

Project *brief*

Thünen Institute of Fisheries Ecology

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When fish sum up: Political framework conditions and profitability of Lusatian carp ponds

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- In Lusatia, pond farms are struggling to survive – despite subsidies and tradition.
- Typical Lusatian carp pond farms in Saxony and Brandenburg differ substantially in terms of their economic efficiency, with the size of the farm also playing a role.
- New marketing channels, education, and training offer potential for supporting carp pond farming in the long term.

Background and objectives

Lusatia represents the largest pond landscape in Central Europe. However, regional fish production is undergoing profound structural change: losses due to predators, water shortages as a result of climate change, low prices for the products produced, as well as a lack of young recruits and investment backlogs are hampering the profitability of pond farming. As a result, numbers of pond farms are decreasing. Whereas in the past the focus was primarily on the production of animal protein, today importance of other positive effects of ponds – such as groundwater recharge, nutrient storage, and water regulation – is increasing. Continuous management of the ponds is necessary to maintain these ecosystem services. The aim of the “Teichlausitz” project was to use an interdisciplinary and transdisciplinary approach to investigate how this ecologically valuable cultural landscape can be preserved, using the Lusatian pond landscapes in Brandenburg and Saxony as an example. In the project, we analyzed the economic efficiency of carp production using representative farming systems. On this basis, we examined the financial dependence of regional carp farms on current subsidies and explored possibilities for improving economic efficiency.

Approach

The project defined typical carp farms in Lusatia. “Typical farms” are data sets based on real costs and prices that can be considered typical for farms of a certain size and region. Focus group discussions served as the primary method for defining ‘typical’ carp farms from Saxony and Brandenburg. In a dialogue between experts from aquaculture research and the business sector, it was determined which operational characteristics are typical for pond production in Lusatia. These typical farms - 21 tons of edible fish production on 120 hectares of cultivated land for Brandenburg, as well as 57 tons on 150 hectares and 139 tons on 310 hectares of cultivated land for Saxony - were projected from a reference year to the period 2014-2023. Their profitability was analyzed with and without considering the current subsidies for each respective year. The projection was based primarily on selected indices from the German Federal Statistical Office. When assessing the profitability of typical farms, a distinction can be made between short-term, medium-term, and long-term profitability. For the calculation, the expenses (short-term),

the sum of expenses and depreciation (medium-term), and the sum of expenses, depreciation, and opportunity costs (long-term) were subtracted from the revenues.

Results

In Brandenburg, the typical farm was unable to achieve medium-term (see Fig. 1) or long-term profitability between 2014 and 2022, even when subsidies were included. Furthermore, profitability declined steadily over the years. In the years 2014-2016 and 2021/22, no short-term profitability was achieved, meaning that not even operating costs could be covered.

The two typical farms in Saxony produced 57 t and 139 t respectively, and thus had higher production volumes than the typical farm in Brandenburg. In the years 2014-2022, both farms were able to cover their short-term costs even without subsidies. Between 2018 and 2022, medium-term profitability for the smaller Saxony farm could only be achieved with subsidies, while the larger farm was able to achieve medium-term profitability without subsidies over the entire subsidy period (see Fig. 1).

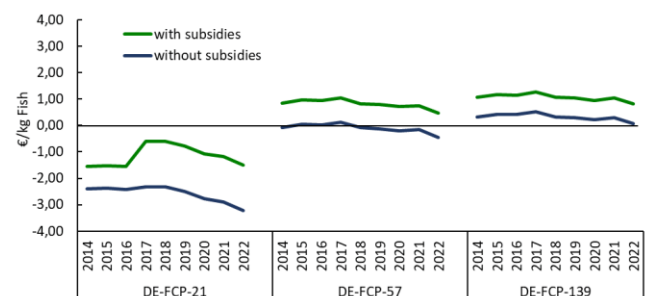


Figure 1: Medium-term profitability of typical carp farms in Brandenburg (DE-FCP-21) and Saxony (DE-FCP-57, DE-FCP-139) with and without subsidies between 2014 and 2022.

When subsidies were included, no additional financial requirements were identified in Saxony to achieve medium-term profitability during the funding period until 2022. In Brandenburg, however, the average requirement between 2017 and 2021 was 145 €/ha. A change in the subsidy guidelines in Brandenburg in 2023 and the associated increase in the subsidy rate led to a significant

increase in profitability for a typical farm compared to the previous funding period (see Fig. 2). In 2023, short-term profitability could be achieved for the typical farm. In Saxony, a new directive came into force in 2023, which was associated with significantly higher subsidy rates. In that year, the profitability of the typical farms also rose significantly (see Fig. 2), so that in both typical farms all costs could be covered by revenues and subsidies. Unlike Brandenburg, the sharp increase in this case was attributable solely to higher revenues from increased fish sale prices and reduced costs, rather than to the new subsidy guidelines.

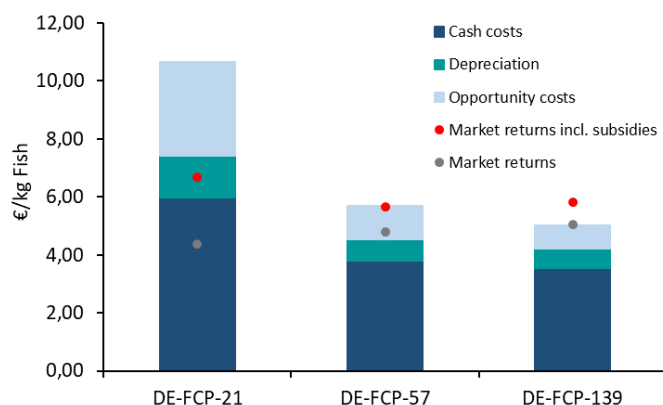


Figure 2: Costs and revenues for typical carp farms in Brandenburg (DE-FCP-21) and Saxony (DE-FCP-57, DE-FCP-139) in 2023. The calculation includes all stages of production and processing.

In addition to examining the economic viability of carp farms, the project also discussed entrepreneurial development potential. In a project's workshop, representatives of the sector identified fish vending machines, an expanded range of catering services, and reaching customers who primarily purchase convenience products as potential areas of untapped opportunity. In addition, a marketing alliance of producers from different sectors was considered promising.

To exploit this potential, investments in education, training (consumers and society – especially the younger generation – catering, chefs, retailers) and image cultivation (e.g., “School meets carp” with transport organization and financing) were mentioned. Investments in overarching structures were also proposed, e.g., for marketing associations. The need for a bridge between producers and retailers was identified.

Conclusions

Within the German region of Lusatia, there is a considerable difference between the two federal states in terms of the profitability of their carp pond farms. There are many reasons for this. Among other things, different cost structures and farm sizes play a role here. In the federal state of Brandenburg in particular, where there are mainly medium-size to small carp pond farms, there is a clear dependence on subsidy policies. Here, subsidies helped to cover expenses, at least in the short term. To secure the long-term existence of carp pond farms in Lusatia, further measures to improve the economic efficiency of carp farms, such as investments in education and training as well as overarching structures, should be considered in addition to subsidies.

Further Information

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