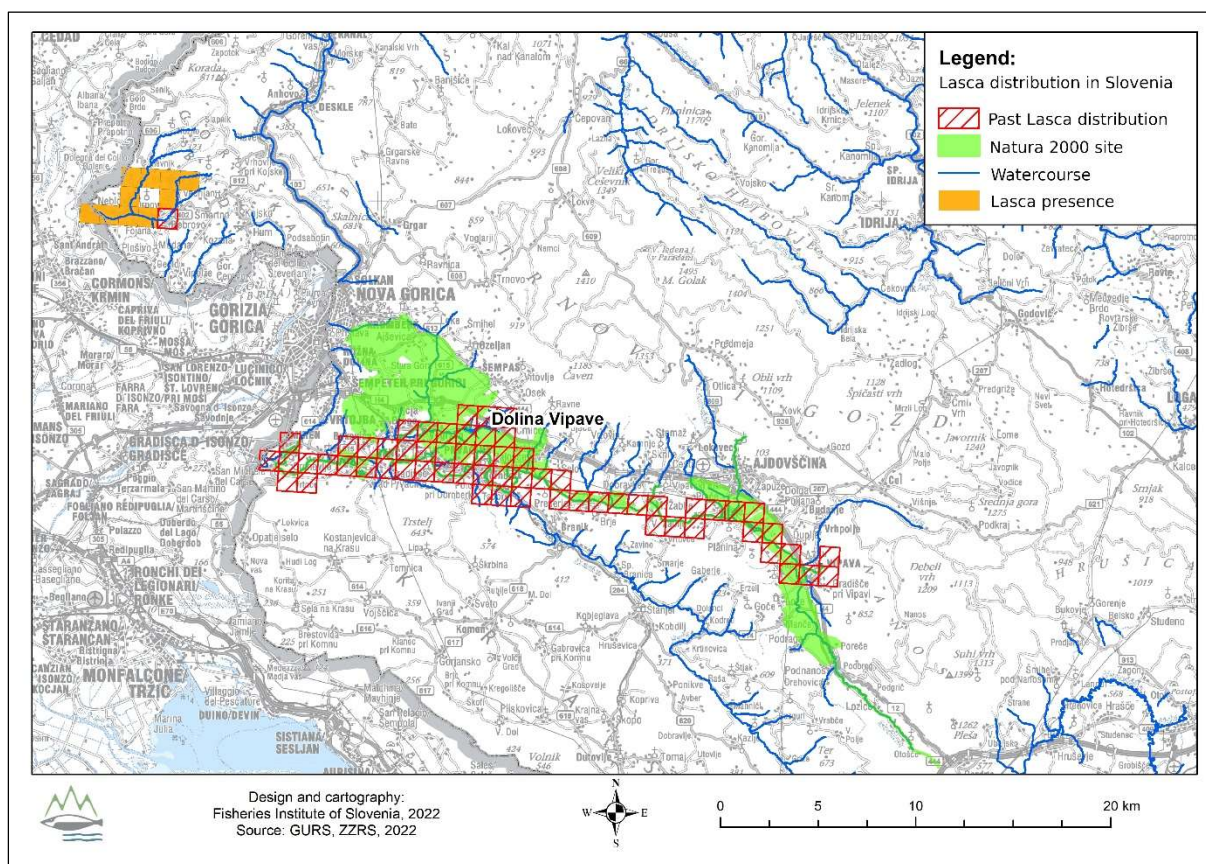


Figure 1: Lasca distribution area in Slovenia defined in 2018 [1 km x 1 km grids]. Assessment based on fish community surveys and data from literature.



In frame of ecosystem function restoration we have achieved further results:

(1) We successfully repopulated Lasca in three streams within Vipava river basin, named: Jovšček, Močilnik and Ozlenšček. In nature we have found 1.019 well adopted Lasca specimens. They have spread all over suitable habitat within all three selected watercourses. Even more, released Lasca specimens successfully spawned in the wild. Spawning in the wild is a great success and especially a big step towards self-maintaining capabilities of wild populations.

(2) At the request of the Ministry for the Environment and Spatial planning, we issued three expert assessments on Lasca conservation status in Brda region (initial small Lasca population in Slovenia), in years 2019, 2020 and 2021. Based on our assessments, the Ministry officially protected Lasca habitat in Brda region for two years (“Order for temporary ban and restriction of Lasca habitat manipulation”; Official Gazette of the Republic of Slovenia No. 47/19 and 103/20). In the frame of the protection, all human interventions in water bodies and nearby lands were prohibited, with an exception of emergency and regular public service interventions. However, even emergency and regular public service interventions had to be approved in advance by the Institute for Nature Protection and us (Fisheries Research Institute). As part of this, we attended 5 meetings in the field in a period from y. 2018 to y. 2022. On the meetings we meet with representatives of the Institute for Nature Protection and Slovenian Water Agency. Specifically, we discussed the local road restoration along the Vedrijanšček stream due to a collision, regular mowing along the Reka stream to protect nearby agricultural land and selective removal of sediments and riparian vegetation in Reka stream and the lower stretches of Kožbanjšček stream due to the anti-flood protection of town Neblo and the industrial zone in town Dobrovo. After each intervention we did the follow-up and checked if the execution was in line with agreement. We never detected any deviation from the agreements.

(3) We actively protected Lasca habitat in Vipava valley by interventions on the field as well as by issuing documents to relevant public institutions, including appeals to reduce massive construction works in watercourses and to use more co-natural approaches. We respond to any information regarding potential habitat destruction. Unfortunately, we could not register all our actions regarding habitat protection, since a lot of work was done “ad hoc” and it was dispersed within our regular work on the project. We can expose some of the actions. During the project implementation, Fisheries Research Institute issued official opinions on majority of intended interventions in water bodies and nearby lands in Vipava Valley. Opinions acted as an expert support to Institute for Nature protection that issues the final consensuses. In December 2019, we issued appeal to Slovenian Water Agency, Institute for Nature protection and to Ministry for the Environment and Spatial planning. In the appeal we exposed possible consequences of inappropriate construction interventions in water



bodies and nearby lands on fish communities and their habitat and we kindly asked them not to allow or plan construction interventions in Lasca release sites. Despite the appeal, in 2020, the Slovenian Water Agency intended to carry out extensive construction works in the lower stretch of the Močilnik stream (Lasca release site and also habitat of many other endangered fish species). Together with the Institute for Nature Protection, we managed to prevent the intervention. At least three field meetings were held, a lot of communication via e-mails and phone were done, despite the fact that well-supported negative expert opinions and consents were issued. Nevertheless, the situation left many negative consequences in the mutual cooperation of the institutions involved, even today.

(3) During the project we actively reduced alien Common nase that compete with Lasca for food and space. We removed 11.191 specimens. We focused the reduction efforts towards specific periods and strategic sites to achieve results that are even more efficient. We removed Common nase specimens more intensively during spring and autumn, when specimens group at larger numbers in shallows, in spawning and feeding grounds. Moreover, we repressed the Common nase population also at crucial areas preventing intrusion of large specimen numbers into Lasca release sites. By controlling Common nase populations we enabled space and food for newly arrived Lasca and also for other species that alien Common nase affected.

## **Methods and methodologies used**

During the project, most of our field surveys were performed using methods for fish community surveys (N=389) and habitat surveys (N=394). Fish community surveys were performed in accordance with official Slovenian methods for Fish Community Surveys. We performed electrofishing by wading or in water deeper than 0,7 m by boat. On each sampling site, we recorded the basic habitat properties, such as river bed width, shading, water flow dynamic, substrate composition, riparian vegetation, etc. and the composition of the fish community and their abundance. The mass of the specimens was weighed or estimated on the basis of the correlation between mass and body length. For each site we recorded also number of electrical units used, number of persons in the team and we measured the survey area. In the watercourse sections potential for Lasca reintroduction (N=4) we also performed detail habitat surveys using River Habitat Survey method. For this purposes we visited experts in England, where we learned the method and obtained a certificate for its implementation.