

## Internship project (Master 2)

### *Elicitation of preferences for the management of Arctic char in Lake Annecy*

#### Project description

The ISERV<sup>1</sup> project investigates the effects of Arctic charr (*Salvelinus alpinus*) restocking practices in alpine lakes on the links between intraspecific diversity and ecosystem services. Restocking can alter intraspecific diversity, which may indirectly affect fish population biomass and nutrient cycling, important services for fisheries and water quality. However, the links between fish farming management practices and ecosystem services remain unexplored.

The fourth task of the ISERV project is to survey local people and assess their preferences for different management practices. Although there is a rich scientific literature on economic valuation of water quality and recreational fisheries, few studies focus on intraspecific diversity and potential local attachment to species varieties. A discrete choice experiment will be integrated into a questionnaire to understand local people's preferences for different conservation strategies affecting water quality, population performance and genetic diversity of Arctic charr, and to estimate the impact on the socio-economic value of recreational fishing. As attachment to a place can be a determining factor in preferences for environmental services, the questionnaire will include questions that reveal attachment to Lake Annecy. An online survey will be carried out targeting local recreational fishermen (contacted through local fishermen's organisations) and complemented by a sample of the general population, as people who do not fish may also have preferences on conservation strategies for Arctic charr and their impact on water quality. The task has three subtasks:

- In interaction with the ISERV project team and local stakeholders to develop a questionnaire and discrete choice experiment.
- Carrying out the survey online with local recreational fishermen and with the general regional population.
- Econometric analyses of the survey results and assessing economic value of the impact of management strategies on ecosystem service provision.

#### Internship goals

- Carry out a literature review of previous assessments of preferences for the management of fish populations in lakes, focusing on the use of discrete choice experiments and other economic valuation methods.
- Work in a multidisciplinary team and interact (interviews) with key stakeholders in Annecy.
- Contribute to the design and implementation of a choice experiment, including the programming of the questionnaire.
- Data cleaning and econometric analysis of the responses to the discrete choice experiment.
- Contribute to the interpretation of results and the evaluation of management scenarios.

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<sup>1</sup> Relation diversité intraspécifique-services écosystémiques : rôle des pratiques de repeuplement piscicole

## Requirements

Educational background: Economics or related educational background, e.g. environmental management.

Competencies:

- Knowledge of fundamental concepts in (environmental) economics.
- Good knowledge of statistical methods and econometrics.
- Knowledge about the ecosystem service concept
- Communication skills in both French and English.
- High interest in interdisciplinary research and excellent teamwork skills.

## Duration

Six months.

## Starting date

Between February 1st and April 1st, 2024.

## Work location

Bureau for Economic Theory and Applications (BETA), Nancy, Campus AgroParisTech.

## Supervision and environment

The work will be conducted in close collaboration with Jens Abildtrup (INRAE, UMR BETA) within the framework of the ISERV project. The internship will take place at BETA but will also involve collaboration with the CARTEL laboratory, in particular, Allan Raffard, leading the ISERV project.

## Conditions

Gratuity amount: €4.05 per hour or a monthly bonus distributed over the entire six-month internship period, amounting to €581.18.

The trainee will have access to site infrastructure and services, including office space, a desktop computer, and software

The trainee will be encouraged to participate in the scientific activities of UMR BETA, such as seminars and conferences.

## How to apply

To apply for this internship, please submit the following documents to [jens.abildtrup@inrae.fr](mailto:jens.abildtrup@inrae.fr) :

- Your CV.
- A cover letter explaining your interest in the internship and how your qualifications align with the project's goals.

**Application Deadline:** February 1, 2024.