

Jun 24th, 3:15 PM - 3:40 PM

Session E8: Efficiency Measurements as Tool in Evaluating Fishways

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Introduction

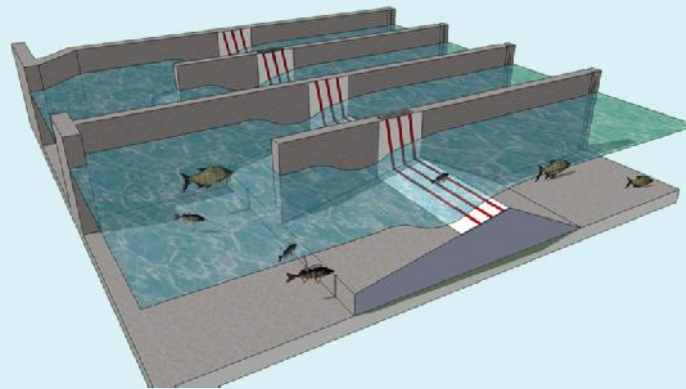
- Dutch situation
- How to evaluate

Case study

- Methods
- Fish way
- Results
- Conclusions

In general

Efficiency measurements as a tool in evaluating fish ways.



By
Jan H. Kemper

Author's:
Jan H. Kemper & Quincy de Bruijn

Fish passages in the Netherlands

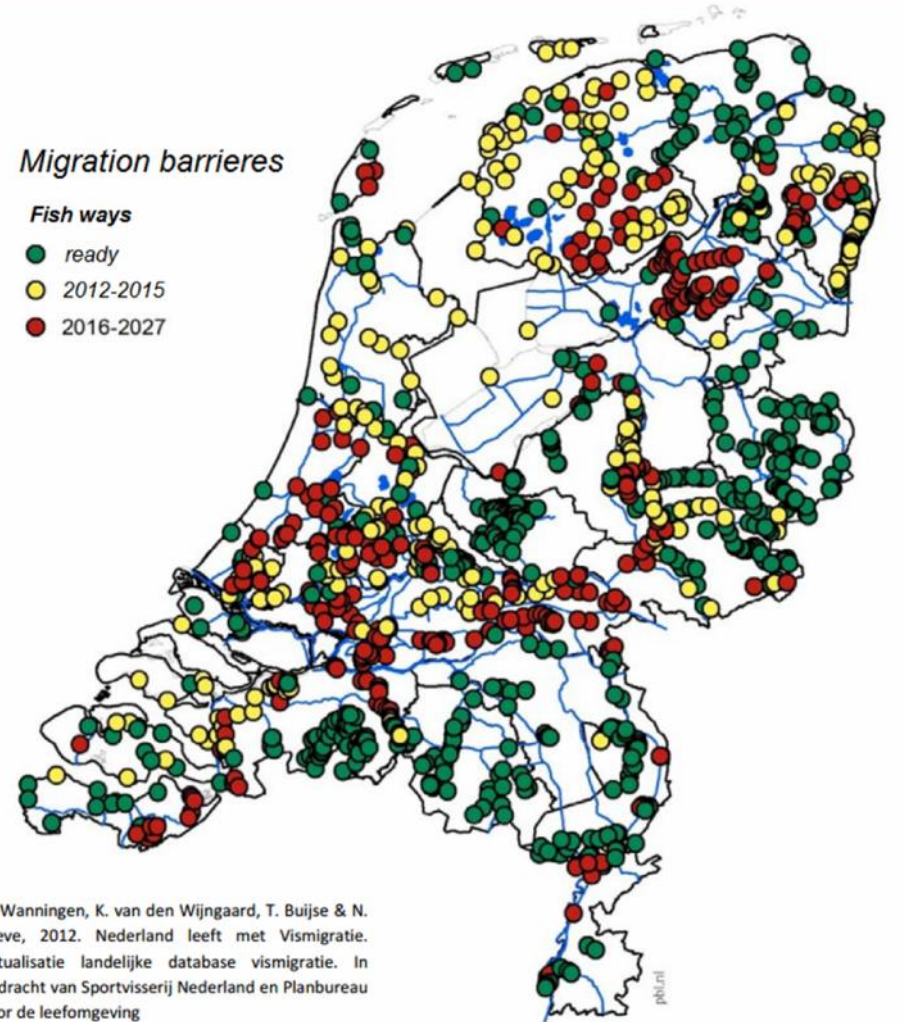
- Complicated water management
- Much land below sea level.



Migration barriers

Fish ways

- ready
- 2012-2015
- 2016-2027



H. Wannigen, K. van den Wijngaard, T. Buijse & N. Breve, 2012. Nederland leeft met Vismigratie. Actualisatie landelijke database vismigratie. In opdracht van Sportvisserij Nederland en Planbureau voor de leefomgeving

Introduction

- Dutch situation
- How to evaluate

Case study

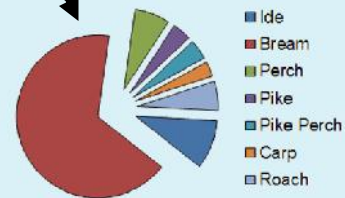
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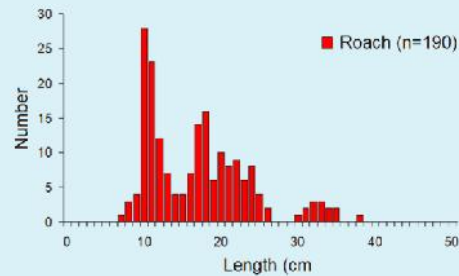
Does it work?

- How to evaluate? →
- What to evaluate? ↙

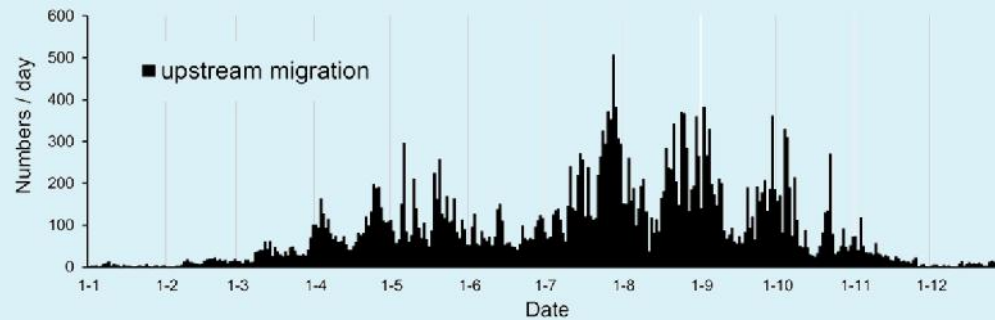
1. Species composition



2. Length composition



3. Numbers



Introduction

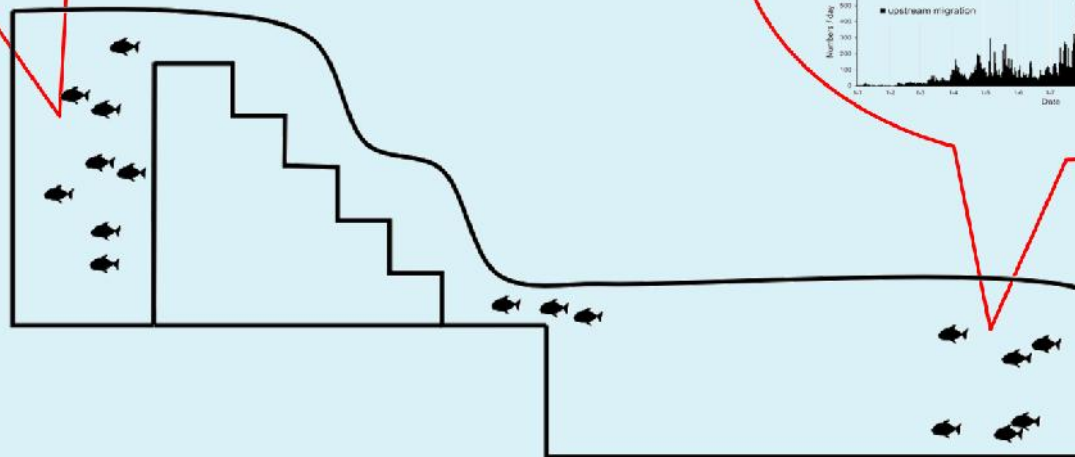
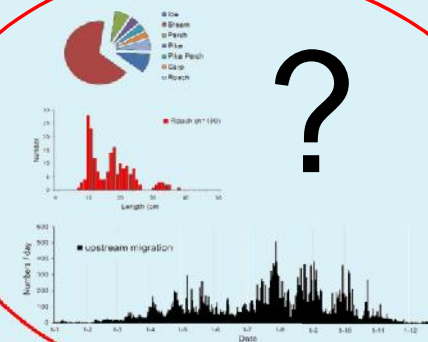
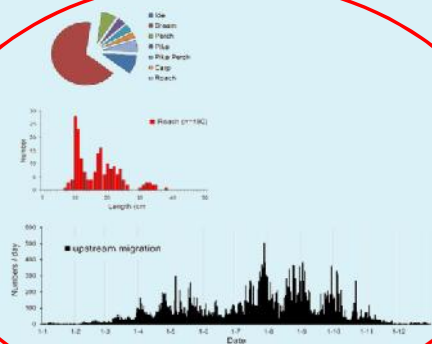
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What is our reference?



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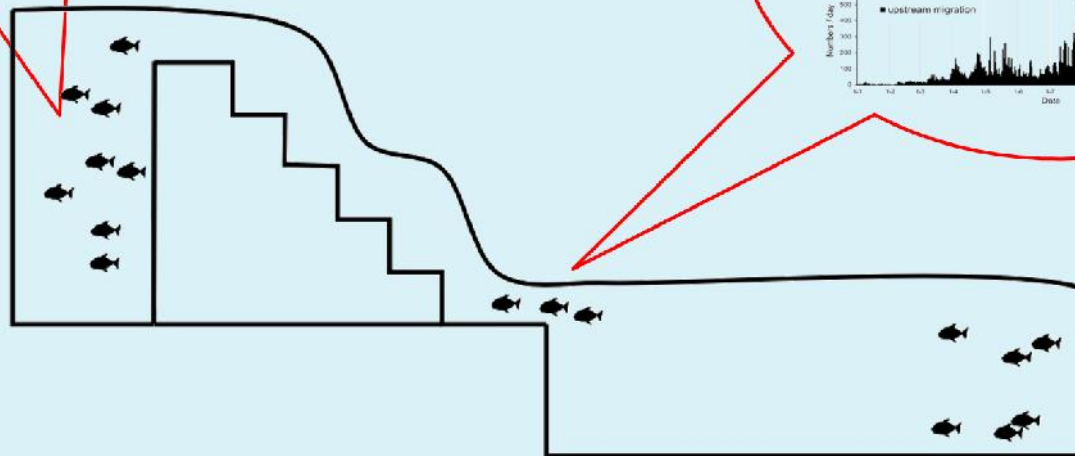
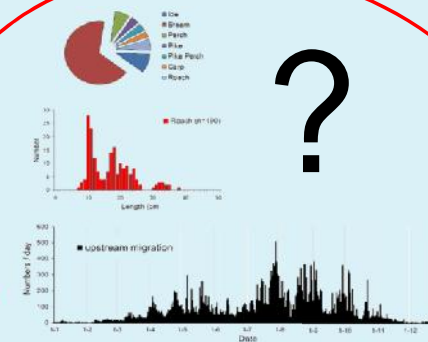
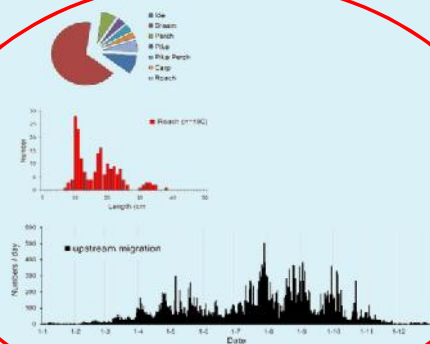
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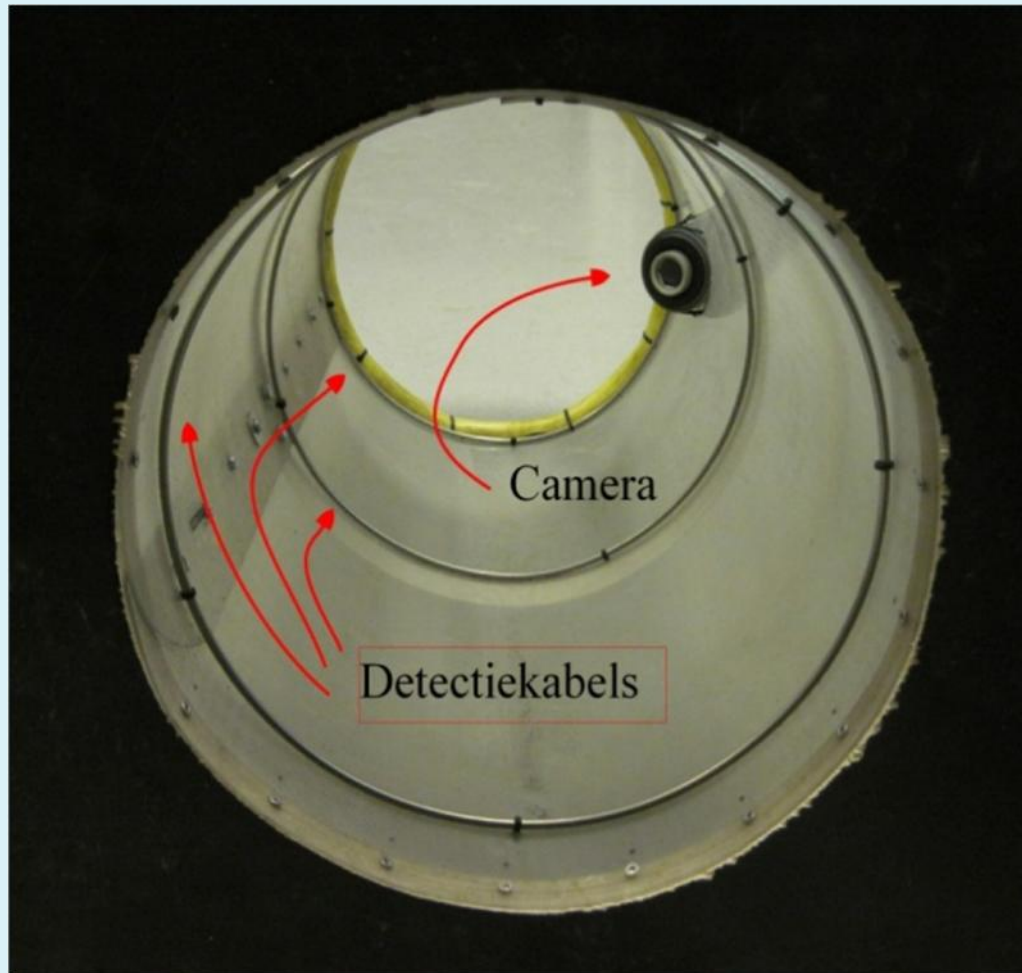
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In general

Electronic Fish Counter



Features

- Detects fish
- Migration direction
- Length

Introduction

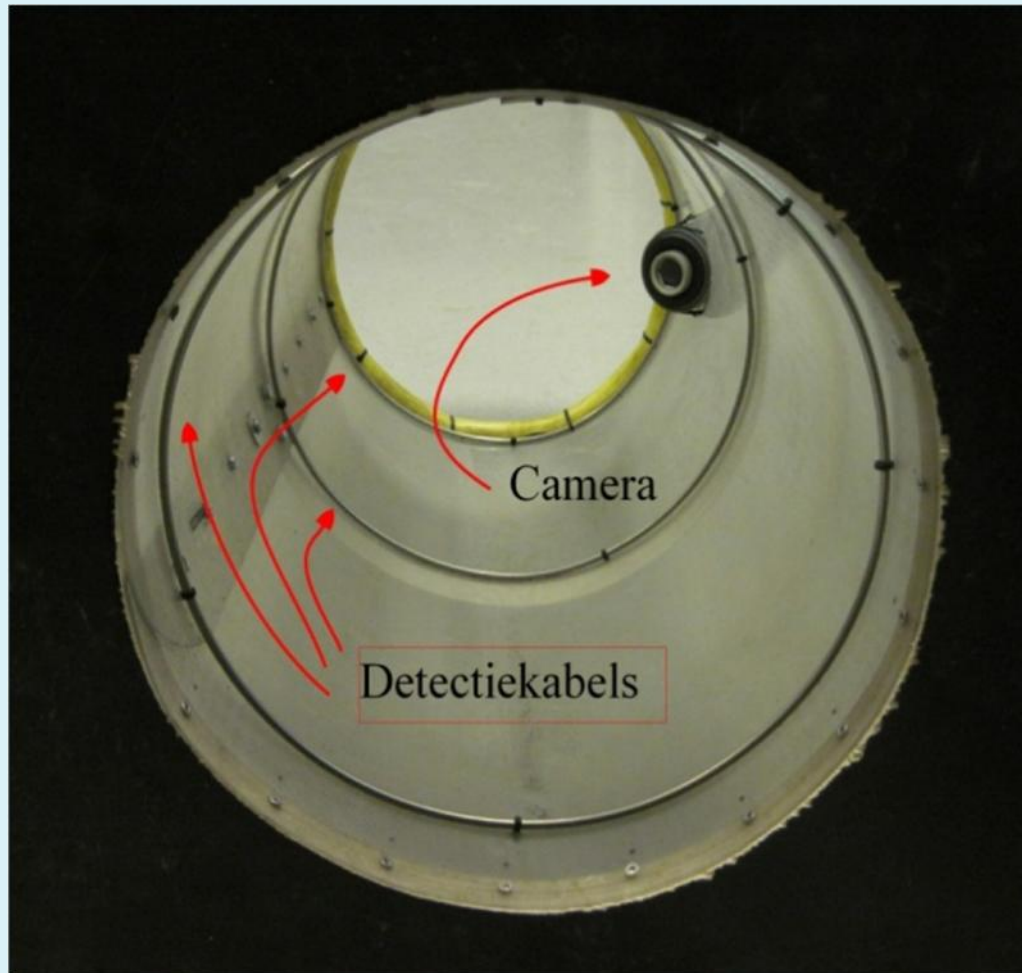
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Electronic Fish Counter



Features

- Detects fish
- Migration direction
- Length
- Species identification (camera)



Introduction

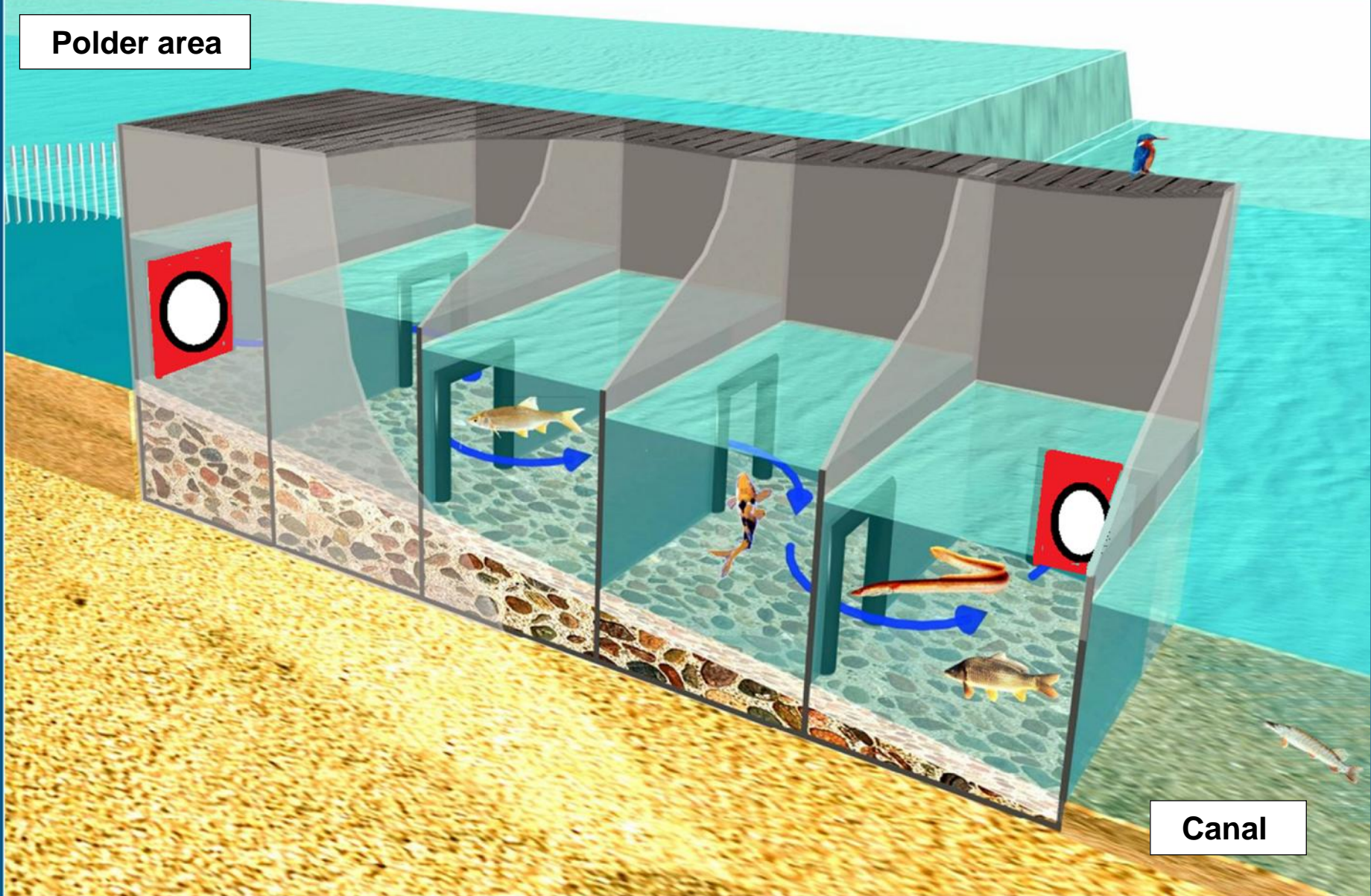
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Polder area



Canal

Introduction

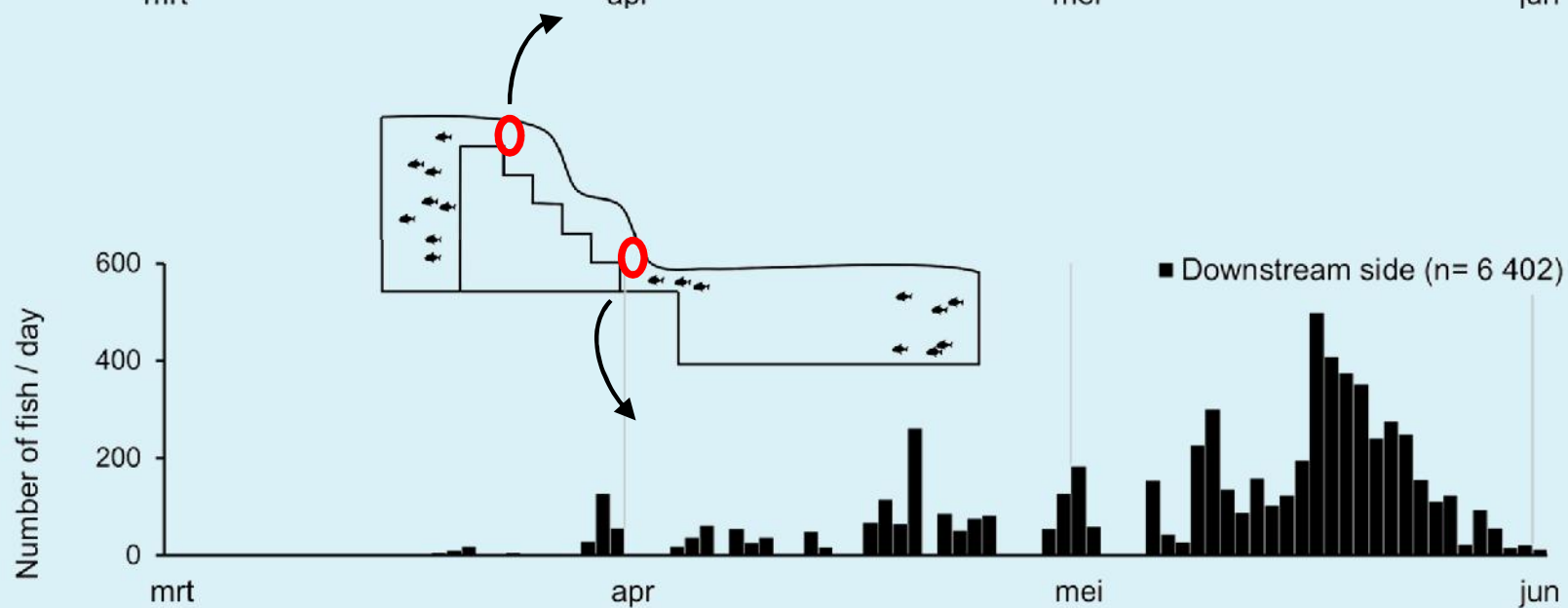
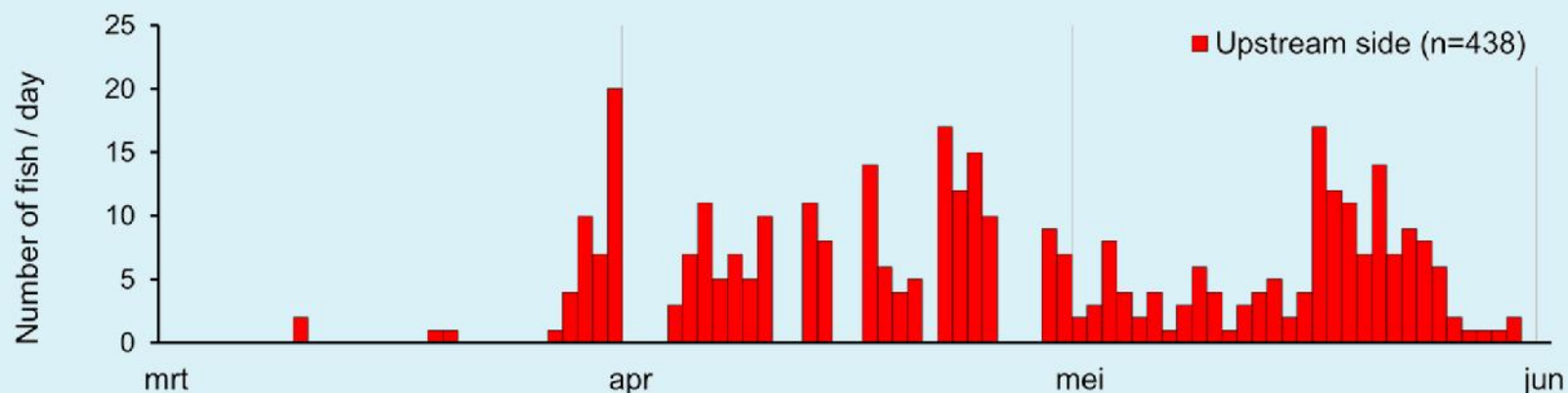
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Results



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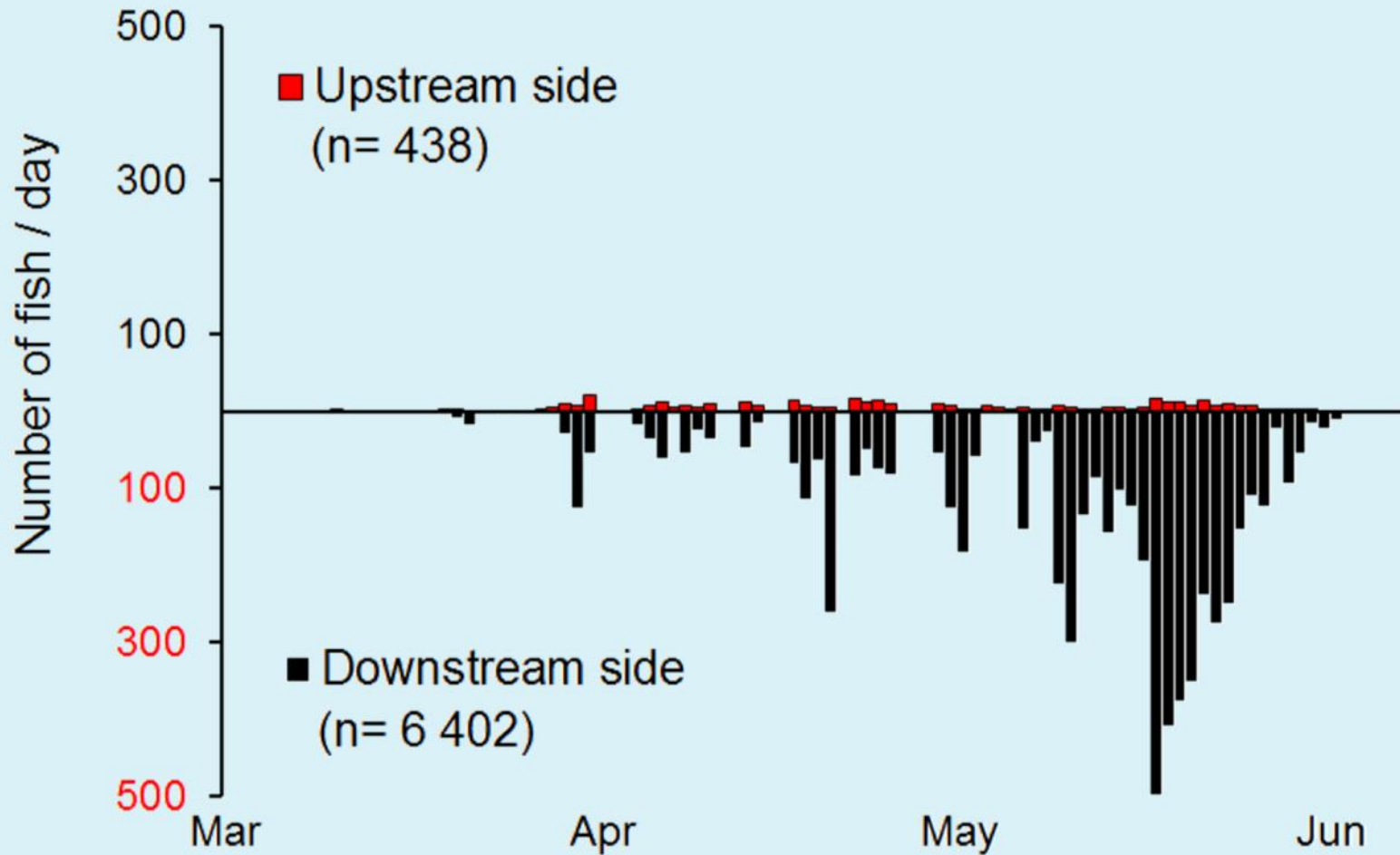
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Efficiency



Introduction

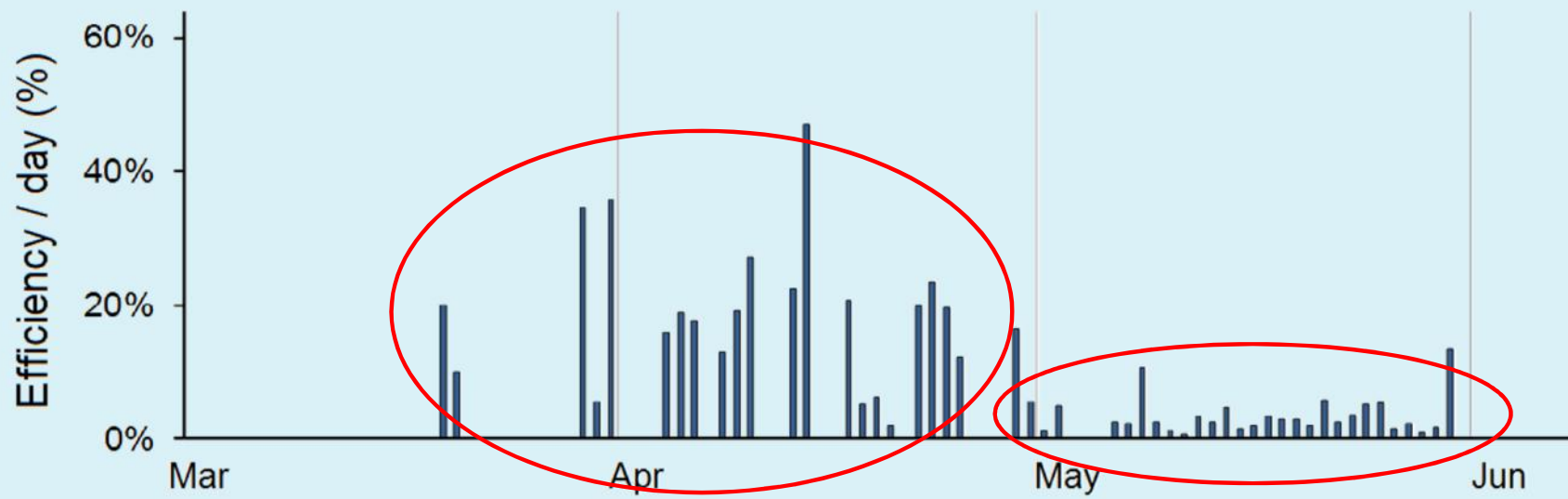
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Efficiency



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- > Conclusions

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Efficiency

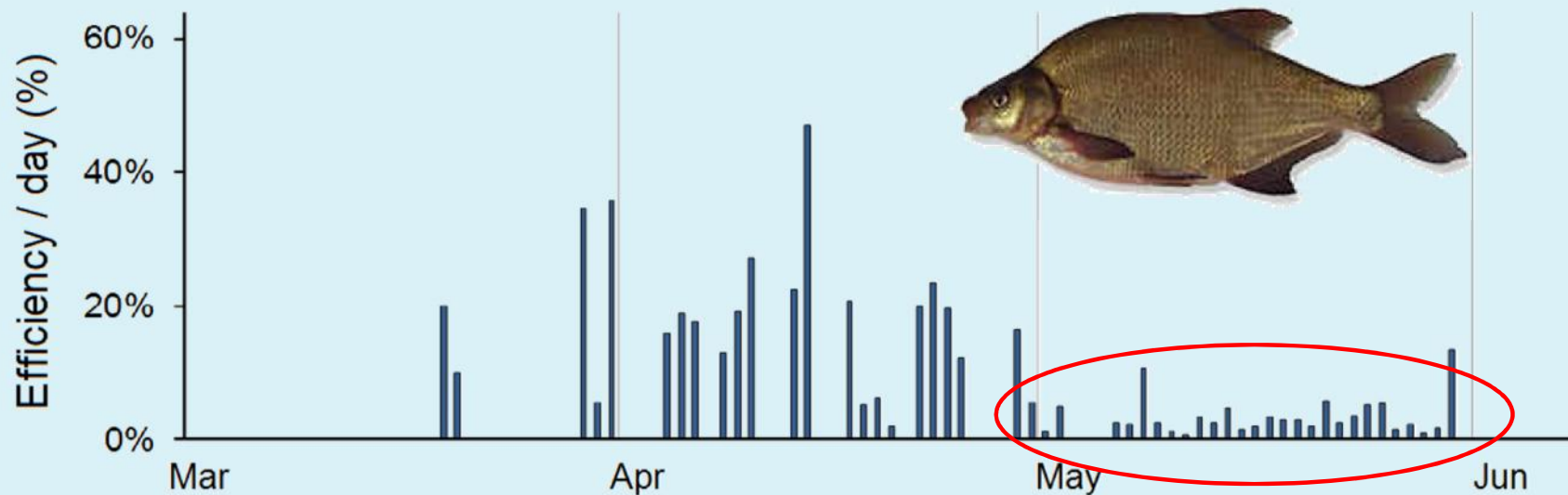
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Case study

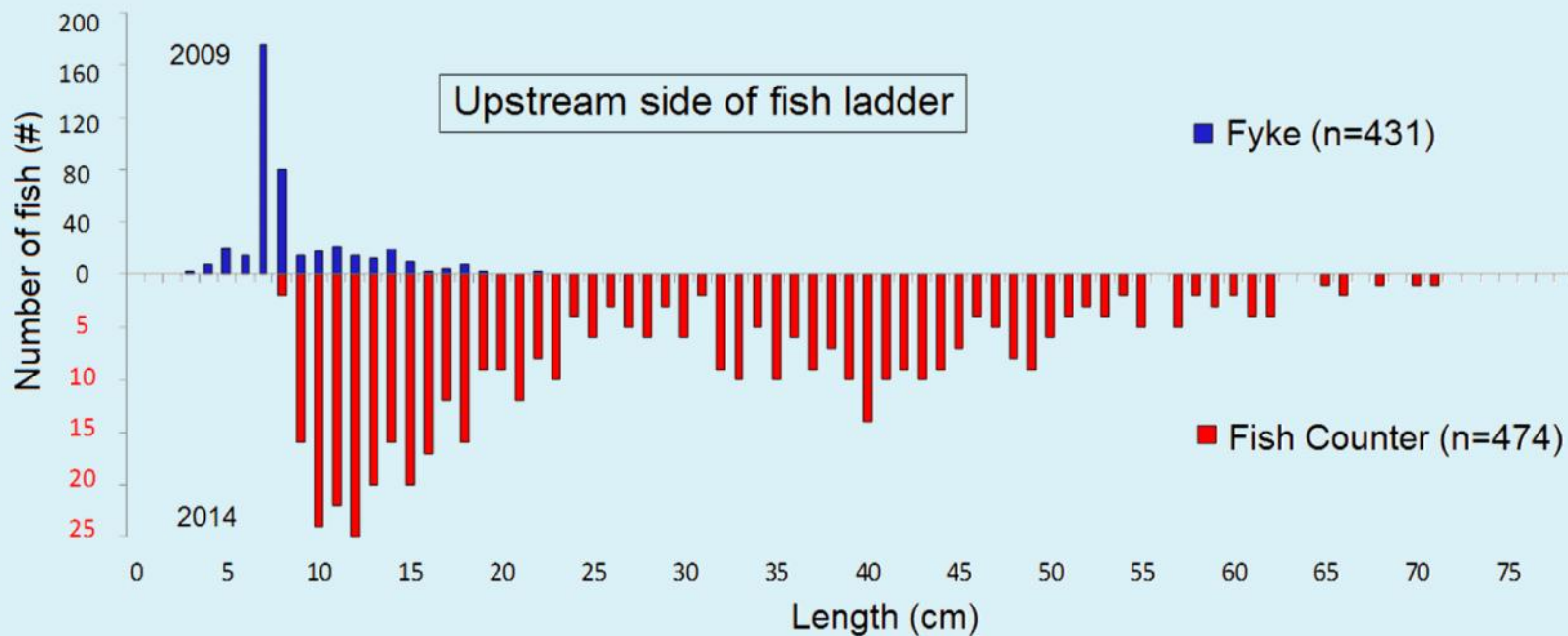
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Fyke versus Counter

- Fyke monitoring showed no big fish (Ide in particular)
- Results confirm the idea that (big) fish is reluctant to enter the fish trap.



Introduction

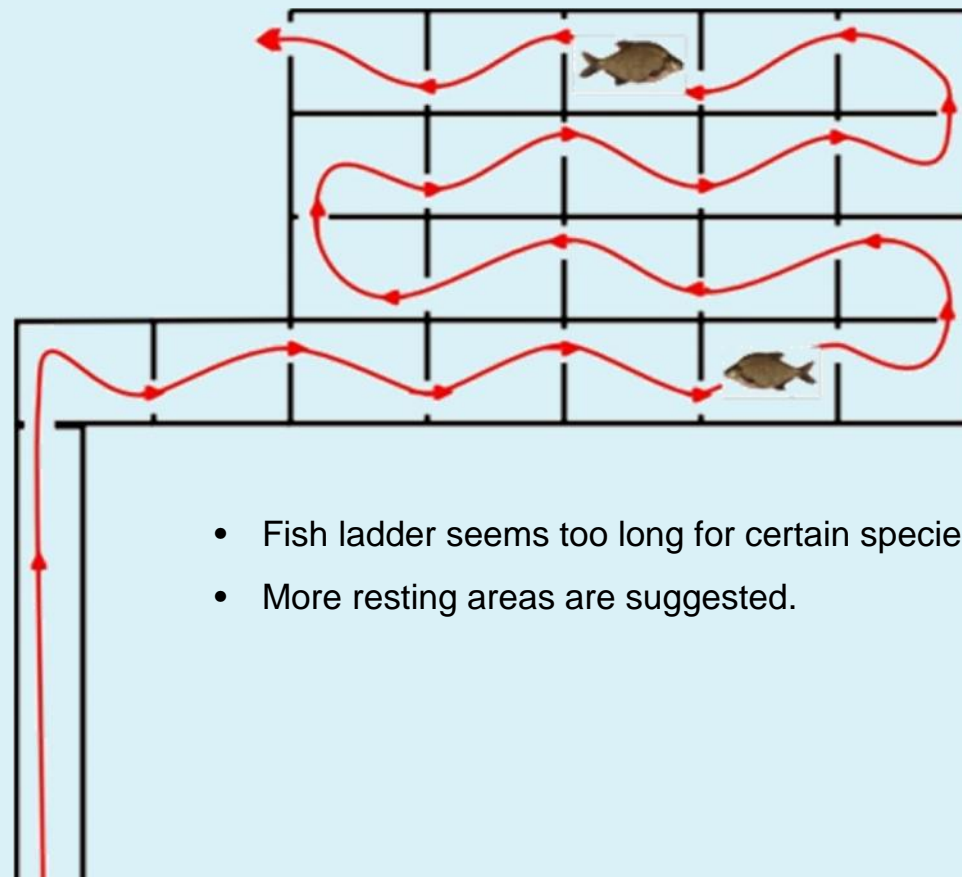
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Conclusions of the study



- Fish ladder seems too long for certain species like bream.
- More resting areas are suggested.

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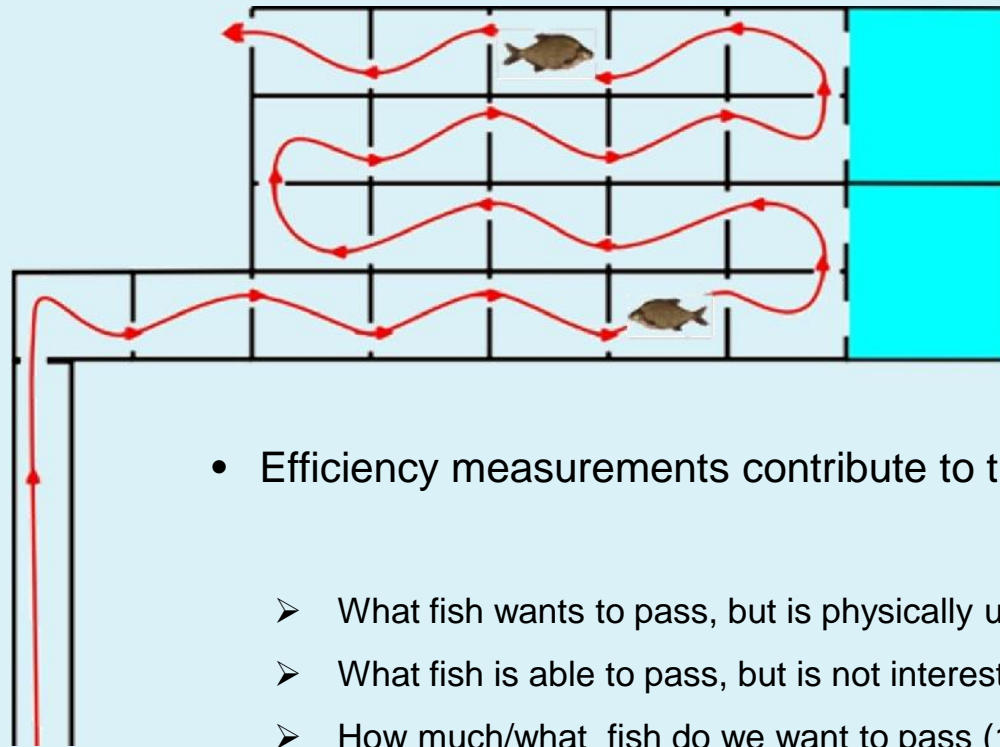
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Conclusion in general



- Efficiency measurements contribute to the understanding of migration
 - What fish wants to pass, but is physically unable? (Bream)
 - What fish is able to pass, but is not interested? (Ide)
 - How much/what fish do we want to pass (10- 100%)?

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- Dutch situation
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In general

Efficiency measurements as a tool in evaluating fish ways.

Thank you for the attention.

Questions?

Author's:

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