



fishheart

A HYDRAULIC FISHWAY SOLUTION FOR UPSTREAM
AND DOWNSTREAM MOVEMENT OF MIGRATORY FISH

Company

Fishheart is an independent, eco-focused company looking to solve a global issue with local partners: reviving migratory fish stocks in altered bodies of water.



The Fishheart unit



A floating unit, which has 2 fishway entries of which at least one is always open.

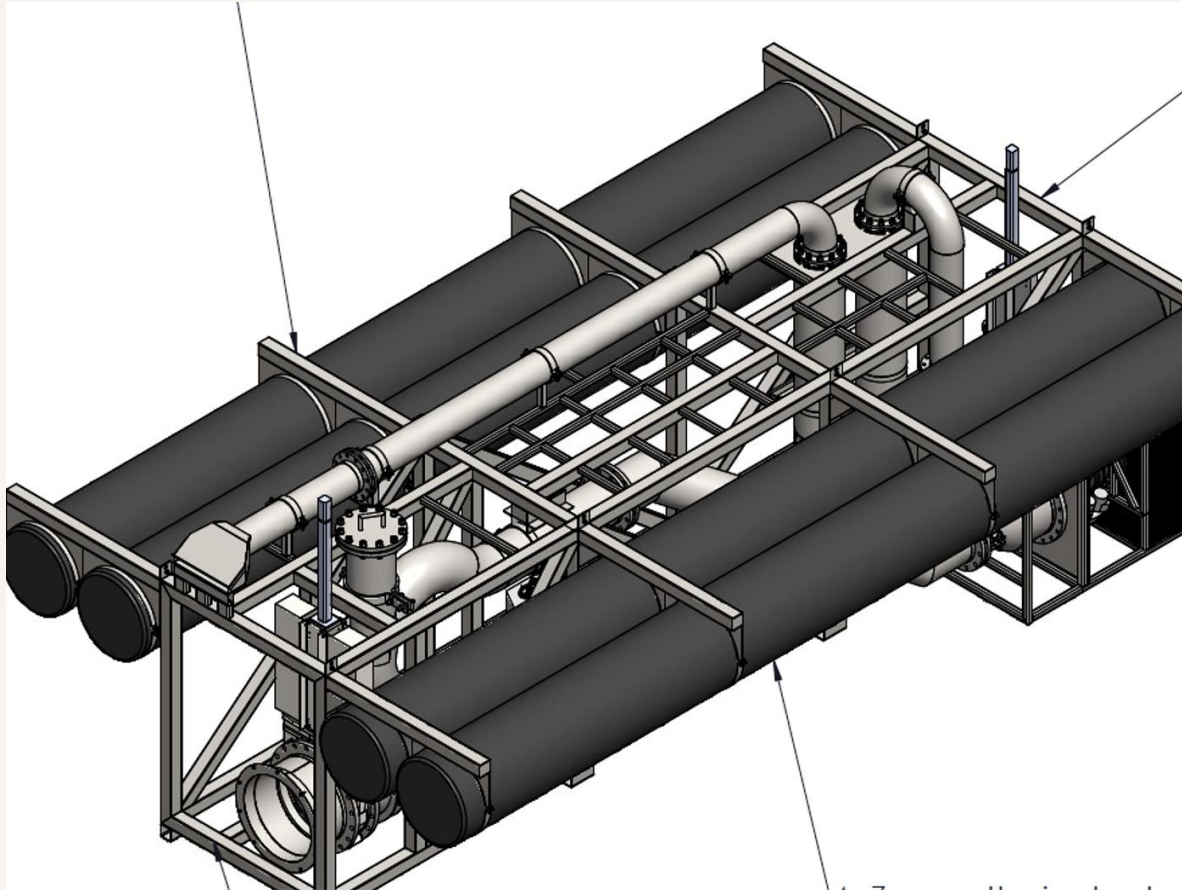
Steel frame, 6 valves, 2-3 pumps, 2 acrylic pipelines with AI and two multicamera systems

4 different attraction flows

4 models

Capacity 70 000 - 100 000 fish per day.

The Satelliteheart unit



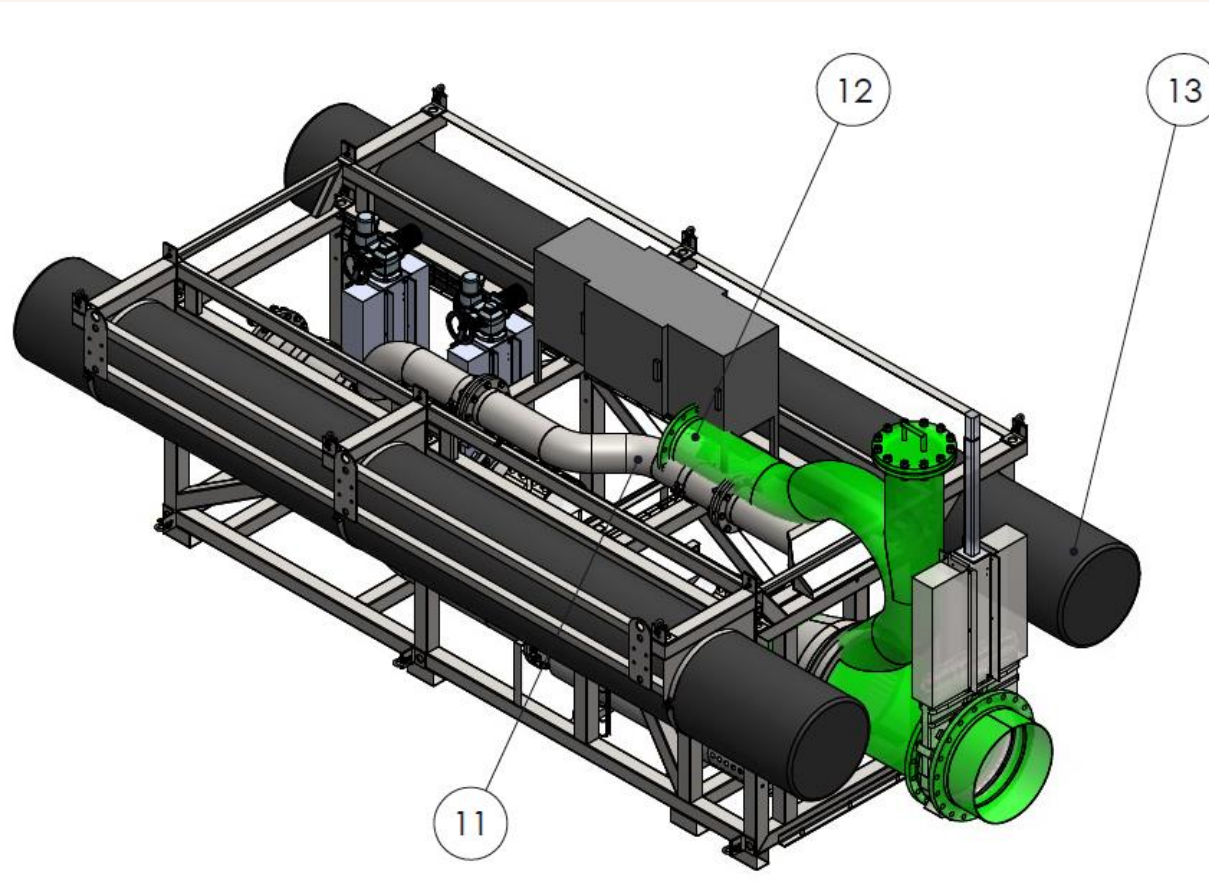
Satelliteheart-fishway uses the same technology as the Fishheart.

It is designed for rivers with less fish.

It also works as an additional entry to the Fishheart- fishway that can be used in really large rivers.

Satelliteheart can also be integrated into badly working fish passages as a new entry for the fish.

The Troutheart unit



For smaller rivers with smaller fish up to 10 kg

**A floating unit, which has 1 fishway entry
Steel frame, 3 valves and a multicamera system**

4 different attraction flows

The hydraulic Fishheart fishway



The innovative technology of the hydraulic Fishheart fishway SAVES water, money and fish.

FORTUM POWER AND HEAT OY –
KIEHIMAN RIVER

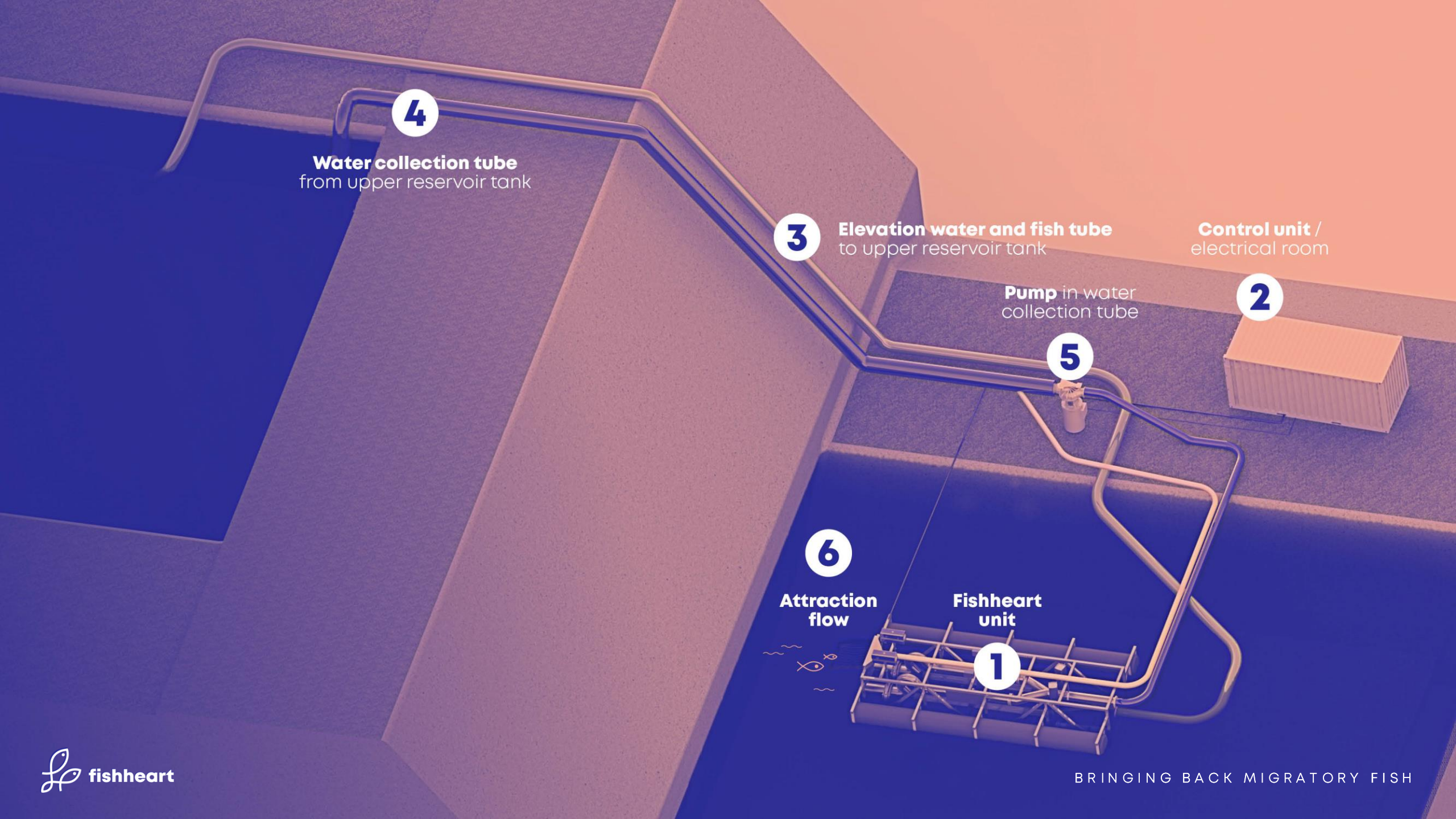
2022 A TOTAL OF 13 291 FISH

2023 A TOTAL OF 19 046 FISH



fishheart
BRINGING BACK
MIGRATORY FISH

Operational principle



4

Water collection tube
from upper reservoir tank

3

Elevation water and fish tube
to upper reservoir tank

2

Control unit /
electrical room

5

Pump in water
collection tube

6

Attraction
flow

1

Fishheart
unit



Fishheart fisheye



A fully automated fish identification system with multiple cameras and a lighting system.

Linked to our own portal, which provides real time pictures and reports.

All species separated into their own groups with accurate number and size.

Capable of detecting and removing invasive species like carp.

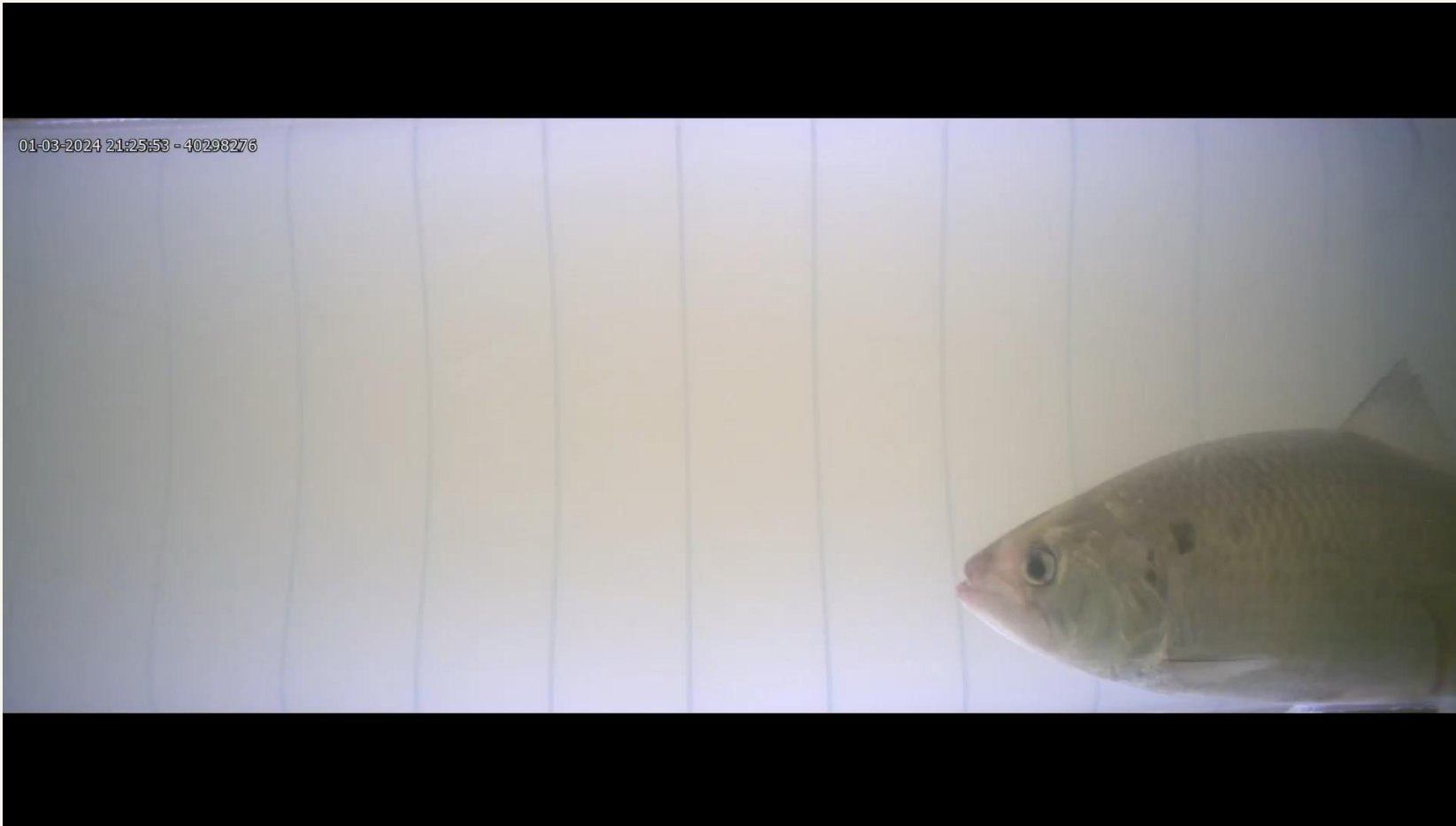
Airtight assembly box, easy to assemble to existing fishladders.

The hydraulic Fishheart fishway



A video inside the Fishheart showing a large group of Baltic herring.

The hydraulic Fishheart fishway



*Footage from our
EPRI/DOE grant test from
the Santee River.*

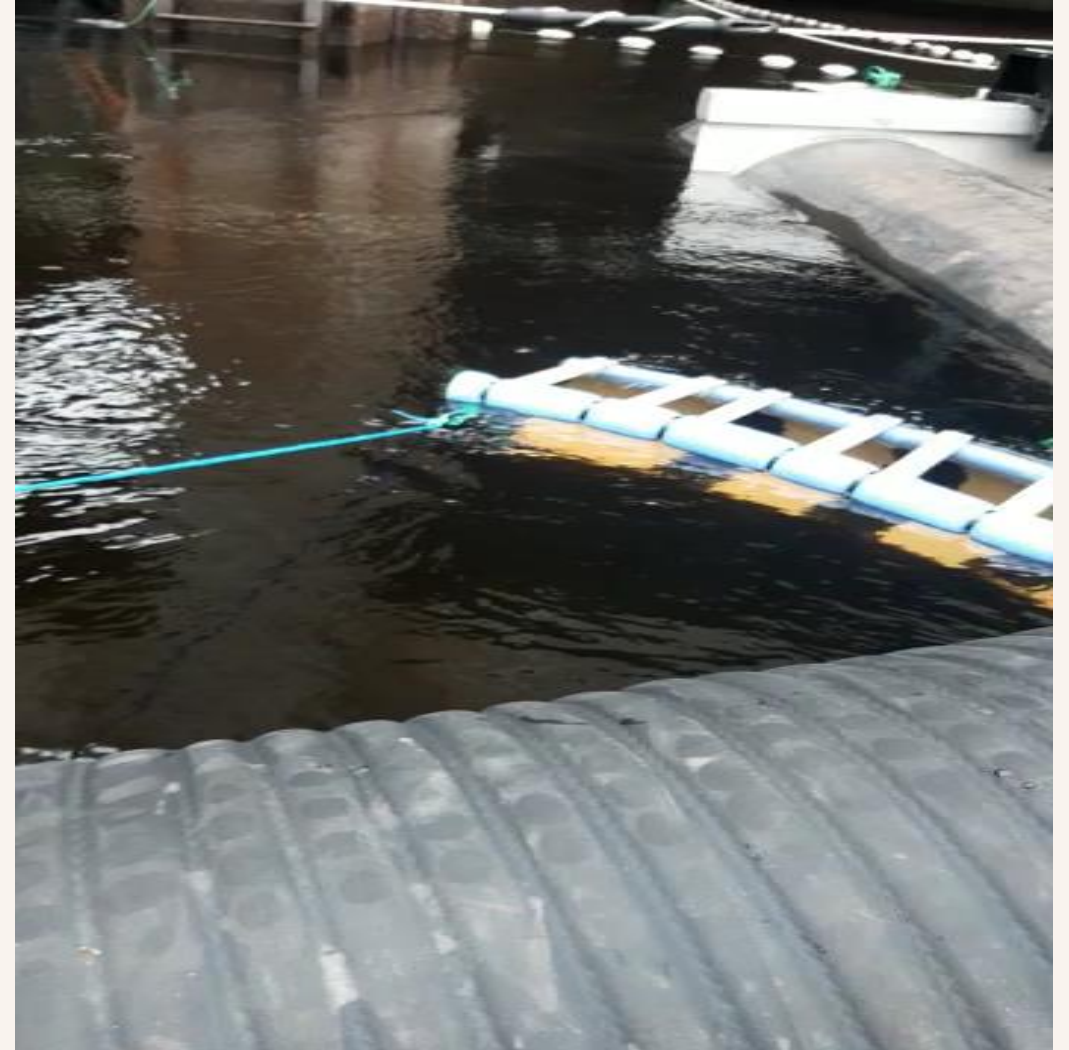
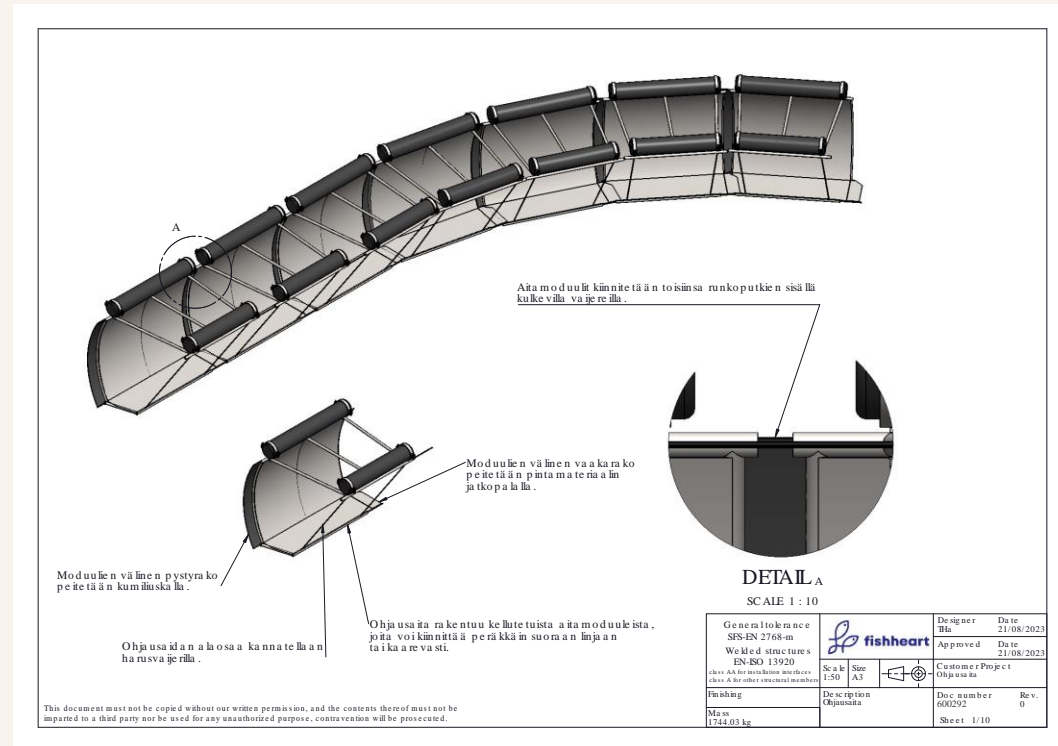
Results of the test at South Carolina

Species collected and length ranges

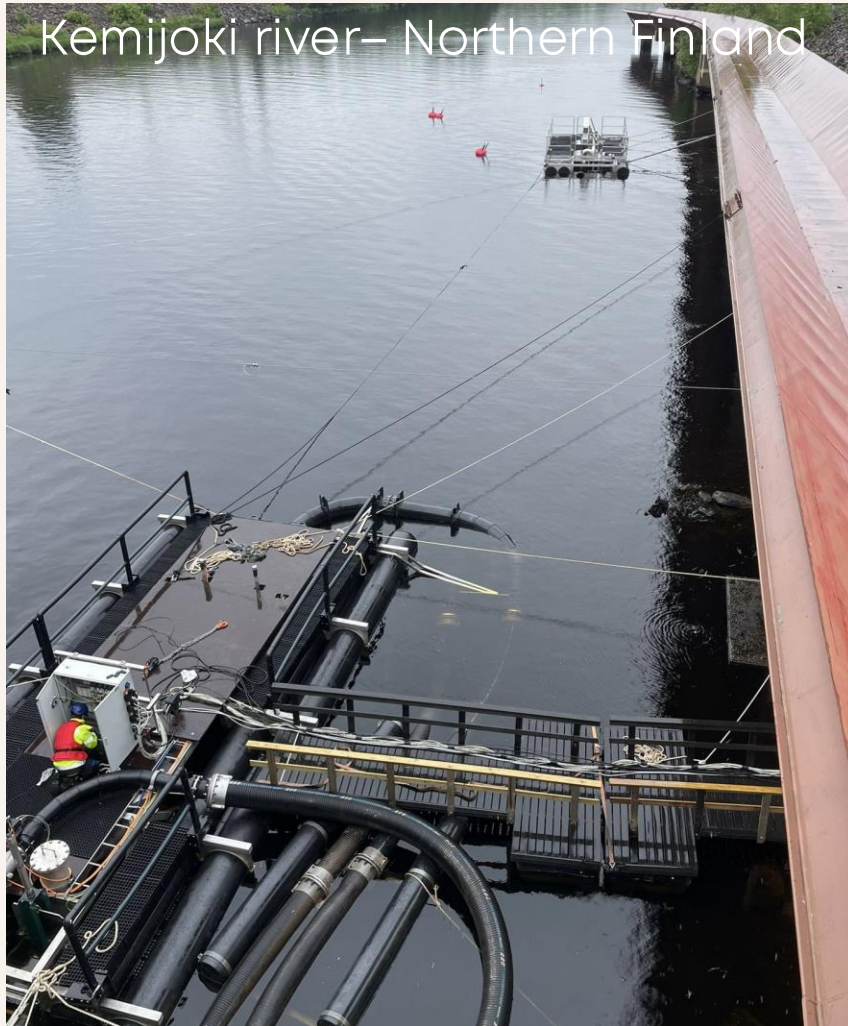
Species	Scientific Name	Number Collected 2/28 - 3/6	Number Collected 3/19 - 4/2	Total Number collected	Min Length (mm)	Max Length (mm)	Average Length (mm)
American Eel	Anguilla rostrata	1	2	3	--	--	--
American Shad	Alosa sapidissima	43	248	291	315	488	398
Black Crappie	Pomoxis nigromaculatus	0	360	360	272	380	323
Blue Catfish	Ictalurus furcatus	189	970	1,159	510	1,130	634
Blueback Herring	Alosa aestivalis	307	366	673	215	269	244
Bluegill	Lepomis macrochirus	0	22	22	112	225	158
Bowfin	Amia calva	1	2	3	648	650	649
Gizzard Shad	Dorosoma cepedianum	17	1,193	1,210	285	421	345
Longnose Gar	Lepisosteus osseus	6	61	67	590	1,145	826
Redear Sunfish	Lepomis microlophus	11	56	67	219	365	275
Striped Bass	Morone saxatilis	3	16	19	415	870	582
Striped Mullet	Mugil cephalus	1	3	4	305	483	403
Threadfin Shad	Dorosoma petenense	151	87	238	85	157	118
White Catfish	Ameiurus catus	0	1	1	262	262	--
White Crappie	Pomoxis annularis	0	6	6	290	428	339
White Perch	Morone americana	2	19	21	123	320	226
Total				4,142			

Downstream Guiding Fence

- New patented innovation
- Solution to downstream problem
- First major live test on spring 2025



Fishheart Fishway



Kemijoki river– Northern Finland

2019 Fishheart was granted a hydraulic fishway status by Regional State Administrative Agency of Northern Finland (AVI)

The condition of fish were reviewed 2019 by the Natural Resources Institute Finland (LUKE) -> All fish in excellent condition

4 fishheart fishways in Finland + 1 Satelliteheart

2023 successful herring test in USA

DOE funded shad test at Santee dam 3/2024

2024 testing in Australia, 2025 in Sweden and France

Fish including Shad, herring, catfish, eel, elver, lamprey, bass, white perch, stripe, gar, salmon, trout, sea trout, pike, white fish, vimba, roach, perch, bleak, vendace, dace, perch-pike and burbot



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BRINGING BACK
MIGRATORY FISH

Concept

Concept



Deploy Fishheart at a site with target species present for a 2-year test.

Objectives are to:

- **Demonstrate passage of target species and refine operations and design elements to optimize the system for target species.**
- **Monitor and observe fish attraction, behavior, and post-passage health.**
- **Year one and year two, direct passage count comparison to existing fishway results.**
- **Year two acoustic telemetry analysis.**
- **Approval of Fishheart as an upstream passage**

Questions?

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facebook.com/fishheartsystem