



WORKING
TOGETHER FOR
MIGRATORY FISH



Mating Belongs to All: Finland love affair with migratory fish

Sampsa Vilhunen & Matti Kalervo






Time to show Finland's migratory fish some love!

Overview

- *Overview of the status of Finland's rivers and endangered migratory fish*
 - Sampsa Vilhunen, Head of Programme, WWF-Finland
- *How Kesko, a retail company, came to be involved in fighting for freshwater fish?*
 - Matti Kalervo, Vice President Corporate Responsibility, K-Group
- *Mating belongs to all: Showcasing the joint innovative campaign*
 - *Sampsa and Matti will discuss the creation of the campaign, linking media, mating videos and concrete field work to generate real change*
- Q&A - What's next - and what can other countries learn from our successes?

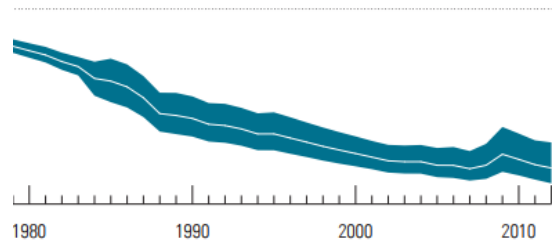


Overview of the status of
Finland's rivers and
endangered migratory
fish

Dr. Sampsa Vilhunen
WWF Finland

Freshwater Living Planet Index shows a decline of 81 percent for freshwater vertebrate numbers from 1970

political boundaries so they require extra efforts of protection. Several studies have found that freshwater habitats are faring worse than marine habitats (Collen, et al., 2014; Cumberlidge et al., 2009). This finding substantiates this finding, showing that on average, the number of populations monitored in the freshwater Living Planet Index overall by 81 per cent between 1970 and 2012, with an average annual decline of 3.9 per cent. These data are for 3,324 monitored populations of freshwater vertebrates.



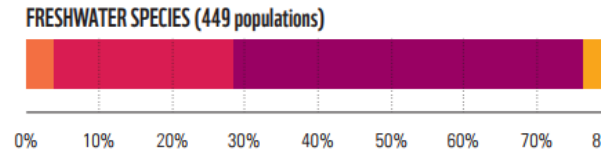
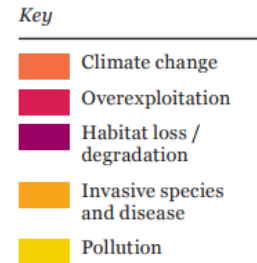
AQUATIC SPECIES AND UNSUSTAINABLE WATER EXTRACTIONS

Figure 12: The freshwater LPI shows a decline of 81 per cent (range: -68 to -89 per cent) between 1970 and 2012

Trend in population abundance for 3,324 populations of 881 freshwater species monitored across the globe between 1970 and 2012 (WWF/ZSL, 2016).



Each population has up to three threats recorded, so the total number of recorded threats exceeds the number of populations (WWF/ZSL, 2016).



The frequency with which different threats are mentioned in the database varies according to taxonomic group (Figure 13). For amphibians, invasive species and disease represent the second most prevalent threat after habitat loss. It is cited as a threat in 25 per cent of cases, potentially reflecting the prevalence of *Batrachochytrium dendrobatidis*, a species of fungus that causes chytridiomycosis, a disease of amphibians. This pathogen is implicated in the steep decline or extinction of more than 200 species of amphibians (Wake and Vredenburg, 2008). The rapid global spread of the disease has been linked to climate change (Pounds et al., 2006). The amphibian trade has also contributed to the original spread of the pathogen (Schloegel et al., 2009) and can still facilitate introduction into new areas.



“As recent successes illustrate, the measure of our progress isn’t always the size of the structures we build to control nature.

It’s often manifested in those we remove – allowing nature to take its course.”

-- Sally Jewell, U.S. Secretary of the Interior, Sept. 2016



With permission of American Rivers

Dam removals can lead to rapid recovery of fish stocks

DAM REMOVAL FOR RIVER RESTORATION: THE ELWHA RIVER

Free-flowing rivers are the freshwater equivalent of wilderness areas. The natural flow variations of these rivers shape and form diverse riverine habitats, within and next to the river. In many places, connected, free-flowing rivers are crucial for carrying sediment downstream, bringing nutrients to floodplain soils, maintaining floodplains and deltas that protect against extreme weather events, and providing recreational opportunities or spiritual fulfilment. Almost everywhere that free-flowing rivers remain, they are home to vulnerable freshwater biodiversity. Dams and other infrastructure threaten these free-flowing rivers as they create barriers, causing fragmentation and alteration to flow regimes. Dams also affect long-distance migratory fishes by obstructing their migratory pathways, making it difficult or impossible to complete their life cycles.

The Elwha River in the Pacific Northwest of the United States provides a striking example. Two hydroelectric dams – the Elwha Dam constructed in 1914 and the Glines Canyon Dam completed in 1927 – blocked passage for migratory salmon. Local people reported a huge decline in adult salmon returning to the river after the Elwha Dam was constructed. This heavily affected the Lower Elwha Klallam Tribe, who relied on the river's salmon and other associated species in the watershed for physical, spiritual and cultural reasons. Salmon are a keystone species in that they bring nutrients from the coast inland, nourishing both terrestrial and aquatic species that benefit from this supply of nutrients.

In the mid-1980s the Elwha Klallam Tribe and environmental groups started to push for the removal of the Elwha and Glines Canyon dams. Eventually the Elwha River Ecosystem and Fisheries Restoration Act of 1992 was put in place, mandating the "full restoration of the fisheries and ecosystem". After 20 years of planning, work to remove the Elwha Dam began in 2011, the largest dam removal in US history. The removal of the Glines Canyon Dam was completed in August 2014. Fish populations are expected to make a return to the river. Some chinook salmon already did in 2012, just after the Elwha dam came down.



A closer look at rivers

While change in size is an appropriate measure when monitoring the health of wetlands, volume and timing of flow and connectivity are more appropriate for monitoring the state and functionality of rivers. Historically, rivers have been extensively altered for urban development, transportation, flood protection, water supplies or energy generation. At least 3,700 major dams are either planned or under construction for hydropower and for irrigation, primarily in countries with emerging economies (Zarfl et al., 2015) (Figure 16). Almost half (48 per cent) of global river volume is already altered by flow regulation, fragmentation, or both. Completion of all dams planned or under construction would mean that natural hydrologic flows would be lost for 93 per cent of all river volume (Grill et al., 2015).

ALMOST HALF OF GLOBAL RIVER VOLUME IS ALREADY ALTERED BY FLOW REGULATION, FRAGMENTATION, OR BOTH

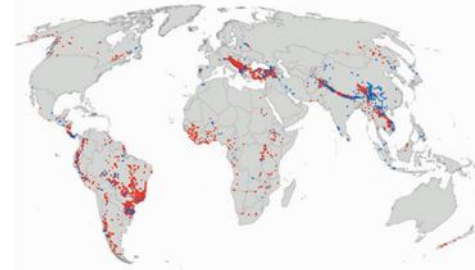


Figure 16: Global distribution of future hydropower dams either planned (red dots, 83 per cent) or under construction (blue dots, 17 per cent) (Zarfl et al., 2015).

Key
 Blue dot Dams under construction
 Red dot Dams planned

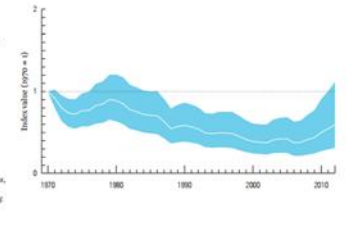
WWF Living Planet Report 2016



Dams alter flow, temperature and sediment transport of rivers (Reidy Liermann et al., 2012). Furthermore, dams inhibit migration, affecting the regular movement and distribution of species (Hall et al., 2011). The global analysis of fish population trends shows that on average, the abundance of fish species that migrate within freshwater habitat (potamodromous species) or between freshwater and marine habitats (anadromous, catadromous and amphidromous species) declined by 41 per cent overall between 1970 and 2012 (Figure 17), with an average annual decline of 1.2 per cent. The index is based on 162 species and 735 populations.

Although threat information for many of the populations was unavailable, of the 226 populations for which threat data is available, nearly 70 per cent are threatened by alteration of their habitat. This is likely to explain the overall picture of decline. The increase seen after 2006 occurs in a number of migratory fish species; this could indicate the benefits that have been seen in some regions, for example in Europe, of improvements in water quality (EEA, 2013) and the introduction of fish passes in rivers to allow migration where there are manmade barriers.

Figure 17: The migratory fish LPI shows a decline of 41 per cent (orange) +12 to -64 per cent) between 1970 and 2012. Trend in population abundance for 735 populations of 162 migratory fish species monitored worldwide between 1970 and 2012 (WWF, 2016). The species included in this index are classified as either catadromous, anadromous, potamodromous or amphidromous by GROMS (Global Register of Migratory Species).



Key
 Blue line Migratory fish Living Planet Index
 Shaded area Confidence limits



Dam Removal in international news

- *... No other action can bring ecological integrity back to rivers as effectively as dam removals.... (Yale, 2015)*
- *...Rivers recover faster than expected after dam removal ... (U.S. Geological Survey, 2017)*
- *... If you are looking at the most economical way to gain watershed restoration, dam removal on its own jumps ahead of many things on the list... (Ohio Environmental Protection Agency, 2017)*
- *...Dams were built with little regard for the impacts they might have on ecosystems... (Nature 2018)*



MENU

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NEWS · 16 MAY 2016

Europe is demolishing its dams to restore ecosystems

Most scientists welcome the dam-removal trend but some call for research into potential ill effects.

Quirin Schiermeier



PDF version

RELATED ARTICLES

Dam removals: River

Fish return to undan



One million dams and obstacles in European waters

Dams are hampering fish migration, restricting sediment flow, and destroying freshwater habitats. Reservoirs are causing methane emissions.

Several thousand dams already removed in Europe over the past 25 years.

Momentum for dam removal after the EU adopted the Water Framework Directive in 2000.

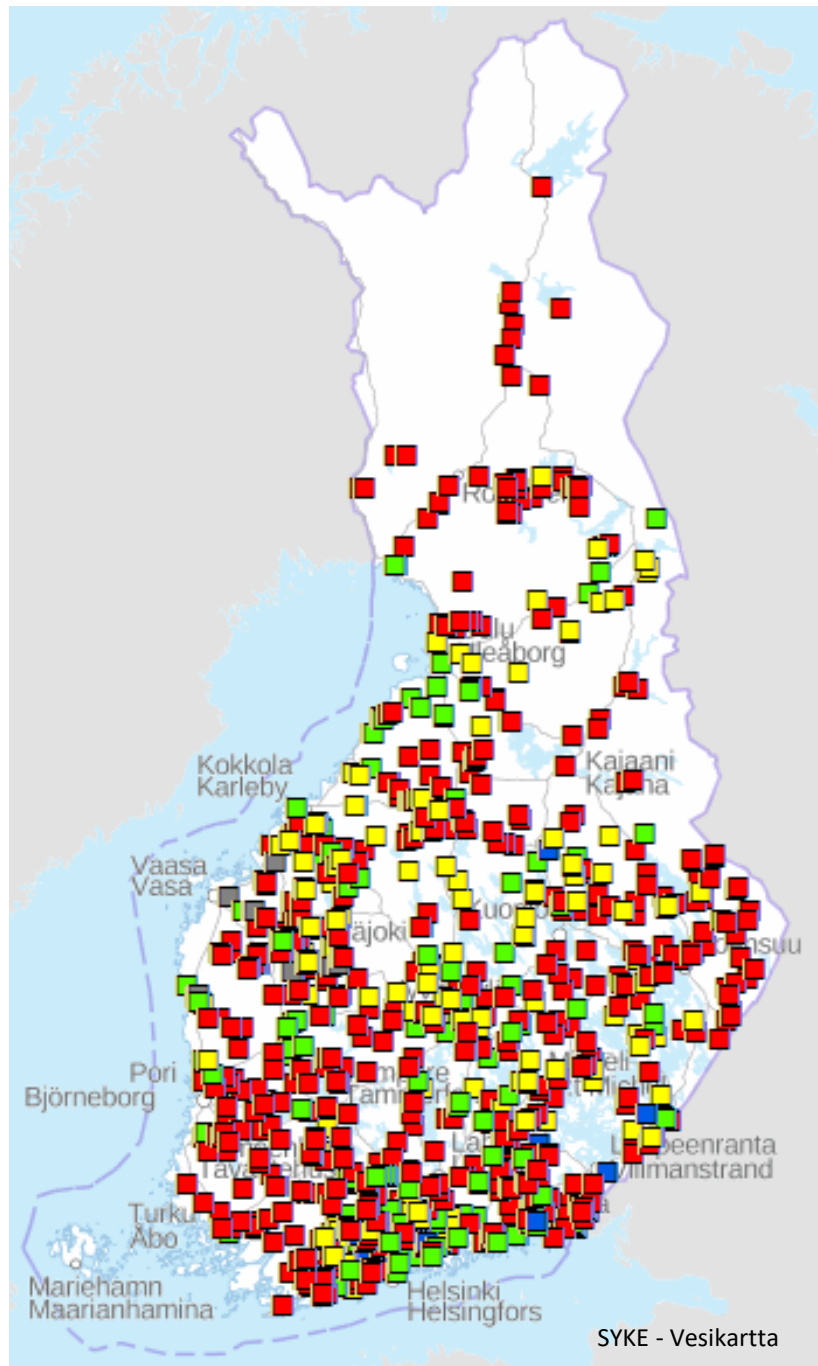


| | Fish species or form |
|----------------------------|---|
| Critically endangered (CR) | <ul style="list-style-type: none">• Land-locked salmon• Sea-run trout• Sea-spawning grayling• Lake Saimaa Arctic char |
| Endangered (EN) | <ul style="list-style-type: none">• Eel• Brown trout (south of Arctic Circle)• Migratory white fish (<i>Coregonus</i>, lavaret) |
| Vulnerable (VU) | <ul style="list-style-type: none">• Atlantic salmon• White fish in the Baltic Sea• White fish in lakes• Spined loach |
| Near Threatened (NT) | <ul style="list-style-type: none">• Asp• Brown trout (north of Arctic Circle) |

Conservation status of Finnish fishes constantly declining

12 species or forms are endangered

Main causes are habitat loss and unsustainable fishing



A brief history of running waters in Finland

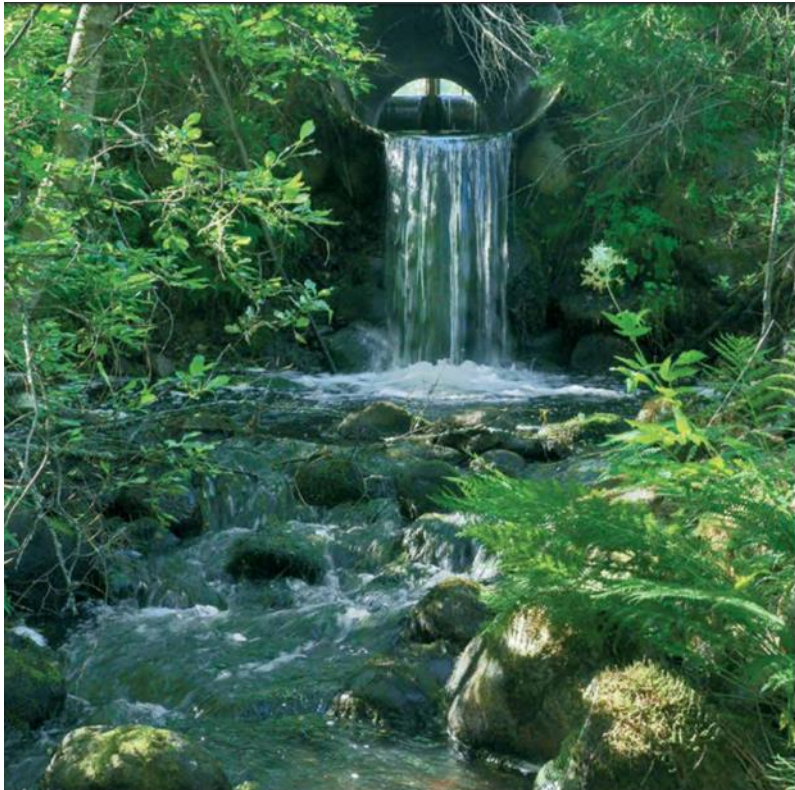
Extensive hydropower damming, ditching in the catchment, & dredging rivers for log transport

No-go legislation in the 80s

Extensive compensatory fish stocking

Restoration of rapids and spawning areas

Finland: 200 hydropower plants, but as many as tens of thousands of other migration barriers





The pivotal 2010s

Red book of species 2010

Recovery of Baltic salmon stocks

National Fishway Strategy

Full protection for endangered fish for first time in history in the fishing act

Considerable increases in minimum landing sizes

National salmon and seatrout strategy and the full revision of fishing legislation

'Red listed' species no longer found on fish counters



The future of running waters in Finland

Currently great efforts in awareness raising. Thus attitudes are changing.

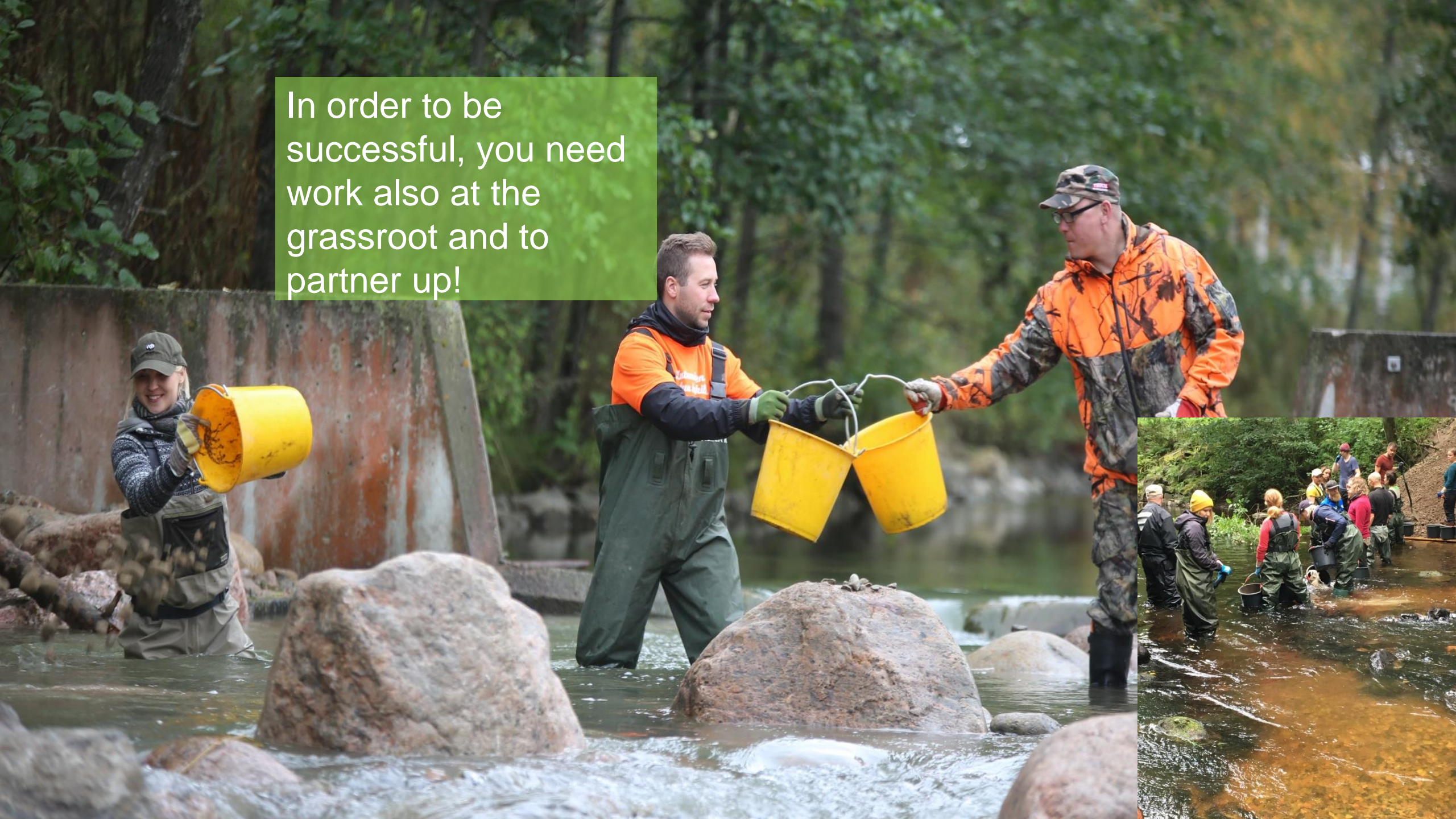
62 percent of Finns would be ready to remove existing hydropower that is insignificant for energy production.

Only 9 percent of Finns would like to have more hydropower dams built in Finnish rivers.

WWF Finland is pushing for the removal of unnecessary dams and for the revision of mitigation measures in old hydropower plants.

We are committed to bending the curve of weakening conservation status of the Finnish fishes.

In order to be successful, you need work also at the grassroots and to partner up!



K Group

(Kesko & K-stores)

Matti Kalervo, Vice President, Corporate
responsibility



K Group in brief

- K Group is formed by K-retailers and Kesko, a Finnish listed trading sector company that operates in

GROCERY TRADE



- Net sales €5,282 million
- 1,282 stores in Finland
- Some 1.2 million customers visit K-food stores every day

BUILDING AND TECHNICAL TRADE



- Net sales €4,486 million
- 597 stores
- Operates in Finland, Sweden, Norway, Estonia, Latvia, Lithuania, Poland and Belarus

CAR TRADE



- Net sales €909 million
- K-Auto is the market leader in Finland with a market share of 18.6%
- K-Auto imports and markets Volkswagen, Audi, SEAT and Porsche passenger cars, and Volkswagen Commercial Vehicles in Finland, and imports and markets SEAT vehicles in Estonia and Latvia

Sustainability in K Group



VISION

WE ENABLE SUSTAINABLE LIFESTYLES FOR OUR CUSTOMERS

OUR STRATEGIC TARGETS INCLUDE

Employees and retailers are proud advocates of K Group's sustainability work

Significant role in societal discussion by recognised leadership in sustainability action

ONE OF OUR STRATEGIC ACTIONS

Expanding communal responsibility initiatives together with retailers and employees

Our responsibility programme has six themes: Good corporate governance and finance, Customers, Society, Working community, Responsible purchasing and sustainable selections, **Environment**

Kesko in sustainability indices

MEMBER OF
Dow Jones
Sustainability Indices
In Collaboration with RobecoSAM



FTSE4Good



Fish and shellfish statement

- K Group's long-term work to safeguard sustainable stocks
- K Group has strictly followed WWF Finland's Seafood Guide recommendations
- K Group's own fish and shellfish policy will celebrate its 10-year anniversary this year

Sustainable selections

- Local fish is important to K-food stores
- The fish patty of our own brand Pirkka is made from bream caught in John Nurminen Foundation's Local Fishing Project, which aims to promote sustainable fishing
- Cooperation with Plan International Finland to improve the responsibility of the fishing industry and the position of migrant workers in Thailand





How did we become involved in fighting for freshwater fish?

- We have 42,000 employees and over 1,100 K-food stores – thus, we have the opportunity and the obligation to act
- Fish are one of the key products in food store selections
- Kesko has had a representative in the fish working groups of Finland's Ministry of Agriculture and Forestry since 2012

A close-up photograph of two hands holding several interlocking puzzle pieces. The pieces are in shades of orange and yellow. The background is a bright, out-of-focus window with sunlight streaming in, creating a warm, golden glow. The text is overlaid on a semi-transparent white rectangular area in the center of the image.

The idea of K Fishpaths came up in the seminar of WWF's fish campaign on 13 April 2016

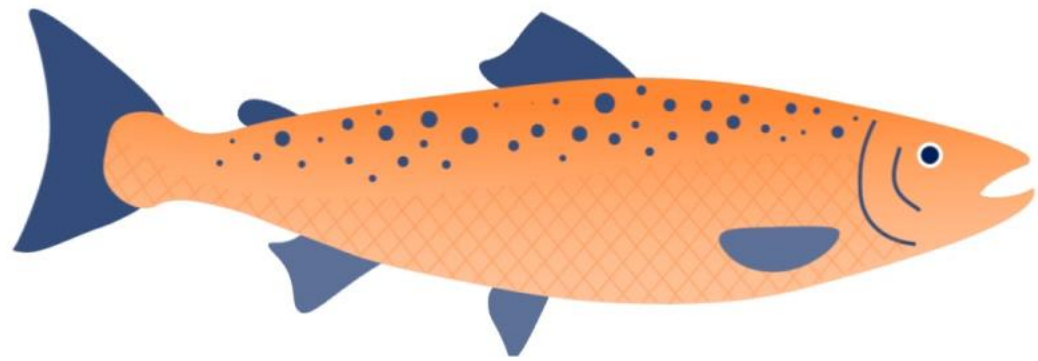


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Mating belongs to all - Showcasing the shared innovative campaign between WWF and K Group







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K Fishpaths

- In August 2017, K Group and WWF Finland began a five-year collaboration called K Fishpaths to conserve and revitalise endangered migratory fish populations in Finland
- The cooperation is recognised by the slogan “Mating Belongs to all”





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The aim of the project

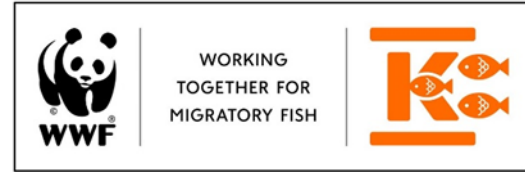
- Mapping different parts of Finland to find and remove obstacles in migratory fish spawning grounds
- Inspire Finns to volunteer in the river restoration work
- In the spirit of cooperation with local landowners, local K-retailers and citizens recreating spawning grounds for endangered fish and removing smaller scale migration obstacles
- Generating more awareness and discussion about Finland's endangered migratory fish populations



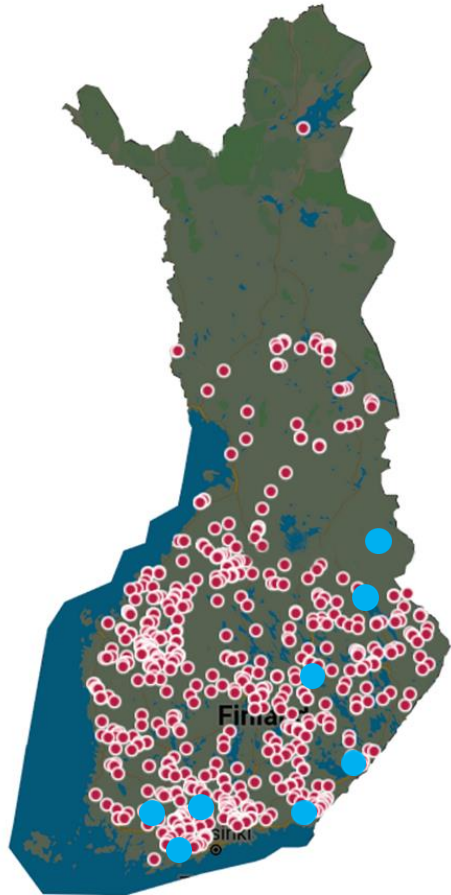
“While driving home, I smiled the whole way. Here, I saw the results of my own work immediately and I found it gratifying to know that the work really helps the endangered sea trout and other aquatic life.”



Follow the campaign on our websites kalapolut.fi



- Obstacle
- Removed obstacle



Impact on the future of migratory fish

12

Removed obstacles

94

Spawning beds

40000

New spawning areas (meters)

467

Volunteers activated

Visibility in K-stores

- Posters
- Material for social media
- "Mating belongs to all" t-shirts



Kuteminen kuuluu kaikille

WWF ja K-ryhmä kutsuvat suomalaiset talkoisiin uhanalaisten vaelluskalojemme pelastamiseksi.



Kuteminen kuuluu kaikille

Asiakkaamme, tule mukaan WWF:n ja K-ryhmäläisten kanssa avaamaan taimenten noususteitä Ingarskilanjoen puroille 4.-5.9. Ilmoittaudu talkoisiin kaupan kassalla.



Campaign has gained high visibility in Finland



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Vaelluskalojen kulku muuttuu esteettömäksi kynnyks kynnökseltä



Suomessa on noin 90 000 alua ja harvimpaa, joiden pöykä kulkemaan on vaelluskalojen mukana onnistunut...
Estetön kulku on elinehto vaelluskaloille
 Suomalaisilla on...
 WWF Suomeksi...
 Suojelusuojelut...
 Suojelusuojelut...
 Suojelusuojelut...



AREENA KIRJAUDU HAE VALIKKO

Ohjelmat ja kanavat Suorat TV-opas Radio LASTEN AREENA Ohjeet Suosikit Jatka

MATTI OVASKA suojelusuojelut, WWF

Ylen aamu-tv
Pelastetaan vaelluskalat
 8 min ma 28.8.2017 toistaiseksi 997 katselua

WWF:n mukaan suomalaisia vaelluskaloja voitaisiin auttaa pienillä teoilla. Kalojen pääsy jokien ja purojen kutupaikoille voi usein riippua pienistä esteistä, jotka olisi mahdollista poistaa tai korjata ilman valtavaa työmäärää. Suojelusuojelut Elina Erkkilä ja Matti Ovaska kertoivat kampanjasta kalojen auttamiseksi.

LISÄÄ SUOSIKKISI
 JAA OHJELMA
 LATAA

Ville Väresmaa jakei käyttäjän WWF Suomi videon.
 31 Helsinki, Uusimaa

Hyvä K-ryhmä, lupaan harkita Plussakortin hankkimista

5 067 näyttökertaa

WWF Suomi 31 Tykkää sivusta

Kuteminen kuuluu kaikille! Tule mukaan talkoisiin uhanalaisten kalojemme pelastamiseksi: kesko.fi/kalapolut.

Mikko Peltola @PeltolanMikko · Aug 23
 Ihanaa ja esimerkillistä! Hyvä @Kesko_Oyj ja @WWFSuomi #kuteminenkuuluukaikille

Translate from Finnish

K-ryhmä ja WWF yhteistyöhön uhanalaisten vaelluskalojen puolesta:
 K-ryhmä ja ympäristöjärjestö WWF aloittavat laajan, monivuotisen yhteistyön Suomen uhanalaisten vaelluskalakantojen pelastamiseksi ja palauttamiseksi...
 wwfi.fi

Todellinen vaappujen kaksintaistelu **MUKANA RISTIKKO**

KOUKUTTAVA JUHANNUSLIITE

K-Kalapolut -EXTRA

"Kuteminen kuuluu kaikille"
 Mikko "Peltsi" Peltola ja Elja Vilpas tulkitsevat vaelluskalojen patoutuneita tunteita

K-KALAPOLUT PALJASTAA: Tämän suomalaiset haluavat tietää kaloista ja kutuohimmista

Juhannuksen vaelluskalaton kesäherkkü

"Pitääkö olla huolissaan, jos kuteminen ei kiinnosta?"
 Karkkujen kappelin perustajat työpöydällä





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Lessons learned

- Invest for marketing and comms materials
- Reserve enough time for planning your work, especially the fieldwork
- Involve citizens by inviting them to join the actual fieldwork, not just social media events
- Cooperate with local organisations and give credit to them. Try connecting your work to the river restoration plans of the regional environmental administration
- Involve different teams in your organisation





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Thank you! Questions?

Matti Kalervo, Vice President, Corporate Responsibility

Sampsa Vilhunen, Head of Programme, Ph.D. Marine and freshwater environments