FAIR FISH

Annual report 2024

Minnows (Phoxinus phoxinus) in the Belper Giessen (Switzerland)
© Michel Roggo

A glimpse beneath the surface – with Michel Roggo

For this year's annual report, we selected eight stunning underwater photographs of native fishes in their natural habitats – all taken in Swiss waters. In doing so, we want to highlight our Swiss roots while making visible the quiet beauty and vulnerability of the underwater world.

The images were taken by internationally renowned Swiss photographer Michel Roggo, who has been documenting fascinating underwater worlds for decades. With patience, technical skills, and artistic sensitivity, he captures fishes and their habitats in a truly unique way. His work has been exhibited worldwide and has received numerous awards.

Learn more about Michel Roggo and his Freshwater Project at: roggo.ch

This annual report was approved at the general assembly on 10 April 2025.

Introduction

The year 2024 was one of development and strategic focus for fair-fish. While key projects like the fair-fish database, Carefish/catch, and the aquaculture consulting program were further strengthened, new scientific insights and practical improvements were achieved to benefit fish welfare. Through targeted public outreach, partnerships with allied organisations, and deeper connections within the industry, fair-fish brought attention to the suffering of fishes in aquaculture and fisheries.

Significant progress was made particularly in the Carefish/catch initiative: New studies and reports on animal welfare risks in various fishing methods were published, and the fair-fish database was expanded with additional profiles. The aquaculture consulting initiative implemented concrete improvements in fish husbandry and helped to raise awareness for more sustainable breeding methods.

fair-fish also made important contributions in the field of communication, with media appearances, professional articles, and events. Ongoing dialogue with the public, donors, and partner organisations remains an essential part of the work.

This report provides an overview of the milestones, challenges, and developments of 2024. We thank all supporters who make our work possible and look forward to continuing our commitment to improving the lives of fishes.

Imprint
fair-fish, Weiherweg 4, CH-8610 Uster
Publisher: fair-fish, mail@fair-fish.net
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Photo research: Laura Kamp
Proofreading: Jürg Fischer
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Bream (Abramis brama) in Lake Morat (Switzerland) © Michel Roggo

Staff

In 2024, there were several personnel changes at fair-fish. Rolf Frischknecht, who was previously responsible for social media, left the organisation. Since 1st of March 2024, Goran Andrijašević has been managing the social media channels on a mandate basis (approximately 20 percent employment). Laura Kamp has taken over photo research and the photo archive (approximately 10 percent employment). Joly Ghanawi and Maria Cabrera ended their collaboration with the fair-fish database, while Paolo Panizzon was contracted in November 2024 with a workload of 60 percent.

The fair-fish team is made up of dedicated professionals who work with scientific expertise and practical experience to promote the welfare of fishes and other aquatic animals.

Fausta Borsani (80%) is responsible as Executive Director for the areas of finance, human resources, communication, and fundraising. The scientific management of the fair-fish database is in the hands of Dr. Jenny Volstorf (80%), who leads research on fish welfare in aquaculture and fisheries together with her team. She is supported by researchers Paolo Panizzon (60%) and Caroline Marques Maia (30%). Regula Horner (20%) supports fair-fish as head of administration. Sebastian Scholz (80%) is responsible for the technical infrastructure. As webmaster and data protection officer, he ensures that fair-fish's digital presence is professionally managed and that the highest data protection standards are upheld. Public relations work is supported by Goran Andrijašević, who has been managing the organisation's social media channels since March 2024 (20%), ensuring that important information and scientific findings are made accessible to a broad audience.

In the area of educational work, Sarah Mahni (20%) is actively engaged; she took over the role of the fair-fish teacher in 2024.

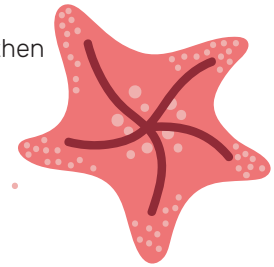
Board

At the beginning of 2024, the Board consisted of Adrian Horst, Daniela Gschweng, and Sabine Wirtz. The presidency was vacant. On 22 May 2024, Dr. Ralph O. Schill was elected as the new president and Benjamin Galler as an additional Board member. These transitions provide new orientation and fresh perspectives for the strategic development of fair-fish. In 2024, Adrian Horst, Daniela Gschweng, and Sabine Wirtz stepped down from the Board. fair-fish thanks both the remaining and the departing Board members for their commitment to the association's mission.

The Board held a total of seven meetings in 2024 – six online and one in person.

Members

During the course of the year, six members resigned. As of the end of 2024, fair-fish had a total of 16 members. This development has resulted in a smaller membership base, but ongoing dialogue is being maintained to strengthen the member community.



Barbels (Barbus barbus) in the Sense River (Switzerland) © Michel Roggo

Projects

Carefish/catch: further insights and reports

The Carefish/catch project is a collaboration between five organisations, including fair-fish, FishEthoGroup, Friend of the Sea, the Centre of Marine Sciences, and the DeMoS Institute. Funding is provided by Open Philanthropy.

The project remains focused on identifying and reducing the suffering of fishes in various fishing methods by issuing scientifically grounded recommendations for better practices. In 2024, reports on animal welfare risks in longline and trap fisheries were published. In addition, guidelines for improved fishing processes continued to be developed.

Report on longline fishing

The report assessing animal welfare risks in longline fishing highlights the main issues affecting the welfare of fishes during capture, handling on board, stunning, and slaughter. This method is used for various species, including Atlantic cod, halibut, swordfish, groupers, moray eels, sparids, and Patagonian toothfish. The method presents significant challenges to fish welfare – from baiting and capture to handling and slaughter.

Fishes can remain on the hook for up to a full day, exposing them to considerable suffering such as pain, injuries, exhaustion, and the risk of being eaten or suffocating. Shortening this period would greatly reduce animal suffering. Furthermore, fishing gear

should be adapted to minimise bycatch and protect juveniles – for example, by using barbless or circular hooks and adjusting the line length or fishing depth.

The mechanical strain caused by hauling in the lines, handling the hooks, and the prolonged exposure to air further impair the welfare of the fishes. Injuries caused by removing the hooks or by the sorting process worsen the situation. Measures to handle fishes more gently are necessary, such as reducing the hauling speed and providing better training for crews. Rapid stunning and killing of the fishes immediately after capture would prevent considerable suffering. The most effective method is a targeted blow to the head, which renders fishes unconscious instantly. In practice, however, many fishes die from suffocation on deck or during sorting.

Report on trap and pot fishing

The report on animal welfare risks in trap and pot fishing focused on octopus fisheries in southern Portugal, a representative example of small-scale fisheries in southern Europe. Traps and pots are used worldwide in both small-scale and industrial fisheries. Although they account for only a comparatively small share of global catches, they have considerable economic significance because certain species generate high revenues.

The analysis reveals significant animal welfare issues for octopuses, which are considered highly intelligent and sentient beings. When removed from the traps, they often suffer severe injuries – in some cases even limb amputations. Furthermore, in practice, bleach is sometimes used to detach the animals more easily from the traps, causing painful burns, particularly to the eyes. Since non-mature animals should be released back into the wild, it is questionable whether they can survive the injuries and stress caused by the bleach.

Another major problem is the lack of stunning and humane killing after capture. To preserve freshness, the animals are often kept alive on board – sometimes even in freshwater, which causes additional suffering.

To avoid the use of bleach and the violent removal of animals, traps and pots should be redesigned to include larger openings or movable parts. Moreover, immediate and proper stunning and humane killing of the animals is necessary. The recommended method is a targeted incision into the brain with a sharp, pointed object, carried out by trained personnel.

fair-fish database expands its reach

The fair-fish database is fair-fish's central scientific tool for assessing fish welfare in aquaculture and fisheries. It provides well-founded information on natural behaviour, reproduction, stocking densities, habitat design, fishing methods, and stunning techniques to minimise animal suffering and enable more sustainable fish production. In 2024, the database was further expanded.

Pike (Esox lucius) in Lake Neuchâtel (Switzerland) © Michel Roggo

In the area of aquaculture, new WelfareChecks were added for the species snakehead (Channa argus), largemouth bass (Micropterus salmoides), and blue tilapia (Oreochromis aureus). In addition, the existing WelfareCheck for Nile tilapia (Oreochromis niloticus) was updated to incorporate the latest scientific findings on husbandry and fish welfare.

The fisheries section of the database also grew: New assessments were published for the fishery of Atlantic chub mackerel (Scomber colias) using purse seines and European hake (Merluccius merluccius) using set nets.

These additions help to better understand and assess the impact of different fishing methods on the welfare of fishes.

The revision of the overview page ("Overview") of the species profiles not only led to a visual redesign but also prompted in-depth research on some newly added criteria. Firstly, the revision was used as an opportunity to restructure the data collection behind the scenes to simplify future use of the data by us and others. Secondly, we updated the editorial content of all – now 91 – species profiles.

Scientific recognition of the fair-fish database was particularly evident at the Annual Science Conference of the ICES (International Council for the Exploration of the Sea) 2024 in Gateshead, GB. Jenny Volstorf, head of the database, presented a poster on the methodology and latest developments of the database. The poster was awarded the best poster award. The jury especially praised the clear structure, the simple comprehensibility, and the effective presentation. This success highlights the database's significance as a valuable tool for research and practice.

Furthermore, the work of the fair-fish database was referenced in several scientific publications in 2024. A research article titled "The fair-fish database surveys the welfare of farmed fish species on a global scale" appeared in the Journal of Fish Biology, describing the database's methodology and scope in detail. Another article, "Fish welfare in farms: potential, knowledge gaps and other insights from the fair-fish database," was published in Frontiers in Veterinary Science.

In addition, the fair-fish database served as a foundation for further scientific studies. In their publication "Disaggregating animal welfare risks in aquaculture," Chiang and Franks cite the fair-fish database as evidence that conventional aquaculture systems lead to unacceptable conditions for fishes. They use species-specific data from the database to assess welfare risks in their own framework and describe the database as "the most reliable publicly available database for welfare-relevant information."

The Brazilian NGO Alianima used data on Nile tilapia from the fair-fish database for an informational brochure. In Brazil, there are neither legal protections for fish welfare nor are Nile tilapia farms certified by any major labels. Therefore, Alianima compiled their own material to support discussions with farmers, retailers, and other potential stakeholders.

Looking ahead, further additions to the database are planned, especially by recording additional species in both the aquaculture and fisheries sections and by conducting deeper analyses of existing WelfareChecks with practical recommendations. International networking and collaboration with industry, research institutions, and NGOs are also to be expanded to further increase the relevance and impact of the fair-fish database.

Aquaculture consulting: improving fish welfare through targeted measures

fair-fish is actively committed to improving the living conditions of fishes in aquaculture facilities in German-speaking countries through its aquaculture consulting program, and to promoting animal welfare within the industry. In 2024, the project manager for fish welfare knowledge transfer, Yannick Rohrer, proposed and implemented several important measures across three aquaculture farms. These adjustments directly and positively impacted the welfare of around 15,000 rainbow trouts, pikes-perch, and carps.

Special focus was placed on feeding, nutritional management, and water quality. In several farms, the feeding schedules were adjusted to allow better food intake and to reduce competitive behaviour. One farm introduced automatic feeders to distribute food more evenly and thus prevent feeding stress and malnutrition among individual fishes. Another farm improved oxygenation with a Venturi system, which also provided currents and bubbles, enriching the tank environment.

The habitat conditions in the tanks were also deliberately improved. In one farm, gravel was added to the breeding tanks to create more natural conditions and support the healthy development of juveniles. In addition, poles are planned to be tested in tanks to provide fishes with more structure and movement opportunities. These measures aim to validate research findings and to test their practicality for wider application in aquaculture.

Another central topic was health monitoring, particularly regarding fin damage. Fin damage is considered an indicator of poor water quality or high ag-

Tench (Tinca tinca)
in the Düdinger Möser nature reserve
© Michel Roggo

gression levels in the tanks. fair-fish also began offering simplified tools to monitor fish health and welfare. These tools aim to help farms detect potential problems early and respond effectively. Additionally, fair-fish created a comparative table on the pain perception of fishes relative to other farm animals, to raise awareness among breeders on this important topic.

To further sensitise breeders to the issue of fish welfare, our project manager used a virtual reality headset. This technology made training sessions more vivid and hands-on, helping participants better empathise with the fishes' perspective.

To promote fish welfare on a broader level, fair-fish joined the Swiss Coordination Office for Aquaculture in 2024. Together with the Swiss animal welfare organisation Sentience, fair-fish also initiated a campaign on "invisible animals" to raise awareness about the often overlooked suffering of fishes in aquaculture and fisheries.

fair-fish school: raising awareness for the next generation

The fair-fish school project brings knowledge about oceans, fisheries, and sustainable fish consumption directly into classrooms. The aim is to teach children in a playful and age-appropriate way about fishes as sentient beings and to help them understand the ecological impacts of fish consumption.

Since 2024, Sarah Mahni has led the project, visiting school classes to deliver interactive lessons. With her experience as a classroom assistant and her enthusiasm for raising awareness among young people, she succeeds in making complex topics accessible. The school visits are free of charge for schools and were taken up by four classes last year.

Feedback from teachers and pupils was consistently positive. Particularly appreciated were the practical and vivid methods, which gave children a new awareness of underwater life and the effects of human actions.

FishTest: targeting new audiences

In 2024, fair-fish recognised that the market for traditional fish consumer guides is saturated. Therefore, we are now exploring ways to further develop the current FishTest for the gastronomy sector. In France and Belgium, there is already a model by Ethic Ocean that could serve as inspiration. A practical guide for restaurants could help encourage more sustainable fish purchasing decisions.

Perch (Perca fluviatilis)
in Lake Neuchâtel (Switzerland)
© Michel Roggo

Publications, media, and events

In 2024, fair-fish was able to present their scientific findings and messages on various platforms – through publications, media appearances, and events. The goal was to raise awareness among the public and professionals about fish welfare and to highlight grievances in fisheries and aquaculture.

Scientific publications

In 2024, fair-fish contributed to fish welfare research with several publications. In collaboration with the University of Bremen, fair-fish published the study "Fish Welfare in the Context of Sea Fisheries and Aquaculture Farms: An Overview of International, European, and National Legal Systems." The study examines legal perspectives and approaches to fish welfare in marine fisheries and aquaculture. It also proposes measures for legal reforms and greater consideration of fish welfare in industry and society.

A white paper was also published by the Carefish/ catch partners, featuring twelve essays addressing key questions about fish welfare in fisheries and aquaculture.

Another scientific highlight was the publication of the research article "The fair-fish database surveys the welfare of farmed fish species on a global scale" in the Journal of Fish Biology, describing the methodology and scope of the fair-fish database.

Our magazine fish-facts

In 2024, we published three editions of fish-facts – in March, June, and December. Each issue portrayed one aquatic animal: the Atlantic salmon, the octopus, and the Nile tilapia. We aim to bring these animals closer to our readers and encourage a more conscious relationship with them as sentient beings with fascinating characteristics. The lovingly designed issues also inform about our projects and our team.

Media presence

fair-fish gained increased media presence in 2024. Yannick Rohrer appeared on Kassensturz, the weekly Swiss TV show dedicated to consumer protection issues, and spoke about the problems of salmon farming and its impact on animal welfare. fair-fish was also featured with statements in K-Tipp, Eurofish Magazine, and the Tagesanzeiger. In the Tagesanzeiger, fair-fish criticised the practice of ice-bathing shrimps without prior stunning during slaughter.

A particularly notable media contribution was an article by Florianne Koechlin, published on the Swiss news platform Infosperber. She highlighted the cruel conditions fishes face in today's fisheries and aquaculture and emphasized fair-fish's efforts to improve their welfare. The article promoted her book "Verwoben und verflochten", which includes many references to fair-fish's work.

fair-fish issued several media releases regarding salmon consumption, salmon farming, and the Carefish/catch project reports. In addition, fair-fish published an average of three posts per week on Facebook, LinkedIn, and X.

Events and conferences

In addition to publications and media activities, fair-fish participated in numerous professional events in 2024 to directly share its findings and advocacy:

- fair-fish presented a poster at the Humanely Ending the Life of Animals symposium from 6th to 7th of March in Bern (Switzerland), a conference on humane slaughter methods.
- At the Swiss Ocean Day on the 20th of June at the University of Bern, fair-fish advocated for greater awareness of fish welfare.
- Caroline Marques Maia presented the fair-fish database at the 57th Congress of the International Society for Applied Ethology from 22th to 26th of July in Curitiba (Brazil).
- fair-fish was represented with its own booth at Aqua2024 from 26th to 30th of August in Copenhagen (Denmark) – one of the few NGOs present. Yannick Rohrer introduced the fair-fish aquaculture consulting work.
- Jenny Volstorf presented a poster on the fair-fish database at the ICES 2024 Annual Science Conference from 9th to 12th of September in Gateshead (United Kingdom) and won the best poster award.
- fair-fish participated in the Fish Day of the Swiss Fisheries Association on the 9th of November at the Freies Gymnasium Bern.
- On the 16th ofNovember, fair-fish and Sentience organised an event on salmon consumption and farming in Zurich (Switzerland), where Yannick Rohrer gave a talk.
- On the 20th of November, Yannick Rohrer participated in the panel discussion about the documentary film "Salmon Secrets" at the Rote Fabrik, Zurich.
- fair-fish organised the Online Shoal event on fish welfare on the 27th of November – a discussion bringing together scientists, NGOs, and industry representatives on the welfare of fishes and other aquatic animals.

Chub (Squalius cephalus) in the Belper Giessen (Switzerland) © Michel Roggo

Graylings (Thymallus thymallus)
Lacs de Fenêtre, Valais (Switzerland)
© Michel Roggo

Campaigns and collaborations

In 2024, fair-fish supported several initiatives and petitions aimed at improving conditions in fisheries and aquaculture:

- The petition by fair-fish and Sentience for better legal protection of fishes;
- The campaign against octopus farming, initiated by Acción Océanos & Raíces y Brotes;
- The petition “Because Our Planet Is Blue” by OceanCare for better marine protection;
- The Coalition RasSistance, a collaboration with Welfarm and Seastemik opposing planned indoor salmon farms;
- fair-fish also joined the Swiss Aquaculture Interest Group to promote more animal-friendly breeding methods.

Through these diverse activities, fair-fish was able to make its work accessible to a broad audience while further advancing political and societal discussions about fish welfare.

Website redesign

In 2024, the fair-fish website underwent a comprehensive redesign. The goal was to improve user-friendliness, structure the content more clearly, and provide easier access to important information about our fish welfare projects in fisheries and aquaculture. The new website features a modern and clear design, simplifying navigation and making key content intuitively accessible. It also includes an optimised mobile version for better display on smartphones and tablets. New and updated information on fish welfare, projects, and scientific findings has been incorporated.

With this redesign, fair-fish has laid an important foundation to reach even more people and raise awareness about fish welfare.

Relocation of the office

As of 1st of December 2024, the fair-fish office moved to Weiherweg 4 in 8610 Uster.

Thanks and outlook

fair-fish is deeply grateful to have dedicated staff, a competent Board, and committed members. We also extend our heartfelt thanks to the supporting foundations, including Open Philanthropy and the Dreiklang Foundation for their support of Carefish/catch and the fair-fish database, as well as the ProCare Foundation, the Liliane Hirzel-Atzli Foundation, the Edith Maryon Foundation, the Paul Schiller Foundation, and other anonymous foundations for their generous contributions to our aquaculture consulting efforts.

Thanks to the loyalty of our supporters, the total donations reached nearly CHF 90,000 in 2024. fair-fish counts over 700 regular donors, some of whom contribute several times a year. Long-standing supporters often return after a pause of three to four years, although we also face a natural decline in our donor base due to aging. Addressing this challenge and attracting new supporters is crucial. The strength of this community is essential for the welfare of fishes – without it, our work would not be possible.

Looking ahead, we are filled with optimism. We aim for further professionalisation of our organisation and projects and for expanding our network of partnerships. Together, we are building a future where fishes are treated with the respect and care they deserve.

Financial development 2024: project stabilisation and fund resolution

The financial report follows in the attachment.

In 2024, fair-fish was able to continue and expand their core activities thanks to targeted project funding. Total income amounted to CHF 966,480, mainly from donations (CHF 87,818), project contributions (CHF 246,690), and the resolution of funds (CHF 534,577), which together financed our work.

Project-related expenses totalled CHF 518,891, demonstrating that the majority of funds went directly towards achieving our mission.

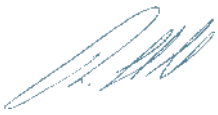
A significant portion of financial resources came from the Carefish/catch fund, which was resolved in 2024 to finance ongoing project work. This explains the decrease in available reserves. At the same time, fair-fish invested in long-term financial assets to support the sustainable funding of future projects.

Overall, donation revenues were slightly higher than the previous year. Additionally, the fair-fish database project continued to receive funding from Open Philanthropy and the Dreiklang Foundation.

With a modest annual surplus of CHF 3,083, the association's assets at the end of 2024 stood at CHF 232,841.61 – slightly lower than in 2023. Nevertheless, all core projects – including Carefish/catch, the fair-fish database, aquaculture consulting, and the school project – could be maintained and in some cases even expanded.

The financial position of fair-fish remains stable, but securing long-term financing remains critical to ensure the sustainable operation of our projects.

Fausta Borsani, Executive Director



Dr. Ralph O. Schill, President

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For donations in Swiss francs:
IBAN: CH68 0900 0000 8503 8259 6

For donations in euros:
IBAN: CH51 0900 0000 9136 260

Balance sheet as per 31 December	2024 CHF	2023 EUR
Liquid assets	423'697.38	1'808'381.37
Other short-term receivables	844.58	331.01
Accrued income and prepaid expenses	801.63	14'247.88
Current assets	**425'343.59**	**1'822'960.26**
Financial asset	726'909.56	189'389.22
Fixed assets	**726'909.56**	**189'389.22**
Total assets	**1'152'253.15**	**2'012'349.48**
Liabilities from deliveries and services	8'768.74	17'330.23
Other short-term liabilities	8'375.30	7'926.35
Other short-term liabilities board member	0.00	0.00
Accrued liabilities	16'300.00	212'000.00
Short-term debt capital	**33'444.04**	**237'256.58**
Fund Carefish/Catch	0.00	575'000.00
Fund Legacy Ringier	885'967.50	952'960.64
Fund Team Switzerland	0.00	0.00
Fund Germany	0.00	0.00
Long-term debt capital	**885'967.50**	**1'527'960.64**
Debt capital	**919'411.54**	**1'765'217.22**
Association assets	229'759.00	241'500.82
Annual loss/profit	3'082.61	5'631.44
Equity	**232'841.61**	**247'132.26**
Total liabilities	**1'152'253.15**	**2'012'349.48**

Income statement	2024 CHF	2023 EUR
Donations	87'818.09	85'256.67
Contributions to projects	246'690.20	254'114.11
Legacies	0.00	0.00
Project revenues	97'227.05	0.00
Subscriptions	0.00	1'452.15
Membership fees	167.30	0.00
Dissolution of funds	534'577.50	667'986.35
Gross revenues from deliveries and services	***966'480.14***	***1'008'809.28***
Revenue reductions	***0.00***	***0.00***
Net revenues from deliveries and services	**966'480.14**	**1'008'809.28**
Projects	518'891.00	665'956.85
Projects and fund allocations	***518'891.00***	***665'956.85***
Gross profit I	**447'589.14**	**342'852.43**
Gross margin I	*46.3%*	*34.0%*
Staff costs	318'352.10	303'787.50
Services of third parties	126'845.77	51'541.41
Gross profit II	**2'391.27**	**-12'476.48**
Gross margin II	*0.2%*	*-1.2%*
Room expenditure	0.00	251.05
Property insurance, fees	226.35	237.30
Administrative expenses	31'036.07	40'872.15
Advertising expenses	7'919.56	6'232.90
Other operating cost	0.00	2'402.28
Other operating expenses	***39'181.98***	***49'995.68***
Operating result	**-36'790.71**	**-62'472.16**
Financial income	47'869.70	71'135.84
Financial expenses	-3'248.73	-2'532.24
Gross profit III	**7'830.26**	**6'131.44**
Extraordinary, non-recurring or off-period expenses	4'747.65	-500.00
Annual loss/profit	**3'082.61**	**5'631.44**