

# Can angling change a lake ecosystem?

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## 1 BACKGROUND

- Kaunas Water Reservoir (65km<sup>2</sup>) in Lithuania: important commercial fishery since 1960s, but stocks got depleted
- **Total ban on commercial fishing in 2013**
- Rapid recovery of fish populations expected
- Recreational fishing impact was completely unknown, **but expected to be small**

## 2 METHODS

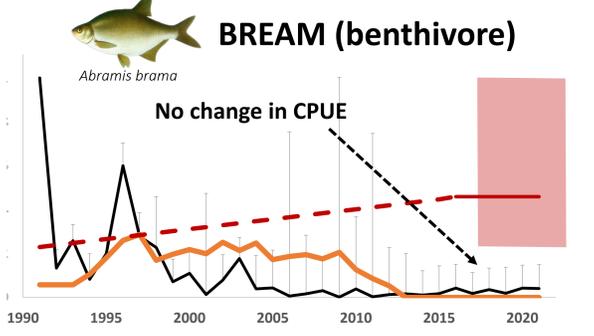
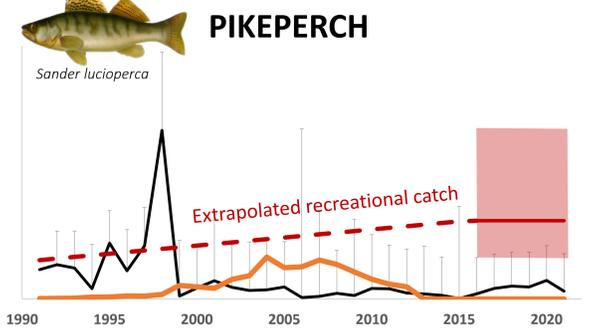
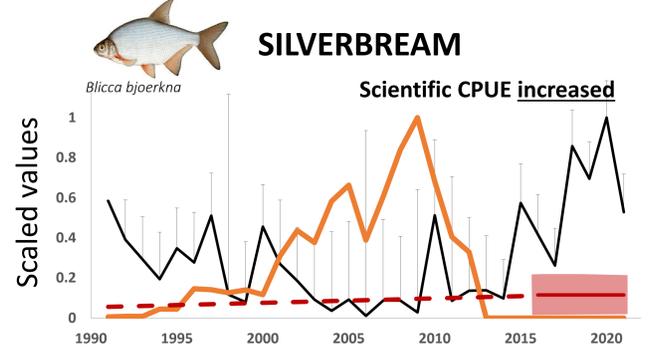
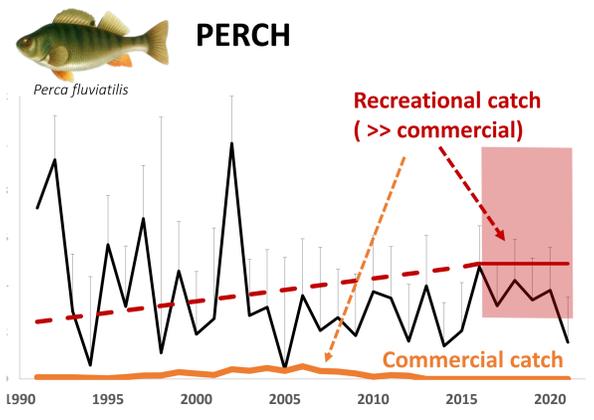
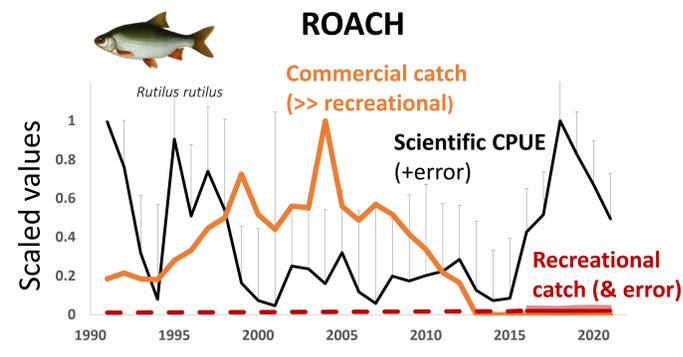
- Detailed angler counts in 2020s
- >900 onsite surveys (2016-2020) to record catches
- Mixed effect models to estimate total recreational catches
- Regular gillnetting scientific surveys



## 3 KEY FINDING

Species that recovered rapidly after commercial fishing ban:  
**benthivores**

Species that didn't recover (no change in scientific catch per unit effort, CPUE):  
**mostly predators**



## 4 TAKE-AWAY

- Detailed analysis of recreational fishing catch reveals very high impact on some species
- Selective removal of predators affects entire food web structure
- Most recreational fishing regulations limit catch per trip, but not total effort
- Careful release of predatory fish after catch should be strongly encouraged or mandatory

Our website

How to release fish safely?



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