**Metadata**

Climate change will render size-selective harvest of cold-water fish species unsustainable in Mediterranean freshwaters

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**Summary:**

This archive contains the model code and input for the simulation experiments, as well as their output data, published in: Ayllón, Nicola, Elvira, Almodóvar, in press. Climate change will render size-selective harvest of cold-water fish species unsustainable in Mediterranean freshwaters. Journal of Applied Ecology.

**Usage notes:**

The archive consists of:

1. One zip file containing the NetLogo code and all files needed to run the simulations: NetLogo extensions required by the software (six folders), input files to define the stream reach and perform the hydraulic modelling (two text files and two csv files), input files defining the temperature and flow time series for each of the three environmental scenarios simulated (three text files), one input file defining the setup of fishing scenarios (one text file), and a file defining the values of parameters that are not set up in the softwares’s interface (one nls file).
2. One RData file containing the outputs of each simulation experiment performed. Outputs are divided into two data frames, one including population outputs and the other the phenotypic traits outputs.

To reproduce simulation experiments:

1. Install NetLogo version 5.0.4 from the NetLogo website. (Versions 5.x.x will probably work but versions 6.x.x will certainly not.)
2. Copy all extensions to the same folder where the NetLogo code is located.
3. Choose the environmental scenario you want to run and edit its name using the same format as with the other text files (e.g., “environmentTimeseries-0.txt”).
4. If you want to run one single scenario, just modify the values of the four fishing parameters modelled in the software’s interface. All text and csv input files must end with “-0”. The name of the file nls must not be edited. Each row of the “experiment-plan-angling-simulation.txt” file represents a simulation scenario, defined by the combination of values of the four fishing parameters modelled.
5. If you want to run all scenarios, the simulation experiments are coded as BehaviorSpace experiment setups that are part of the NetLogo code. The code is prepared to run in parallel 25 simulations. To avoid problems caused by the slow initialization of model runs, include 25 copies of each text and csv input file, editing their names from “-1” to “-25” (e.g., “cellscoord-1.txt” to “cellscoord-25.txt”). The name of the file nls must not be edited. Each row of the “experiment-plan-angling-simulation.txt” file represents a simulation scenario, defined by the combination of values of the four fishing parameters modelled.

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