



PROJECT LIFEEL LIFE19 NAT/IT/000851
Urgent measures in the Eastern Mediterranean
for the long term conservation of endangered
European eel (*Anguilla anguilla*)



NEWSLETTER

THE LATEST NEWS FROM THE LIFEEL PROJECT

2021
22

@Fisheries Research Institute - GREECE

Project title:

Urgent measures in the Eastern Mediterranean
for the long term conservation of endangered
European eel

Acronym:

LIFEEL

Specific financing EU programme:

LIFE Biodiversity

Codice LIFE:

LIFE19 NAT/IT/000851

Duration of the project:

50 months - from 01/10/2020 to 31/12/2024

Coordinating beneficiary:

Regione Lombardia -DG Agricoltura

Associated beneficiaries:

Regione Emilia-Romagna - D. Agricoltura,

caccia, pesca

Parco Lombardo della Valle del Ticino

Parco Regionale Veneto del Delta del Po

Ente Parco Delta del Po Emilia-Romagna

Università di Bologna

Università di Ferrara

G.R.A.I.A. srl

Hellenic Agricultural Organization - "DEMETER"

(GRECIA)

Co-financers:

EU LIFE Programme

Canton Ticino (Svizzera)

ENEL GREEN POWER

Fondazione Cariplo

Associazione Italiana Pesca Sportiva e

Ricreativa

Project Manager: Franco Mari

Communication Manager: Cesare M. Puzzi

LIFEEL CROSSES THE BARRIERS

THE PROJECT REOPENS THE MIGRATORY ROUTES OF EEL

The LIFE Natura LIFEEL project is an articulated project in which the achievement of the foreseen objectives takes place through the realization of a series of linked Actions; to better understand the program it is important to illustrate the operational path linked to the various project themes.

One of the main objectives of the Life Natura LIFEEL project is to reopen at least 1,000 km of river corridor considering the Po River in Italy and the Nestos River in Greece for the migration of eels, where suitable environmental conditions for this species are still present.

This will be possible thanks to the design - with Action A3 - and subsequent construction - with Action C3 - of 7 fish passages that will allow young eels to overcome barriers that are currently difficult to overcome.

IN ITALY 3 of these 6 passages are planned on the Panaro river (at the stretches of Bondeno Casumaro and Nonantola) built with

a ramp structure that allows the passage of most of the fish fauna present, and the last 3 are directly on the Po di Volanodelta (in Tieni, Valle Lepri and Valpagliaro) originally thought to be structured with an eaves shape with an internal “mat” in synthetic material that allows only the passage of the eels but now, at Valle Lepri and Tieni, it is under evaluation a fish ladder with would open the way not only to eel but also to other endangered species, such as shad.

These last three passages will be equipped in their upper part with a capture system formed by a tank with circulating water where the young eels can stay for 24/48 hours for monitoring activities.

IN GREECE the passage on the Nestos river, to overcome the barrier due to the Toxotes dam, will also have a selective “gutter” for eels equipped with a catch trap.

The first contacts and inspections by GRAIA - responsible for these activities in collaboration with the Emilia-Romagna Region and the University of Ferrara for the Italian part, and with Fisheries Research Institute for the design in Greece - have already started and we plan to close the design phase for March 2022 to arrive at the realization of the passages by the end of June 2023.

An important part of this action is to verify the functionality of these passages (with Action D2), analyzing the relationship between how many young eels arrive in the area affected by the passage and how many uses it to run up.

7 fish PASSSES



On the Italian side, the Department of Life Sciences and Biotechnology of the University of Ferrara, referent for this Action at the Italian level, has already initiated an ex ante monitoring both in the Po delta and in the course of the Po at the Pontelagoscuro area. With regard to the Po delta the monitoring activities were operated

Example of specific passage for eelers.

Example of fish rock ramp.

monitoring eel migrations

in its southernmost lagoon, the Sacca di Goro, at the mouth of the Po di Volano, an ancient branch of the Po that is now the main branch of the irrigation and drainage system from the province of Ferrara, with a completely artificial outflow.

The reason for the positioning of a monitoring station at the mouth of the Po di Volano is linked to the fact that the 3 eel passages of Tieni, Valle Lepri and Valpagliarowill be built right on this hydrological system of the Po di Volano-Navigabile-Burana Canal, to overcome the presence of three insurmountableartificial barriers.

This first ex-ante monitoring started at the beginning of Februaryand ended at the end of April, using nets made specifically for the sampling of glass eels (young eels of 6/8 cm). Theses specific fyke netswith a 2.5 mm mesh were positioned on both banks of the Po di Volano adjacent to the mouth, checking them two / three times a week.

The samplings highlighted a very serious situation, as the glass eelswere captured in very low numbers, for a total amount in the period of a few tens. No previous comparison data series are available, except for a monitoring carried out by the same Department of the University of Ferrara on behalf of the Emilia-Romagna Po Delta Park in the adductor channels to the Comacchio valleys, in 2014-15. In those years, the overall catches had been of the order of a few thousand per year. Therefore, compared to 2014-15, the decline recorded this year is approximately equal to two orders of magnitude.

What found at the mouth of the Po di Volano outlines an extremely serious situation of lack of recruitmentforthe whole Po River basin. Further data acquired from professional fishermen operating on the entire lagoon of Goro confirm the LIFEEL ex-ante monitoring data of very low arrival of glass eels in spring 2021.

Researchers of the University of Ferrara engaged in monitoring on the Po river, at Pontelagoscuro. In the small photo, laying nets in the river.



A further data of this lack of glass eels' arrival is also confirmed by researchers monitoring the Tyrrhenian coast of Italy, a traditional glass eels fishing site.

The monitoring of the Po in Pontelagoscuro began in May and one temporary interruption, of a few days, due to excessive solid transport of wooden materials during flood events. It is ongoing and will be carried on till the end of July.

As a matter of fact, a previous sampling, carried out on behalf of the Emilia-Romagna Region in 2014 and 2015, at the same section of the Po, showed that the elvers go up the Po, passing by the Pontelagoscuro section, in the period from May to the end of July. During this period two 4 mm mesh nets will be used, positioned one along each bank of the river. The 4 mm mesh was chosen to direct the capture to the elvers, as, as evidenced by the previous sampling, the glass eels do not reach the Pontelagoscuro section. In addition, the 4 mm mesh avoids excessive clogging of the nets, which is usual in the conditions of the Po.

It should be noted that, for now, none of the samplings carried out on the Po at Pontelagoscuro have been caught specimens of eel either at the elvers or adult stage.

On the Greek side, the project foresaw only monitoring activities until the installation - in 2023 - of the eel passage on Toxotes Dam in River Nestos, for the restoration of free communication and the achievement of the upstream migrations of eels. A catch system for young eels will be installed in the upper part of this passage, in order to carry out the necessary monitoring activities.

Furthermore, and in the Framework of the implementation of the WFD 2000/60, an ongoing monitoring of the fish fauna in River Nestos is taking place both upstream and downstream of the Toxotes Dam. The presence and the abundance of glass eels and yellow eels will take place as well and these data will be used in the future to assess the effectiveness of the eel passage. Monitoring of glass eels took place during 2020 in Lake Vistonida, without a success implying the very low abundance of glass eels recruitment.

Giuseppe Castaldelli. Professor of Ecology at the Department of Life Sciences and Biotechnology of the University of Ferrara, deals with applied issues related to the management of aquatic environments and the conservation of fish fauna and he is the contact person for all project activities that refer to the University of Ferrara, associated beneficiary in the LIFEEL project.



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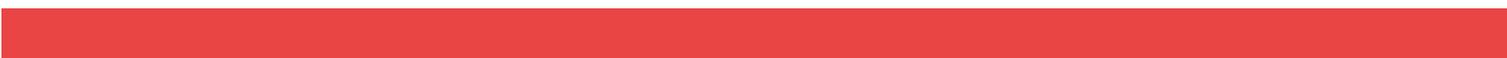
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*Mattia Nocciola. Professional
photographer-videomaker.
It will collaborate with the project
team for the duration of LIFEEL.
Welcome to the team, Mattia!*



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