Western Uusimaa HOLA Lake II - project

6.11.2023

The Association for Water and Environment of Western Uusimaa / Länsi-Uudenmaan vesi ja ympäristö ry (LUVY)

HOLA Lake II

- Lakes Hiidenvesi and Enäjärvi (Vihti)
- Total budget: 176 950 €

- Involving local residents in fisheries management and monitoring
- Increasing the knowledge of predatory fish population and recruiting people to do citizen science (monitoring fish and invasive species)
- Improving the utilization of local fish and less valuable fish
- Gathering and sharing information of experiences related to management of fisheries

Western Uusimaa HOLA Lake II –project

What has happened?

- **The project has gone almost as planned**
- **Changes to the budget and project plan**

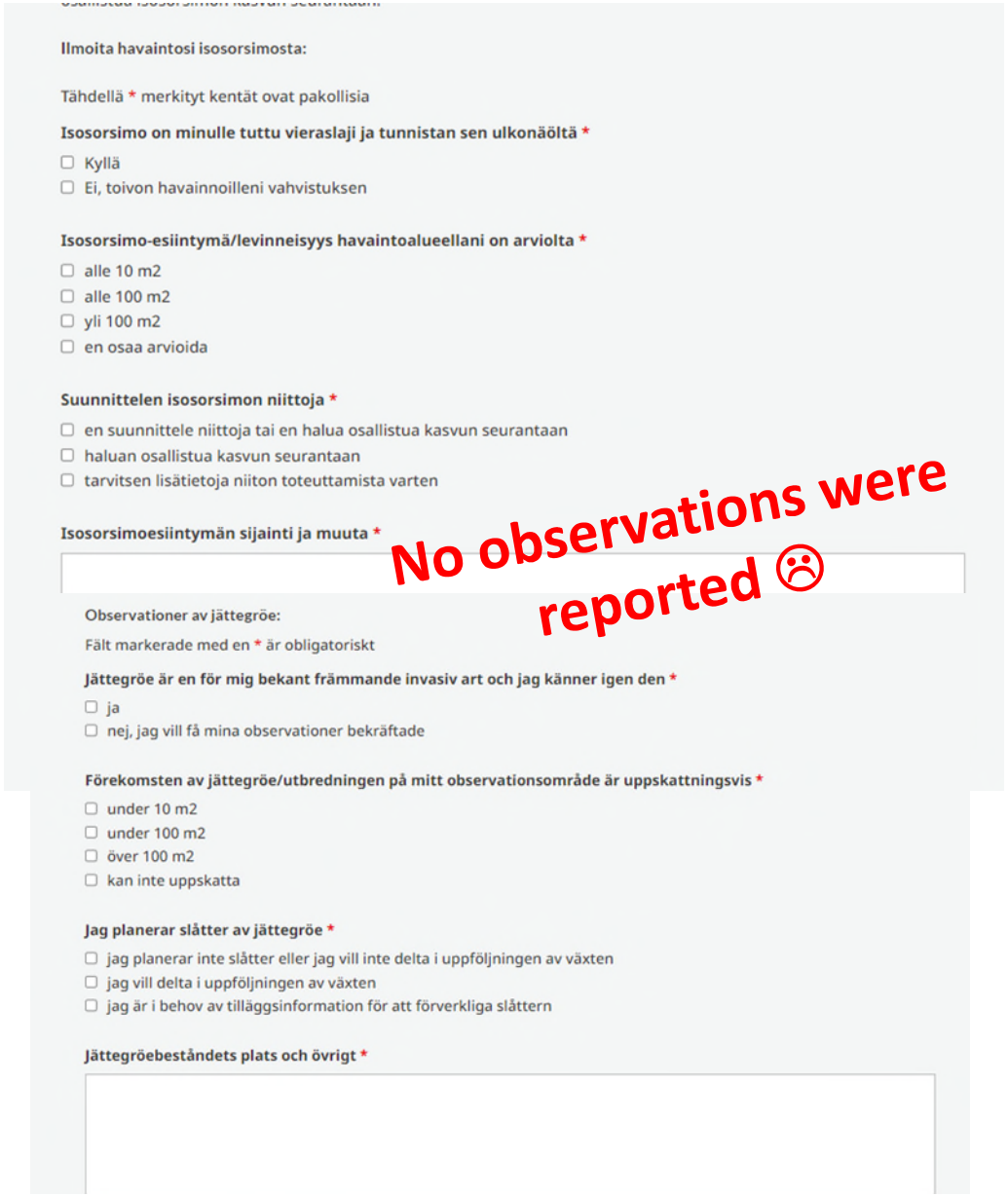
Procurement of refrigeration/fish processing equipment (20000 €)
→ Cyprinid and *G. maxima* themed video series and marketing (~12000 €) and survey of cyprinid fish processing and storage facility (5000 €)

- **Voluntary work accumulated in a different way than planned**

The interest was strongly focused on the utilization of cyprinid fish and courses

Neither the monitoring of G. maxima nor the monitoring of pike fingerlings attracted any volunteers

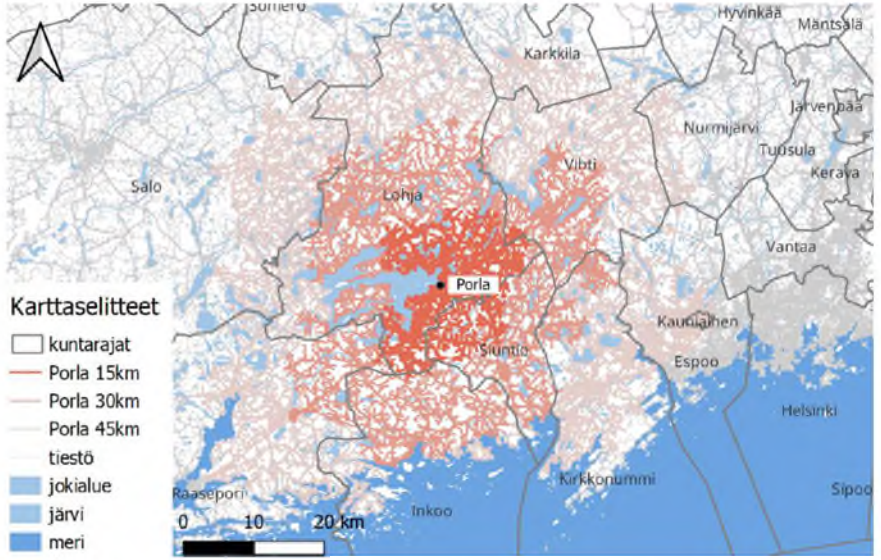
All the remaining budgeted voluntary work hours were collected during the summer 2023



Improving the utilization of cyprinid fish

- **Finnish Consulting Group are studying and resolving which location in Western Uusimaa region would be logistically op -tional for cyprinid fish processing and storage facility**
  - The survey is based on >10 interviews with municipal employees, processors, fishermen, and other subject stakeholders
  - Profitability calculations
  - In terms of storage facility, there were two alternative solutions compared: container solution and permanent storage/processing facility

Survey is now ready, and the presentation will be held on 22.11. 16.00-18.00, Welcome! (online but only in Finnish)



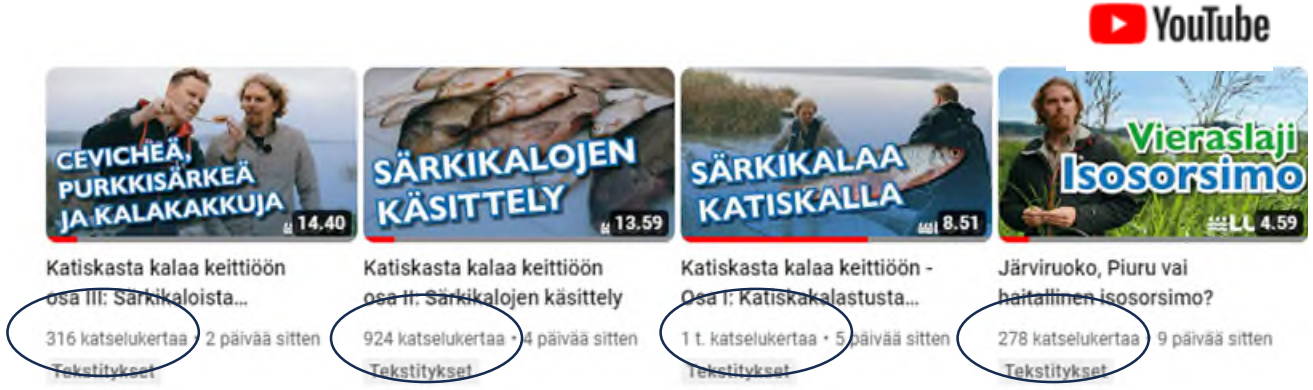
Kuva 3. Karttatarkastelu Porlan kalav

Cyprinid and *G. maxima* video series

- Cyprinid video series (subtitles in Finnish and Swedish):
  - Part 1: Trap fishing
  - Part 2: Handling fish
  - Part 3: Cooking cyprinids

- Videos have been published on the LUVY's YouTube channel and Instagram. Paid advertisements are running on Instagram and Facebook.

- Instagram statistics (5.11.)
  - Part 1: Targeted accounts 172, repetitions 312
  - Part 2: 157 and 238



5.11., at 20.00 (Part 3 had only been released on YouTube, and it had not been advertised yet.)

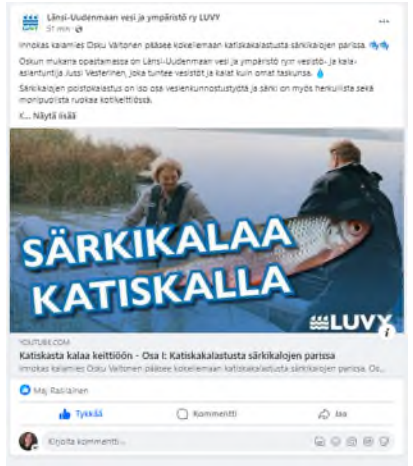
Other activity

- Monitoring pike fingerlings
- Video series: [Controlling invasive Reed sweet-grass *Glyceria maxima*]

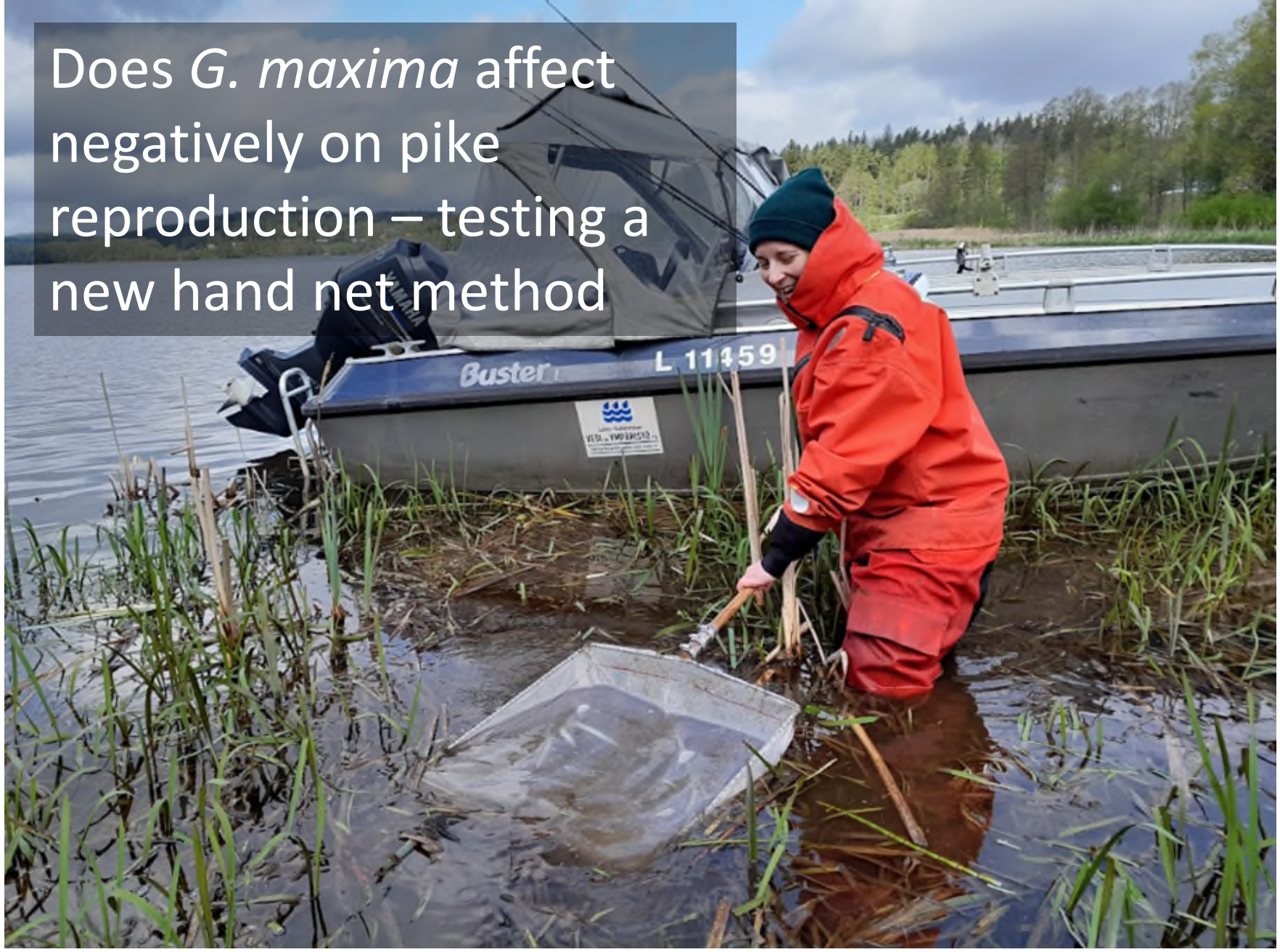
- Developing and manufacturing fish traps and monitoring equipment together with Vocational College Livia
  - Field testing day in June with students
  - Mowing reed sweet-grass with students
- Social media posts, newsletters...

What's left?

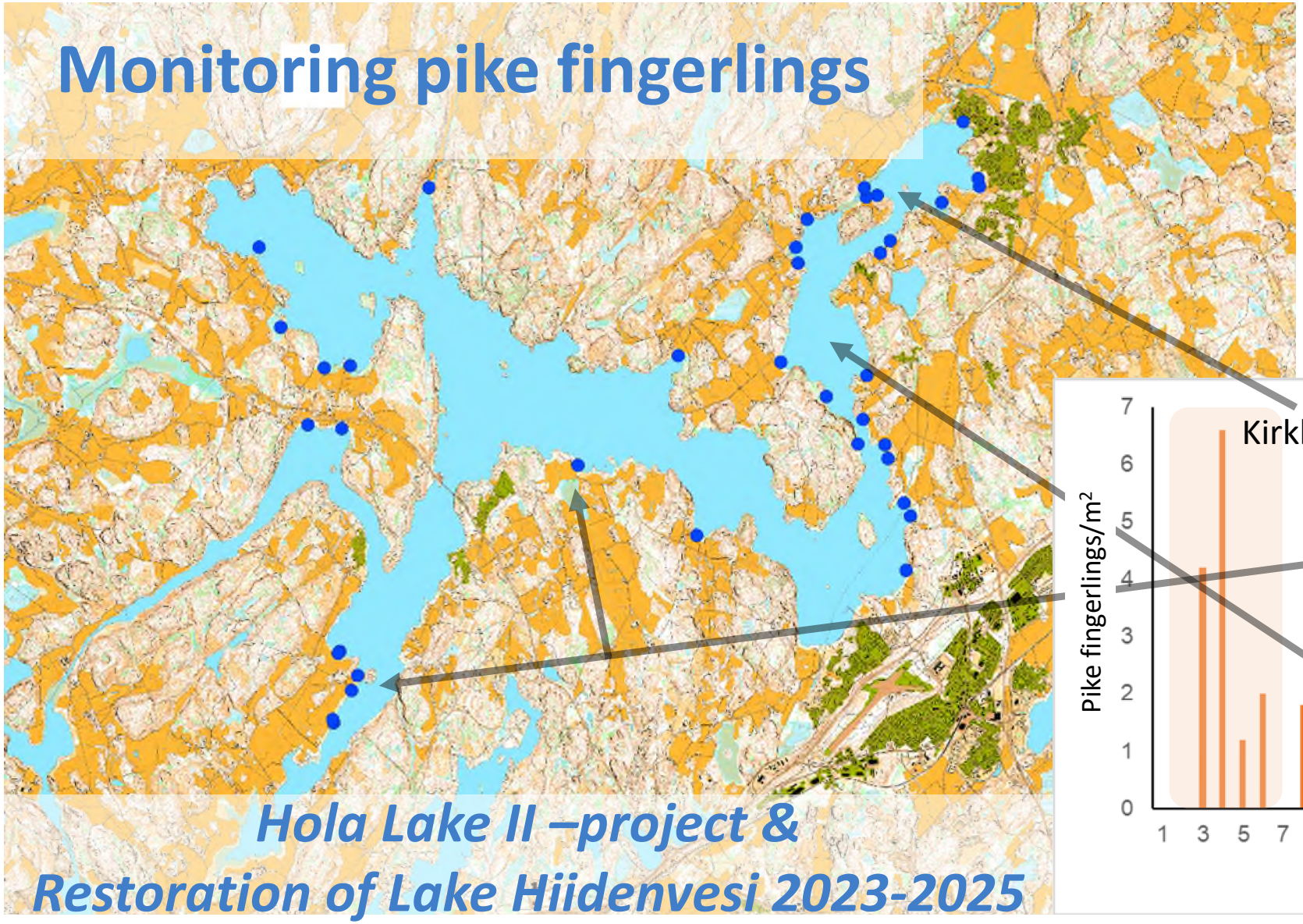
- Reporting
- Social media campaign (videos)
- The presentation of survey



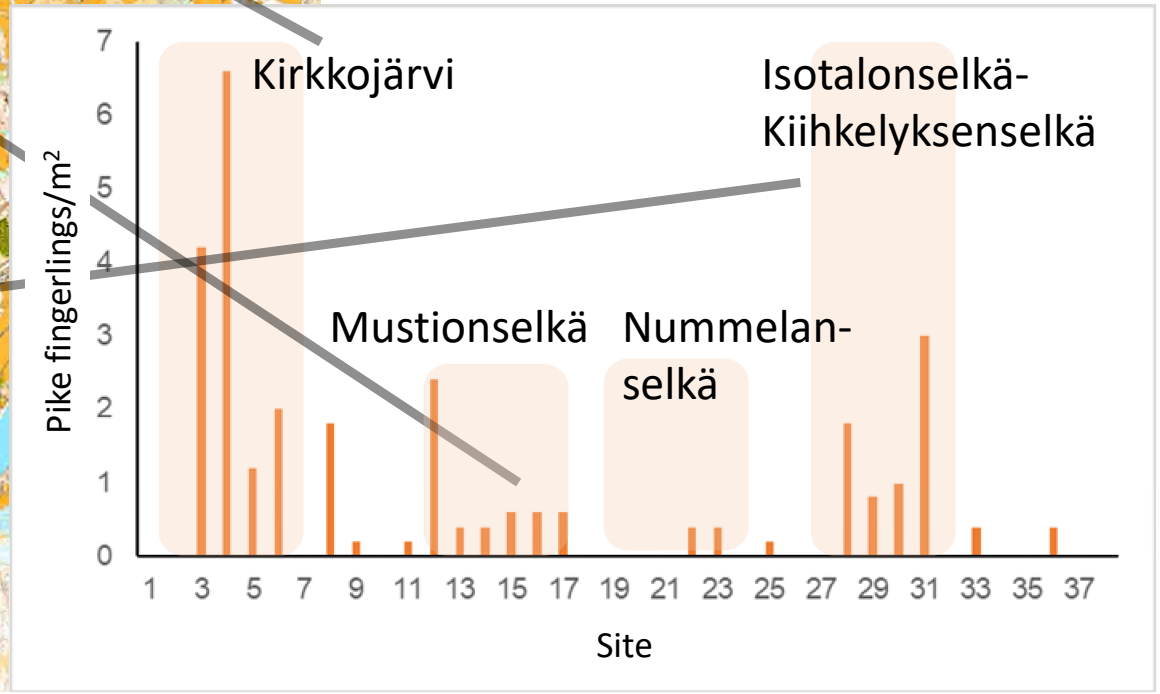
Does *G. maxima* affect negatively on pike reproduction – testing a new hand net method



Monitoring pike fingerlings

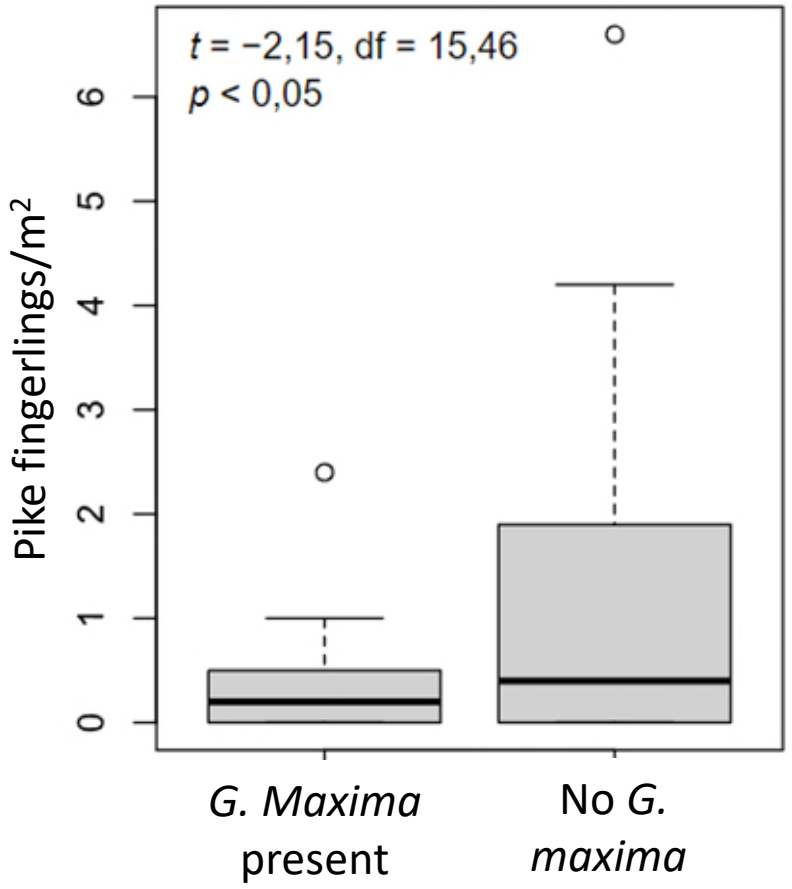


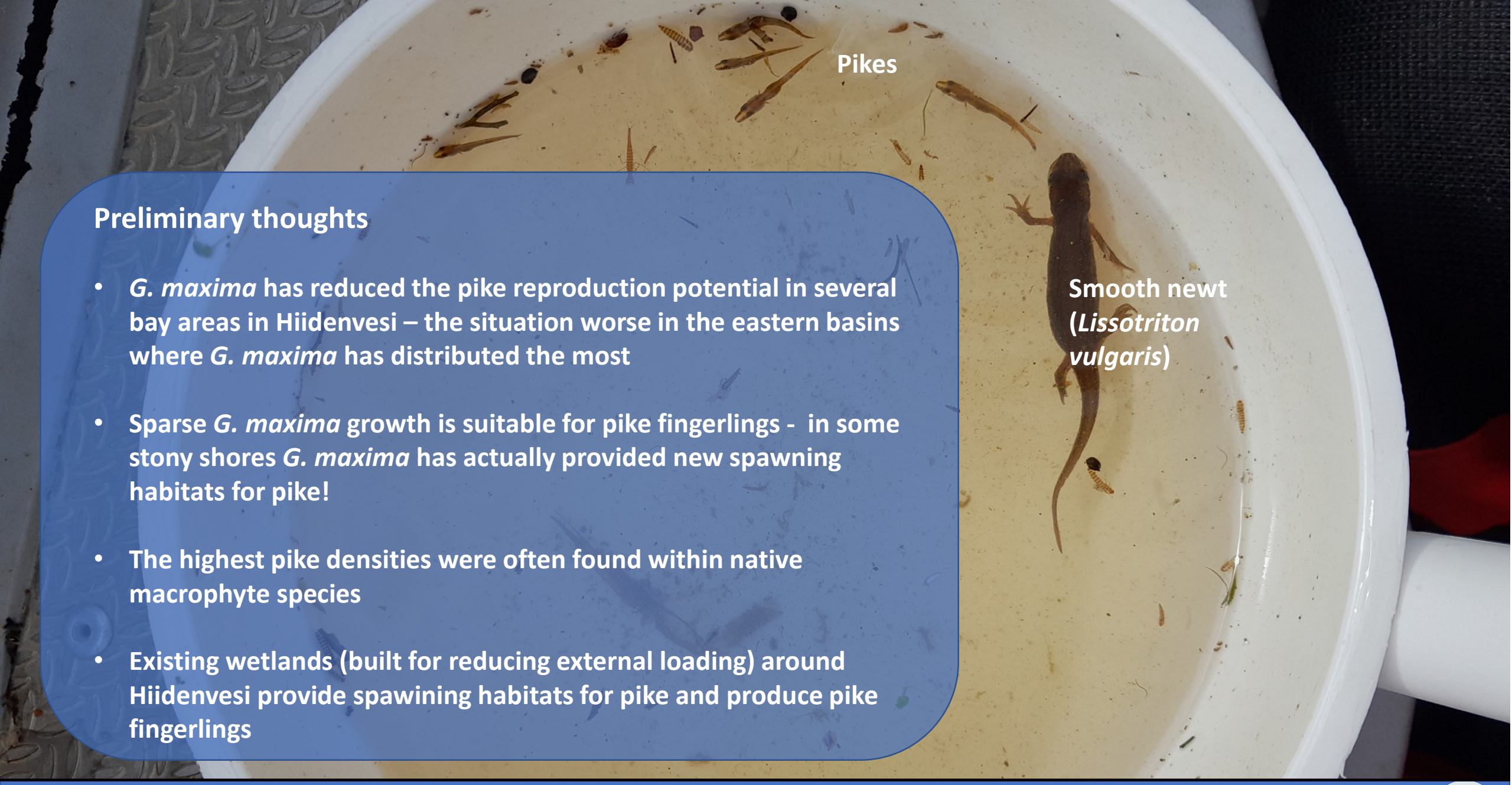
- 38 different sites were sampled with a hand net during May 2023
- Special focus on the shallow and eutrophicated eastern parts
- Standardized method (20 hand net pull ups/site) → allowed us to do quantitative comparisons



Hola Lake II –project & Restoration of Lake Hiidenvesi 2023-2025

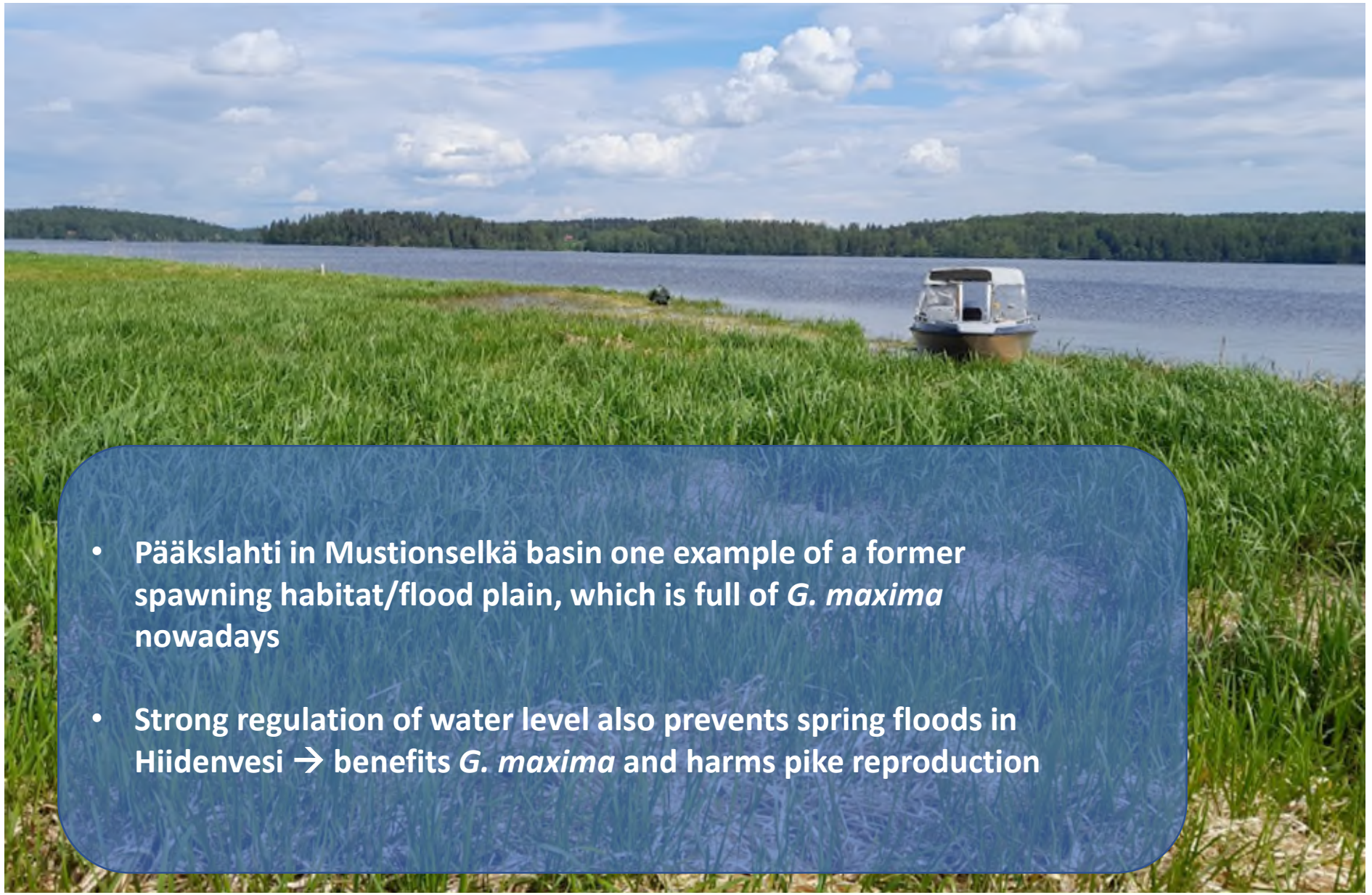
There were more pike fingerlings within the native macrophyte species





Preliminary thoughts

- *G. maxima* has reduced the pike reproduction potential in several bay areas in Hiidenvesi – the situation worse in the eastern basins where *G. maxima* has distributed the most
- Sparse *G. maxima* growth is suitable for pike fingerlings - in some stony shores *G. maxima* has actually provided new spawning habitats for pike!
- The highest pike densities were often found within native macrophyte species
- Existing wetlands (built for reducing external loading) around Hiidenvesi provide spawining habitats for pike and produce pike fingerlings



- Pääkslahti in Mustionselkä basin one example of a former spawning habitat/flood plain, which is full of *G. maxima* nowadays
- Strong regulation of water level also prevents spring floods in Hiidenvesi → benefits *G. maxima* and harms pike reproduction

10 %

50 %

90 %

Strong O_2 gradient from the edges of G. maxima growth towards the shore!

Wetlands

Valkoja ”gäddfabrik”,
No pikes found in 2023

Oinasjoki,
Lots of spawning adults, no fingerlings

Pääkslahti,
Potential for pike, but no access (yet)

Koikkala,
Good access,
Lots of *G. maxima*, no pikes found


Thank you!