**Table S1** An annual summary of all harvested fish, all angling trips, and all angling guard inspections on one the Berounka River in the year 2014. The data were collected by the Czech Fishing Union and originate from angling logbooks that were collected from all individual anglers who fished on the river during the whole year.

| **ID of fishing site** | **Name of fishing site** | **Area (ha)** |
|---|---|---|
| 401 024 | Berounka River | 55 |
| **Fish species** | **Catch (individual fish)** | **Yield (kg)** |
| carp | 561 | 712 |
| tench | 16 | 8 |
| bream | 25 | 18 |
| chub | 56 | 41 |
| perch | 28 | 13 |
| barbel | 0 | 0 |
| nase | 0 | 0 |
| vimba bream | 0 | 0 |
| pike | 32 | 35 |
| zander | 12 | 11 |
| European catfish | 48 | 218 |
| European eel | 192 | 194 |
| brown trout | 5 | 2 |
| rainbow trout | 15 | 7 |
| grayling | 0 | 0 |
| brook trout | 0 | 0 |
| asp | 8 | 6 |
| whitefish | 0 | 0 |
| common huchen | 0 | 0 |
| grass carp | 21 | 54 |
| silver carp | 8 | 17 |
| crucian carp | 2 | 1 |
| burbot | 0 | 0 |
| other fish species | 218 | 105 |
| Total | 1,247 | 1,442 |

| **Parameters** | **Value** |
|---|---|
| Catches per ha (individual fish) | 56.18 |
| Yield per ha (kg) | 48.24 |
| Number of anglers | 2 561 |
| Number of anglers that caught at least one fish | 1 136 |
| Number of all angler visits | 10,218 |
| Number of visits per angler | 4.98 |
| Catches per angler (individual fish) | 0.58 |
| Yield per angler (kg) | 0.35 |
| Number of visits per ha | 20.18 |
| Number of angler guard notes in all angling logbooks | 108 |

**Table S2** An example of a fishing permit (a), a report of killed fish (b), and a summary of killed fish for the whole year (c) from one individual angler. The data originated from an angling logbook that was submitted by one individual angler in the year 2014.

a) a fishing permit

| ID of fishing site | Validity dates (from - to) | Name, surname | issued by | date of issue |
|---|---|---|---|---|
| 411 048 | 1.1.2014 - 31.12.2014 | Jane Doe | Prague 5 | 01.01.2014 |

b) a report of annually harvested fish

| date | ID of fishing site | species | number | weight (kg) | size (cm) |
|---|---|---|---|---|---|
| 09.09.2014 | 411 048 | common carp | 1 | 2.8 | 52 |
| 10.09.2014 | 411 048 | common carp | 1 | 2.1 | 50 |
| 22.09.2014 | 411 048 | common carp | 1 | 2.5 | 53 |
| 24.09.2014 | 411 049 | common carp | 1 | 2.6 | 54 |
| 27.09.2014 | 411 109 | European catfish | 1 | 5.6 | 70 |
| 28.09.2014 | 411 049 | European catfish | 1 | 8.8 | 74 |
| 13.10.2014 | 411 049 | European catfish | 1 | 7.5 | 72 |

c) a summary of annually harvested fish

| ID of fishing site | name of fishing site | harvested common carp (n) | harvested common carp (kg) | harvested European catfish (n) | harvested European catfish (kg) |
|---|---|---|---|---|---|
| 411 046 | Elbe 16 | 3 | 14.2 | 1 | 9.8 |
| 411 047 | Elbe 17 | 1 | 2.7 | 2 | 13.8 |

This appendix describes how the eel stock in the studied rivers was estimated in the study "**The Effect of Fishery Management on the Yield of the Critically Endangered European Eel *Anguilla anguilla* in mesotrophic Rivers and Streams in the Czech Republic**" by the author Roman Lyach.

Firstly, I tried to estimate the biomass of eels in the ecosystem by using fish stocks data from annual electrofishing surveys. The technicians from the Czech Fishing Union conducted ten surveys (on ten different rivers) every year over the study period, using an electrofishing device Lena. The Lena device had the following attributes: size 350×250×135 mm, weight 6.5 kg, accumulator 12V and 7Ah, pulse amplitude 240-310 V (+-10 V – depending on the conductivity), and frequency under 95 Hz. They annually surveyed ten 100 m long river stretches where the river was <1 m deep. However, no eels were found using this technique. So, for the purpose of this study, I had to estimate the biomass of eels in the ecosystem from other data sources. Therefore, a model was built to estimate the eel stock in the rivers.

The biomass of the eel in the studied rivers was estimated using the following mathematical equation: B(river)=B(Stock_Elv)+B(Stock_Yel)+B(Growth_Elv)+B(Growth_Yel)-B(Mort_Elv)-B(Mort_Yel)-B(Ang_lYel)+B(Returned).

The individual parameters in the equation are described in the following way: B(Stock_Elv) = the biomass of the stocked elver eels, B(Stock_Yel) = the biomass of the stocked yellow eels, B(Growth_Elv) = the growth (increase in total biomass) of elver eels, B(Growth_Yel) = the growth (increase in total biomass) of yellow eels, B(Mort_Elv) = the natural mortality (decrease in total biomass) of elver eels, B(Mort_Yel) = the natural mortality (decrease in total biomass) of yellow eels, B(Angl_Yel) = the man-induced angling mortality (decrease in total biomass) of yellow eels, B(Returned) = the biomass of the returned offspring of the stocked eels. All parameters are measured in (kg × year$^{-1}$).

The last parameter of the equation – the biomass of the returned offspring of the stocked eels – was estimated using the following mathematical equation: B(Returned)=B(Stock_Elv_9–16)+B(Stock_Yel_6–11)-B(Mort_Mig)-B(Mort_Fish).

The individual parameters in the equation are described in the following way: B(Stock_Elv_9–16) = the mean annual value of the stocked elver eel biomass over 9–16 years prior to the analyzed year, B(Stock_Yel_6–11) = the mean annual value of the stocked yellow eel biomass over 6–11 years prior to the analyzed year, B(Mort_Mig) = natural mortality (decrease in total biomass) of migrating eels outside of the studied country, B(Mort_Fish) = the man-induced fishing mortality (decrease in total biomass) of migrating eels of the studied country. All parameters are measured in (kg × year$^{-1}$).

Based on the models presented in scientific literature that studied the European eel ecology and biology [9, 12, 16, 32], it was assumed and estimated that stocked elver eels mature in 6–10 years, reach the Sargasso Sea within 6–8 months, reproduce and die. Their offspring (the larvae – the leptocephali) then migrate over 2–3 years back to the shores of Europe, transform to glass eels, and reach the Czech rivers within 6–8 months since arriving to the shore. It was also assumed and estimated that the stocked yellow eels mature in 1–5 years and then undergo the same journey as the stocked elver eels. It means that the offspring of the stocked elvers and yellow eels should be arriving to the Czech Republic 9–16 and 6–11 years, respectively, after their parents were stocked. I took the

information regarding the migration and mortality of eels from the above listed studies and used it without any modification.
In a result, the eel biomass in the studied rivers was estimated in the following way (Table S3).

**Table S3** The estimated biomass of the European eel *Anguilla anguilla* in the 176 studied and 25 control river stretches in the regions of central Bohemia and Prague over years 2005–2018. The biomass was estimated using the equation presented in this appendix.

| Year | Eel biomass (kg × $ha^{-1}$) |
|---|---|
| 2005 | 0.43 |
| 2006 | 0.38 |
| 2007 | 0.34 |
| 2008 | 0.26 |
| 2009 | 0.61 |
| 2010 | 0.42 |
| 2011 | 0.30 |
| 2012 | 0.43 |
| 2013 | 0.42 |
| 2014 | 0.52 |
| 2015 | 0.59 |
| 2016 | 0.47 |
| 2017 | 0.36 |
| 2018 | 0.32 |