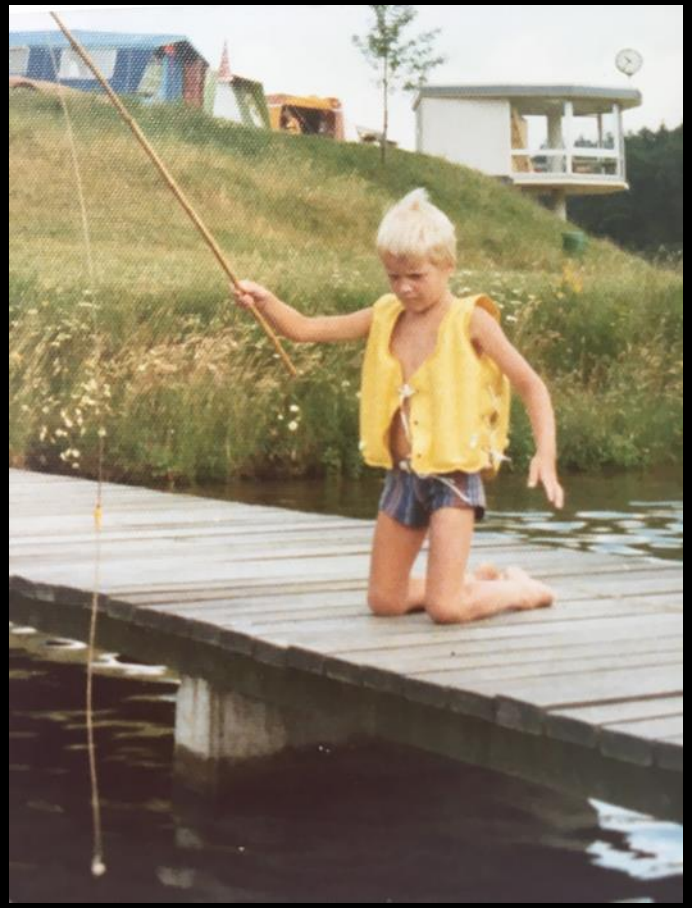

UTSK S7 761 15:30
GOYA TG 645 15:15
KUOKA TG 649 15:04
OKYO/HANEDA NH 5580 15:09
LONDON TG 6383 15:35
MANILA TG 621 15:50
OSAKA TG 623 15:11
SAPPORO TG 671 15:20
SHANGHAI MU 9833 15:23
LONDON TP 8377 15:50
TOKYO/NARITA UL 3327 15:45
16:30 LY 083
16:30 PG 4558 16:30
16:35 PG 4266
16:35 THAI TG 434
16:35 THAI TG 613
TG 334
CI 835
WE 631
EY 7724
BR 2221
VZ 561
From Sea to Source 2.0

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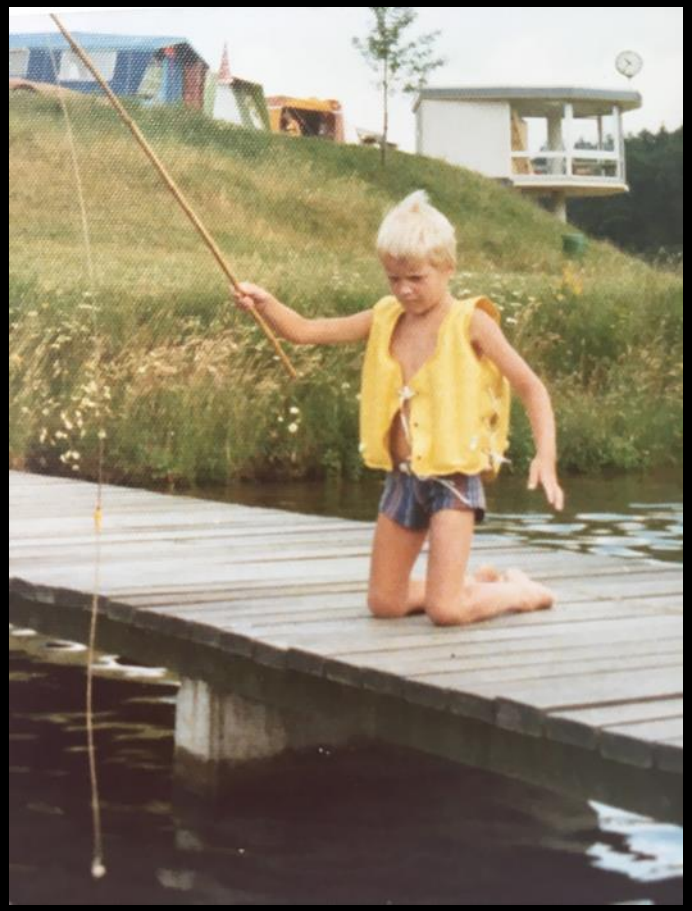


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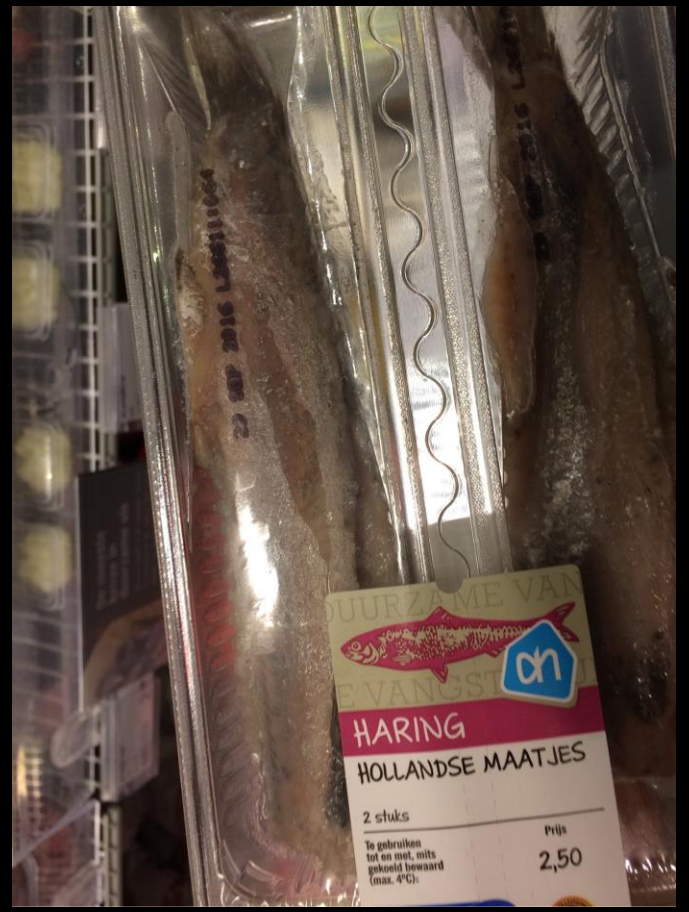
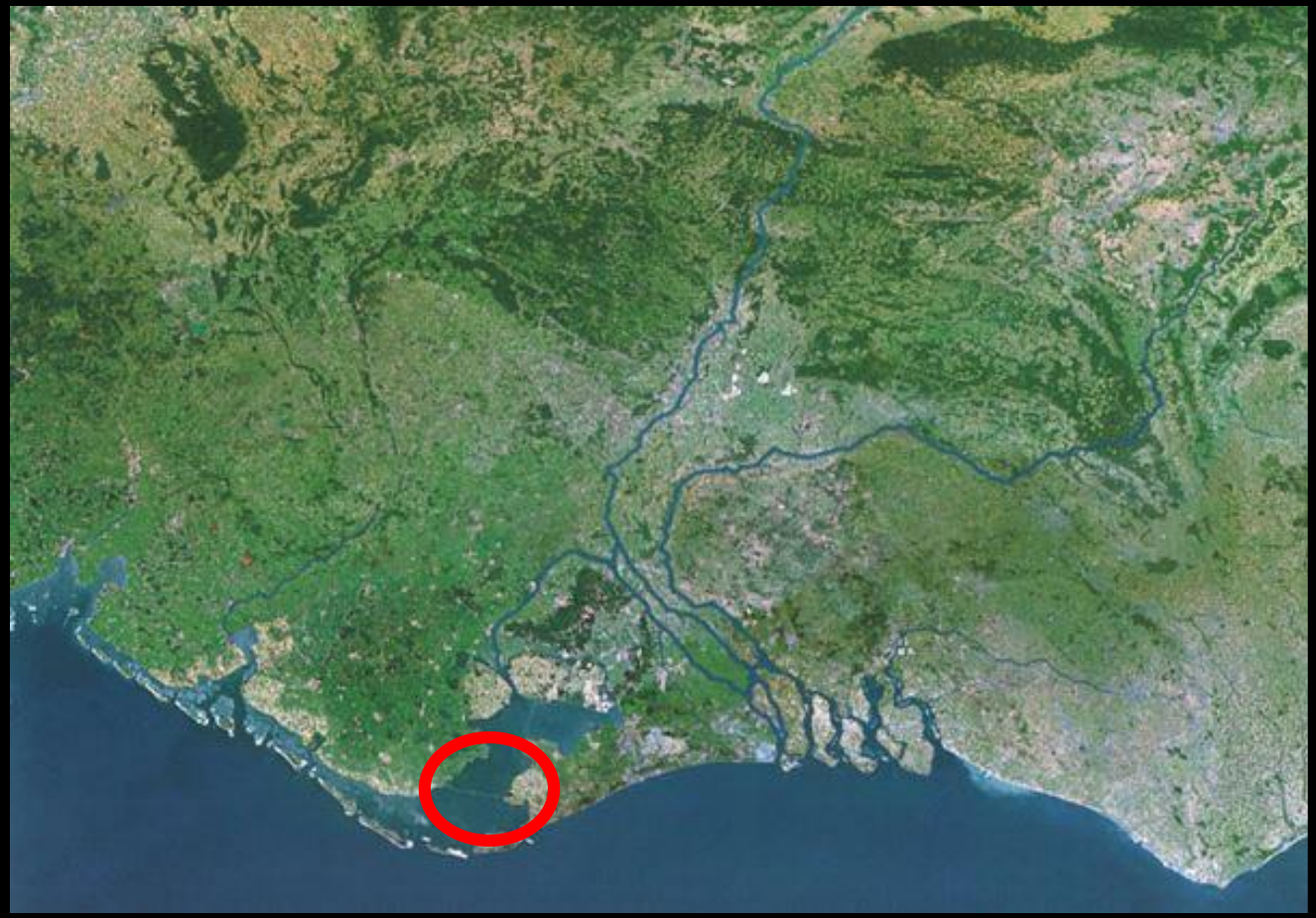
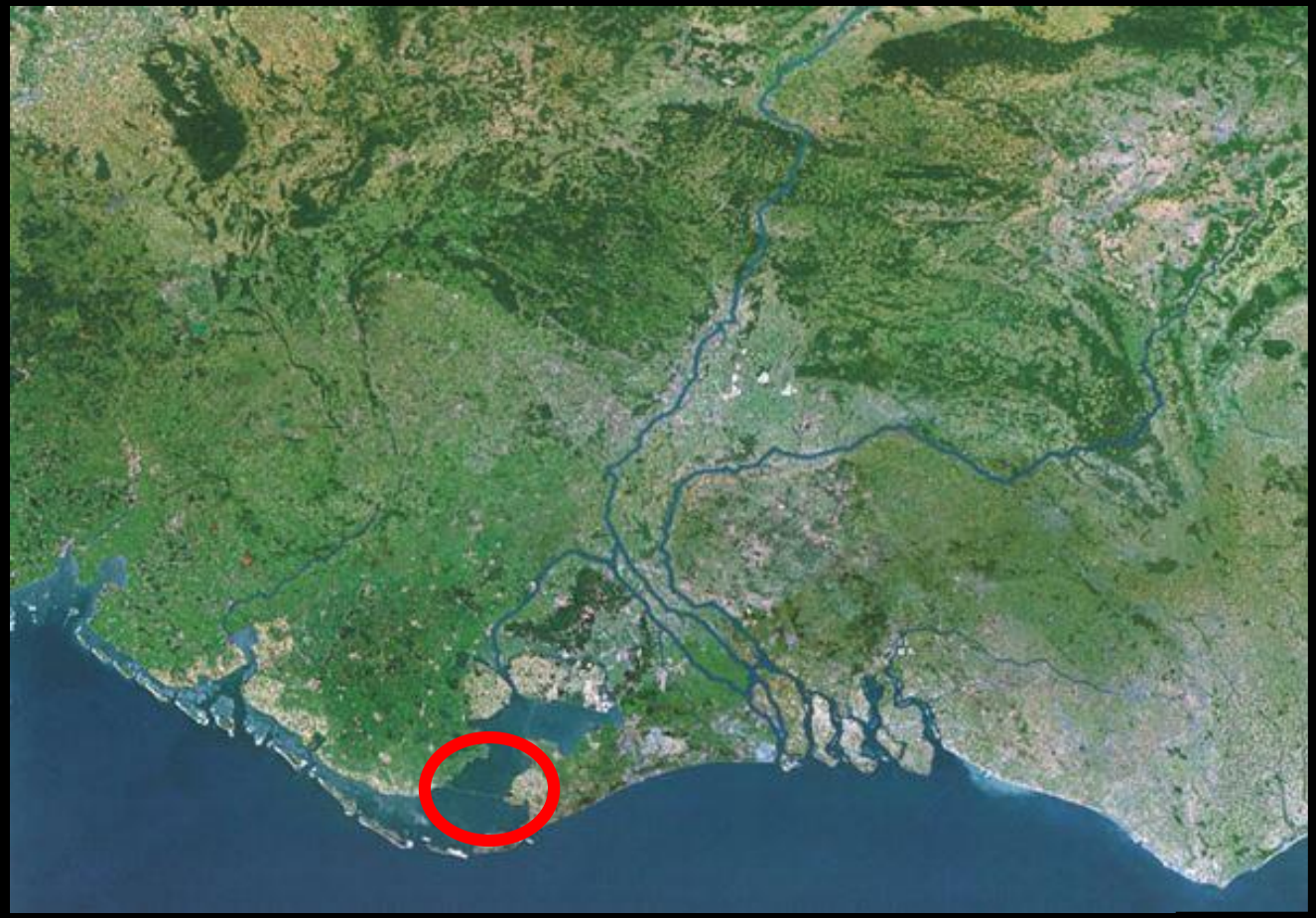
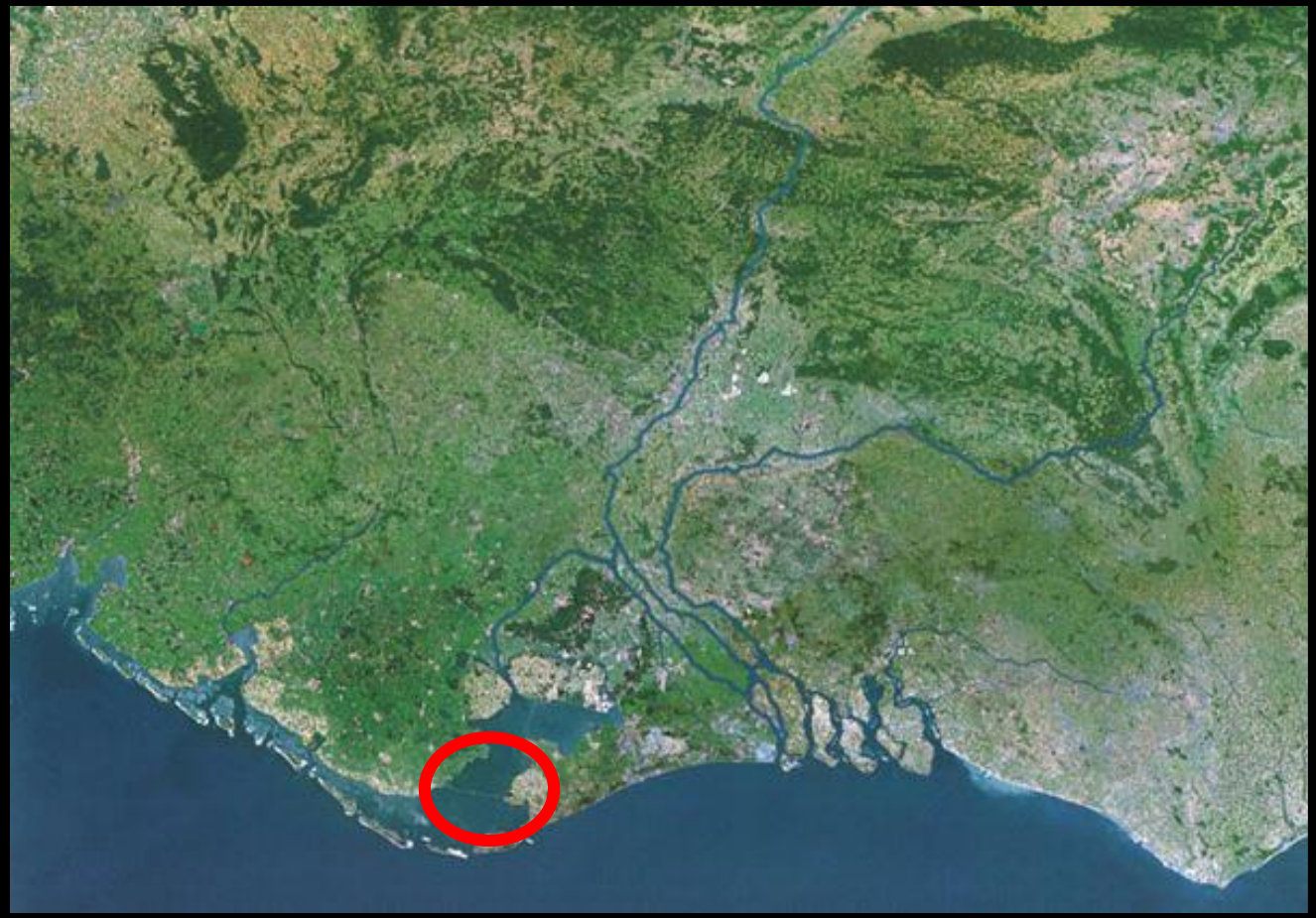

HARING
HOLLANDSE MAATJES
2 stuks
Te gebruiken tot en met, mits gekoeld bewaard (max. 4°C):
Prijs
2,50

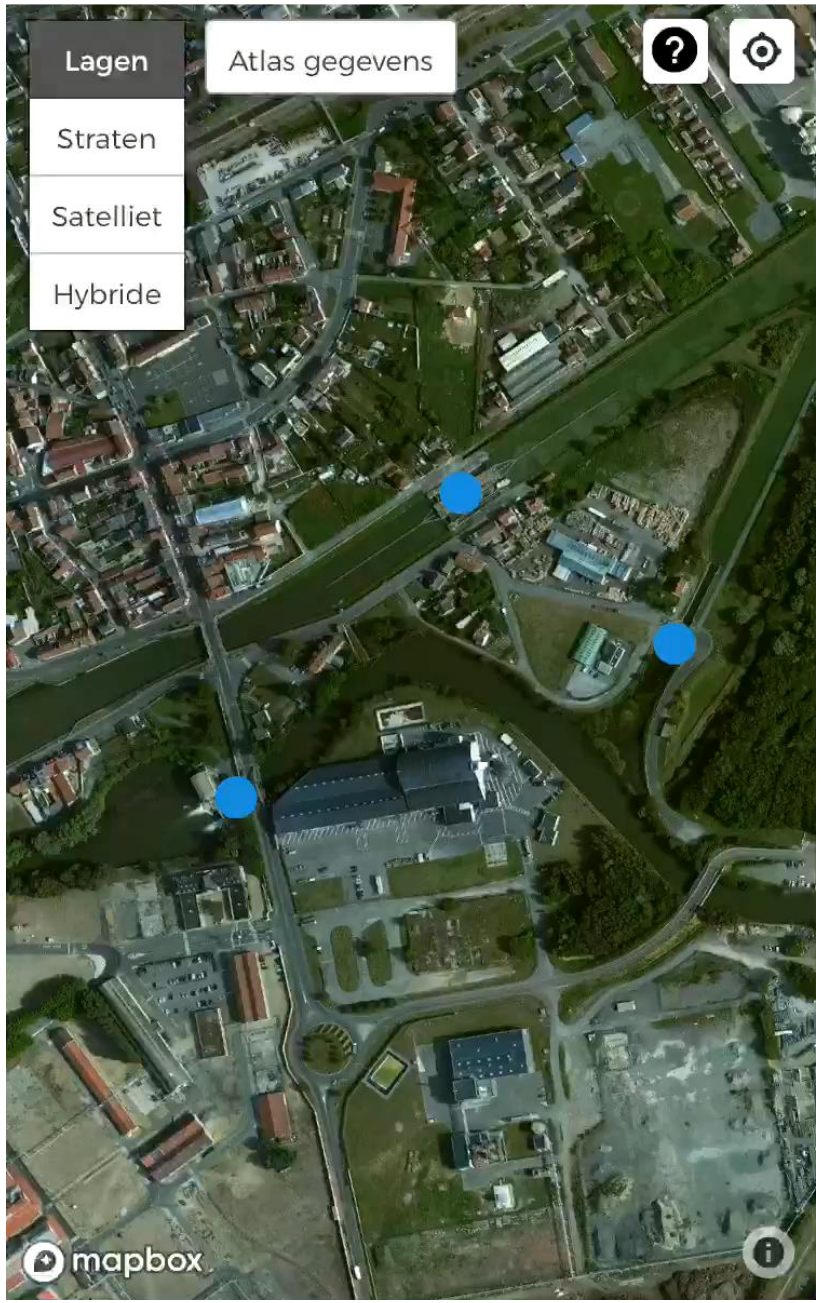







Feddes/Olthof landschapsarchitecten en Paul de Ruiter Architects

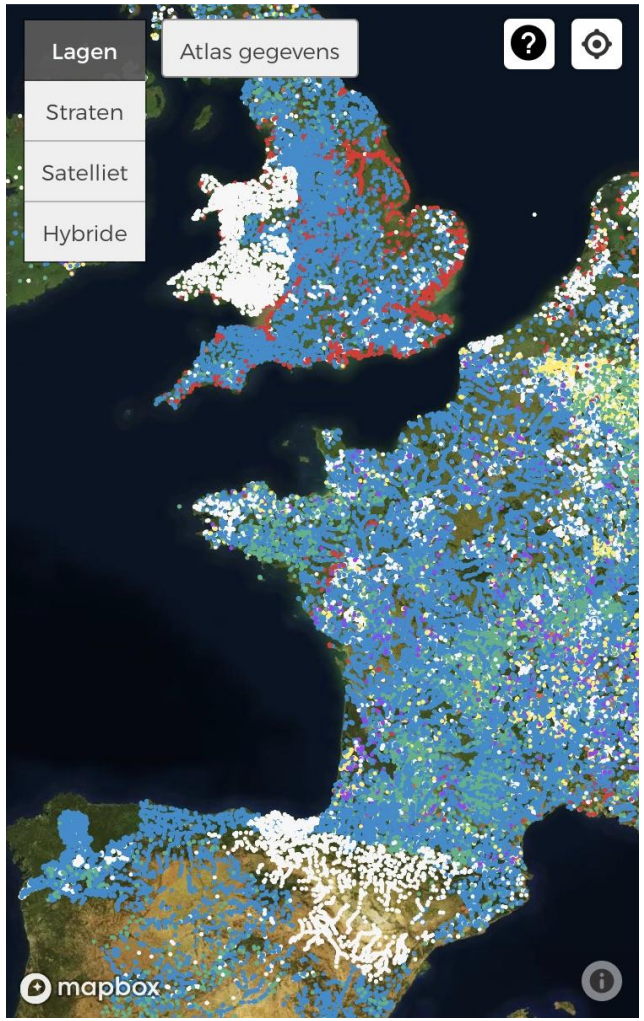
“With current knowledge we would have done it differently”



AMBER

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 689682.

~ 1 Million!



~ 1 barrier / km!

AMBER

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“Nobody can improve this alone”

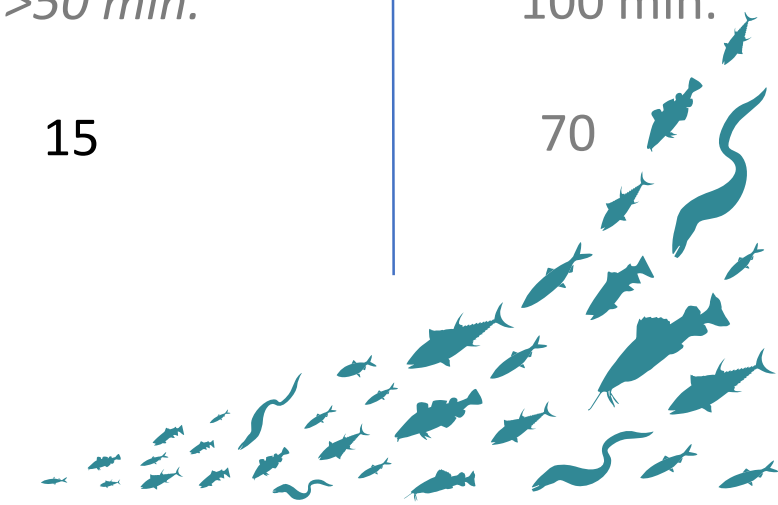
WORLD FISH MIGRATION DAY

Home About Events Sponsor/Support News Downloads Contact Account

Impact

Activate & awareness	2014	2016	2018	2020
Events	273	450	567	>1000
Organizations	1,200	2,000	3,000	4,000
Countries	53	63	63	80
Visitors	50,000	100,000	*130.000*	200,000
Media reach	2 mln.	70 mln.	*>50 mln.*	100 mln.
Celebrations to open up rivers *Dam removal & Fishways*	30	15	15	70

WORLD FISH MIGRATION DAY



WORLD FISH MIGRATION DAY

A bi-annual event, we use World Fish Migration Day to bring hundreds of people onto the banks of freshwater systems throughout mahseer range countries. Parents are encouraged to work with their kids, so that all ages gain a new appreciation of the health of freshwater ecosystems and why they are important for quality of life. We use angling, nature-awareness, art and music to build an exciting and interesting day away from the city.

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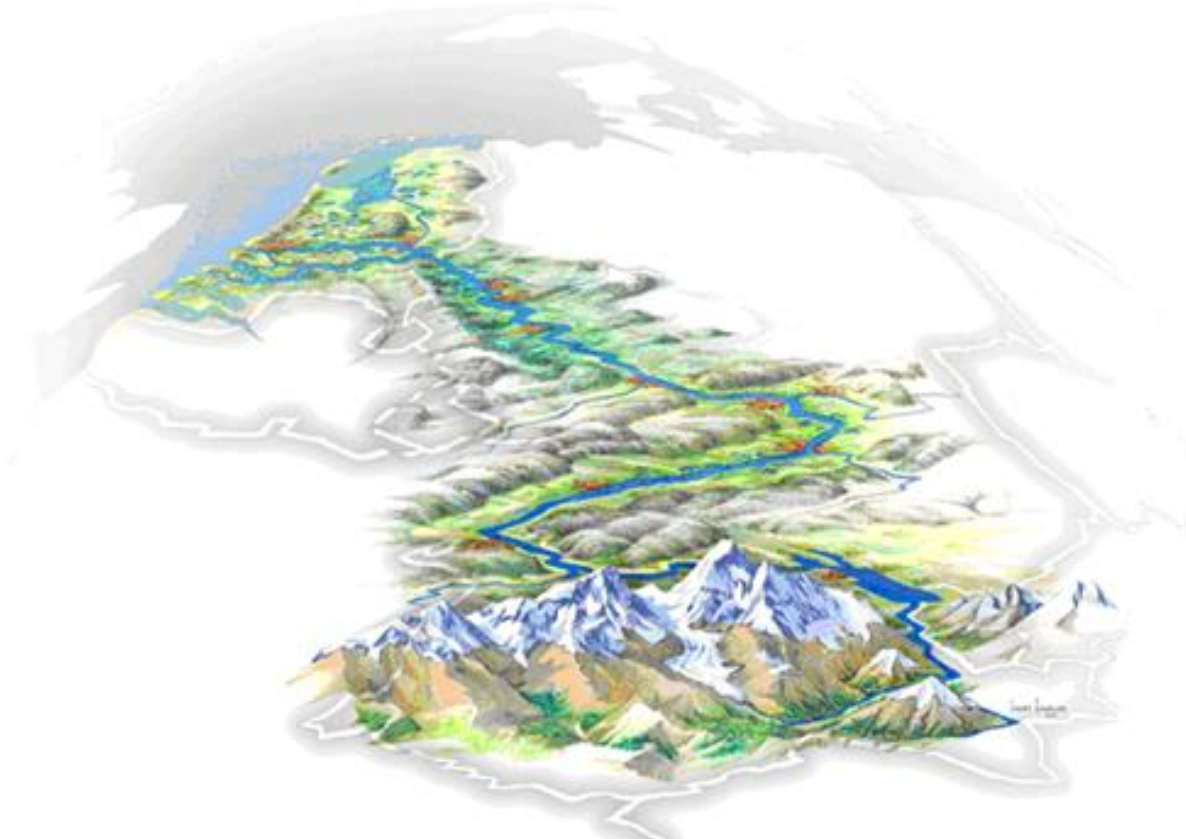
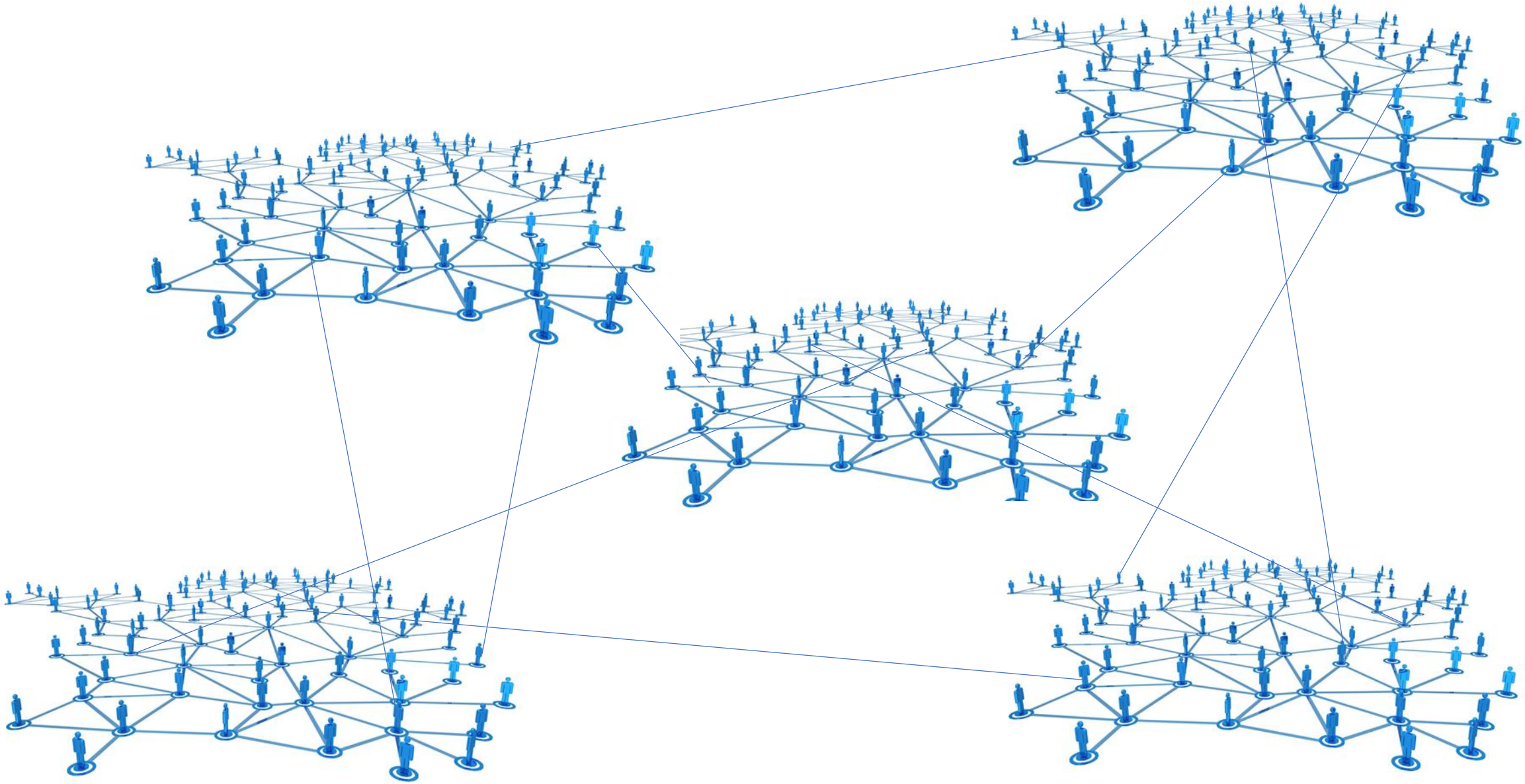
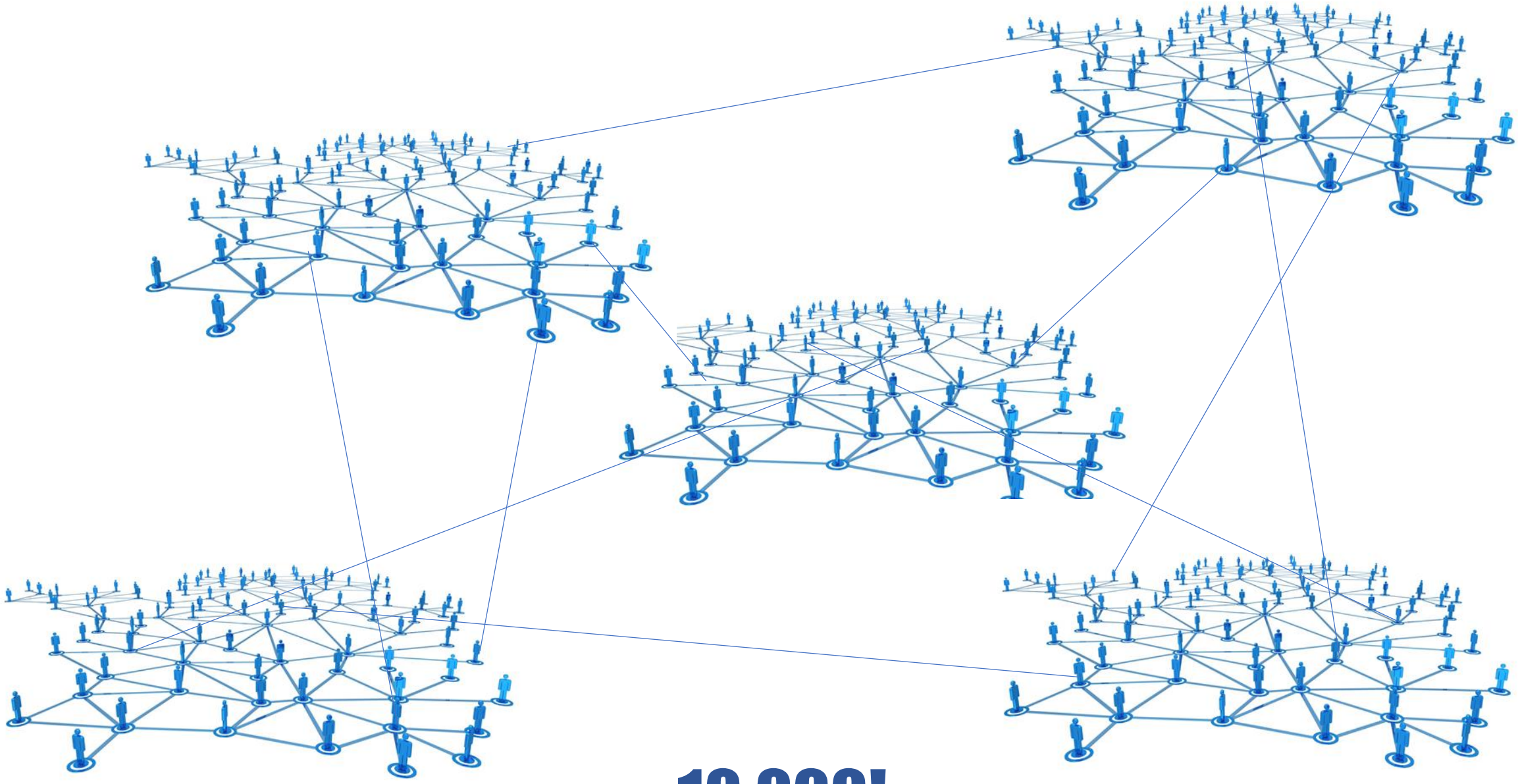
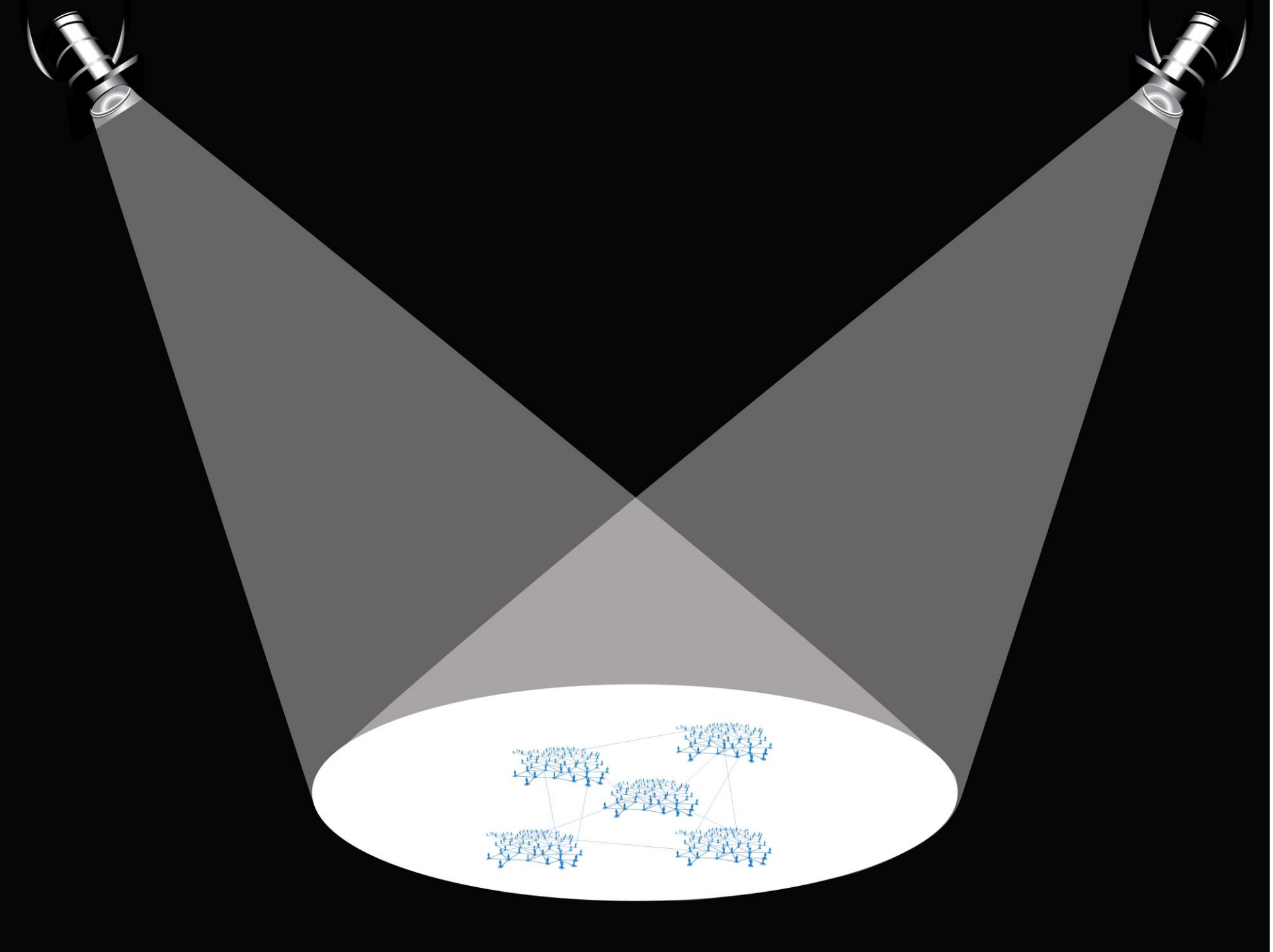
WORLD FISH MIGRATION
FOUNDATION







10.000!



THE MIGRATORY FISHES OF THE WORLD GRATEFULLY THANK THE FOLLOWING ORGANISATIONS FOR THEIR FINANCIAL AND IN-KIND CONTRIBUTIONS:

De Stichtse Rijnlanden
WWF
stowa
Brabantse Delta
MNHN
Rijnland
CDM Smith
afsluitdijk
waterschap amstel gooi en vecht
Ministry of Infrastructure and Water Management
Ministry of Agriculture, Nature and Food Quality
PRINCETON HYDRO
Wonders of the Mekong
USAID
Hollands Noorderkwartier
OAK
DAM REMOVAL EUROPE
South African National Parks
PROGRAMMA NAAR EEN RIJKE WADDENZEE
provinsje fryslân
provincie fryslân
rijksuniversiteit groningen
Sportvisserij Nederland
FishFlow Innovations
oregon RAD
Waterschap Hunze en Aa's
The Nature Conservancy
Protecting nature. Preserving life.
atkb
FFSG
Freshwater Fish Specialist Group
WORLD FISH MIGRATION FOUNDATION
FRESHABIT
STROOMGEBIED RIJN-WEST
RIVERWATCHER
AMBER

From Sea to Source 2.0 *Protection and restoration of fish migration in rivers worldwide*

From Sea to Source 2.0

Protection and restoration of fish migration in rivers worldwide

THE THREE BASIC STEPS

STEP 1

Objectives for fish migration in the whole river basin

Upstream:

- Identify target species;
- Identify and characterise the constraints to free migration;
- Identify and quantify the upstream habitats required for each species to achieve the required ecological status.

Downstream:

- Identify target species;
- Identify and characterise the constraints to free migration;
- Quantify the required survival rate of species migrating downstream.

Other ecological targets:

- Identify the minimum and maximum flows required by each life stage;
- Identify and quantify the suitable habitats within the river stretches that are connected;
- Estimate the connectivity improvements required to achieve an ecological status defined by ecological targets.

STEP 2

Prioritise waters within the river basin

Biologists, engineers, specialists on hydrology/water management and planning bodies should agree priority waters based on:

- Ecological need and technical potential;
- Opportunities to link with other projects;
- Production of a GIS-map and database providing, location of dams, stream connections, quantitative estimates of habitats and other potential obstacles or opportunities for fish passage protection or restoration.

STEP 3

Priorities of measures

For both upstream and downstream migration

- Agree on the criteria for planning (financial, ecological or other);
- Prioritize the candidate sites (high, medium or low);
- Assess resources, sequencing and costs.

fish passage designed for the target species will enable most or all of the resident and migratory fish to pass, and if necessary exclude unwanted fish, such as exotic invasive species.

Every fish species has its own characteristic swimming capacity and typical behaviour. The swimming capacity depends on the fish's morphology, condition and length, and the water temperature during their migration. Behaviour of fish is variable between species, and will also vary on a seasonal and daily basis in response to a wide range of factors. Behavioural issues of relevance include migratory habits of the fish as individuals or in schools in the river channel during migration, their residence time at barriers, the rate of onset of maturation and responses to hydraulic parameters and light (among other responses).

Choice of solution

Passage can almost always be secured by the removal of the barrier! This should always be the preferred option and should be thoroughly considered first. Many impounding structures are relict industrial structures remaining from uses that have long-since ended. Since they were constructed many years ago substantial riverside development, such as bridges, embankments and houses may have been built that rely on the upstream water levels supported by weirs and dams. In such cases removal may therefore not be possible without evaluating the potential risks, but the option should always be fully explored in the context of the river's health, long-term economics, and societal risk of barrier failure as well as societal dependence or preference for the structure.

When removal is not possible, reducing the barrier height or construction of semi-natural solutions such as nature-like bypasses or rock ramps or the use of pre-barrages should be considered next.

The installation of simple passage devices, such as flow deflectors that help larger fish such as salmon to migrate upstream should also be considered, however many such structures do not provide passage opportunity for smaller species.

Technical solutions for fish passage are variously referred to as fishways, fish passes, fish passages, bypasses, fish lifts and fish ladders. The new EU-standard on fish pass evaluations uses the term fish passage solutions (FPS), which includes both up- and downstream passage and all kinds of fish passes. The principle is always to use migratory cues to attract migratory fish to a specified point downstream of the obstruction and to allow them to pass upstream by providing a route in which water velocity and turbulence is both attractive and within the fishes swimming abilities. Most fish passes that fail, do so because they are not sufficiently attractive to fish or are not located where fish naturally assemble. The range of hydraulic preferences between species is a major challenge. This makes designing a single passage structure to function adequately for the whole fish assemblage, difficult or impossible.

In the past, most of the focus for fish passage design has been on securing passage for principal species such as salmon, eel and shad. Fortunately, this is changing in more and more countries where improving the overall ecological status of the river is the goal, and this requires free longitudinal *and* lateral migrations for all species of fish. The selection of a passage solution should therefore address the whole migratory fauna (remembering there are anadromous shrimp, mammals such as freshwater dolphins, manatees, etc.) wherever this is technically feasible. Where it is not, an explicit management statement should be made so that river basin goals may be moderated and resources allocated to river networks that have more significant passage needs.

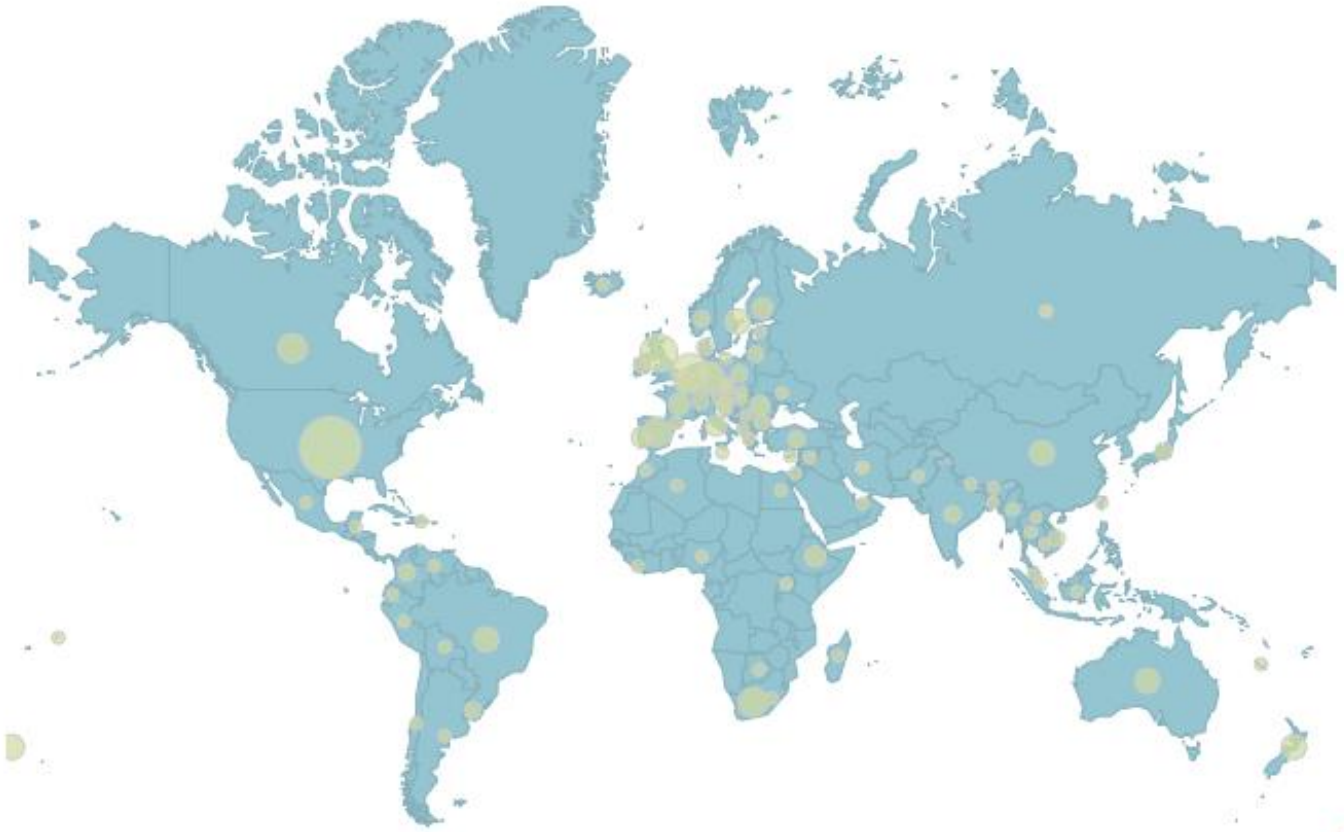
Taking all of these factors into account, together with other locally specific constraints and conditions (e.g. the type of water body, target species, and the management of the structure etc.) and the financial scope for action, the optimal passage solution for a migration barrier can be identified.

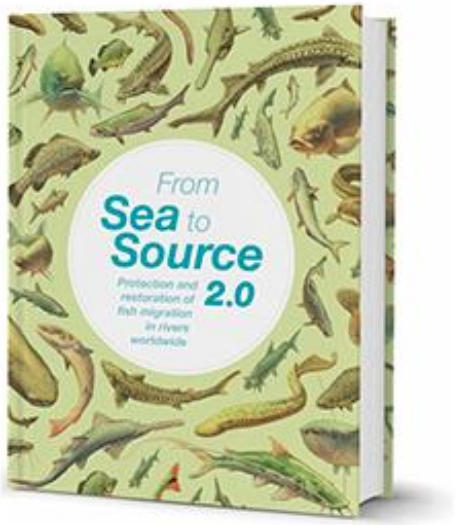
From Sea to Source 2.0

Protection and restoration of fish migration in rivers worldwide

DOWNLOAD BOOK

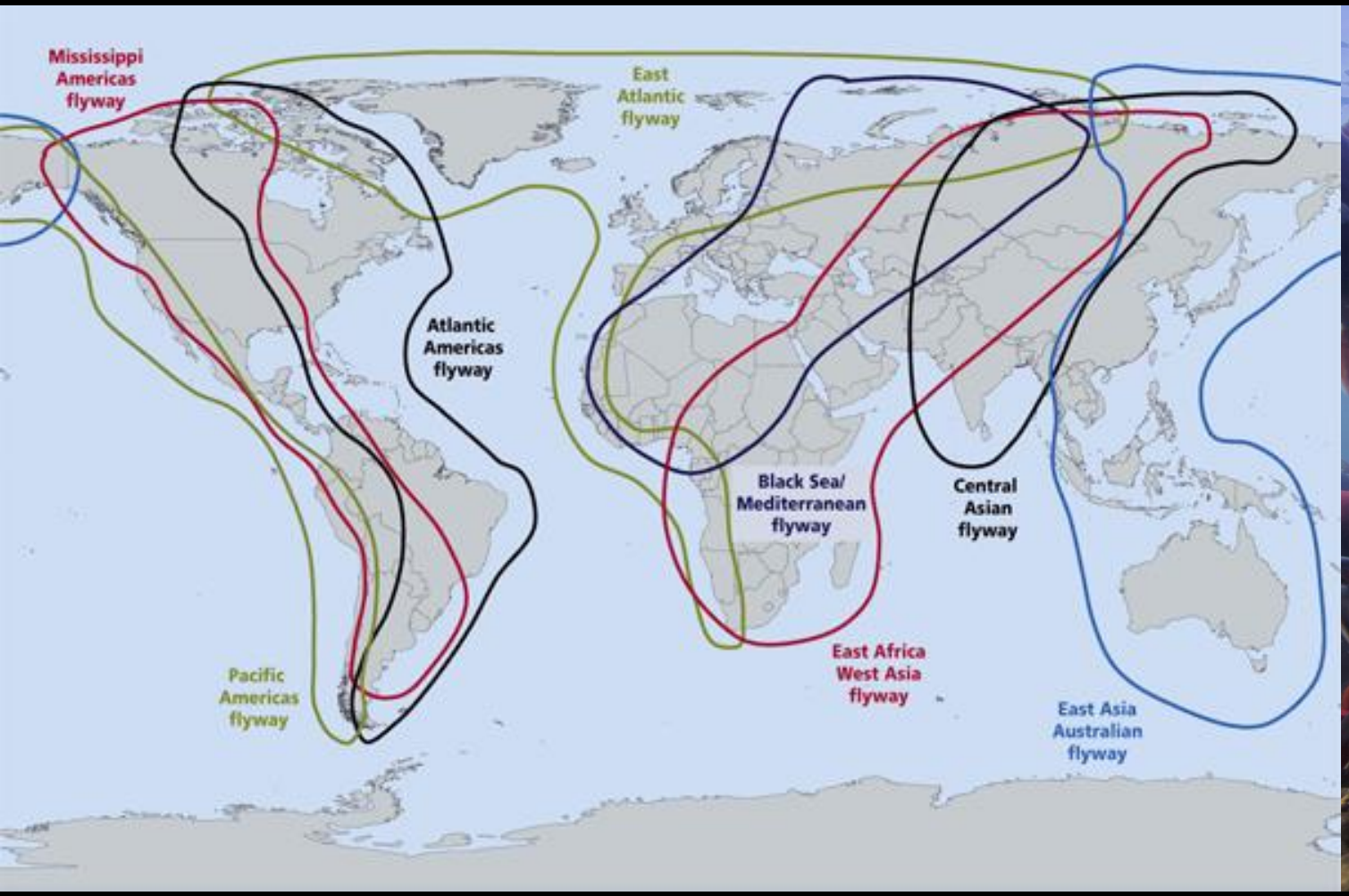
DOWNLOADS WORLDWIDE

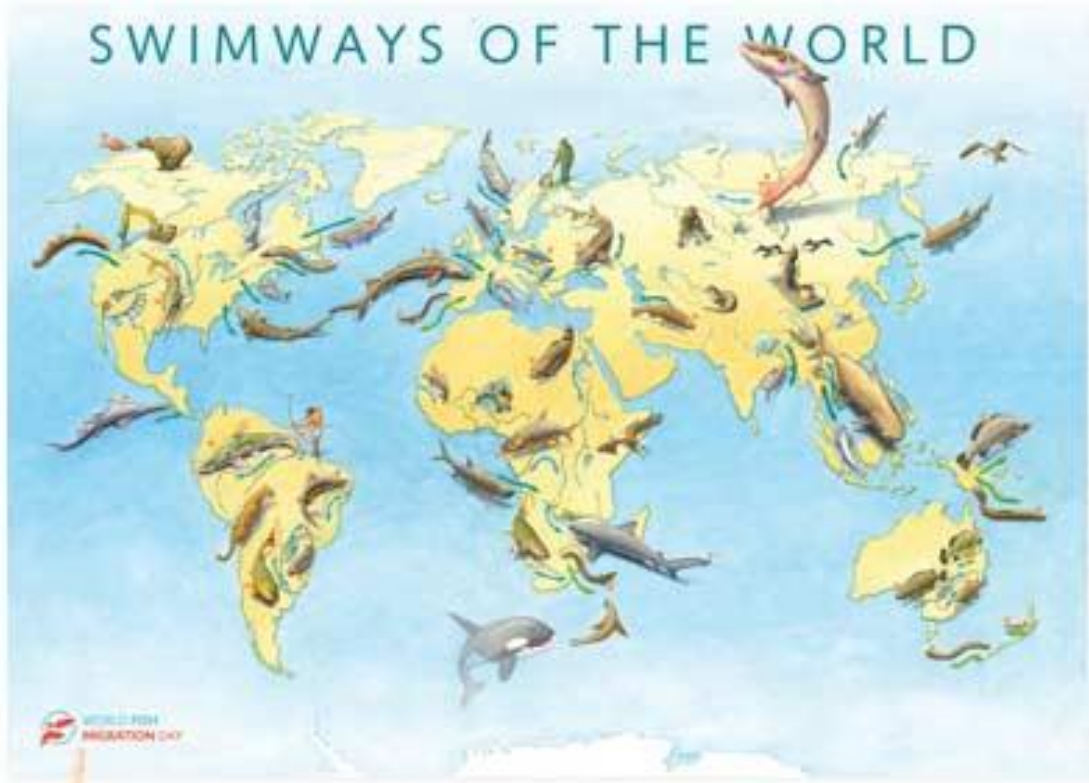




The electronic version of the book can be downloaded for free as a low resolution PDF file.

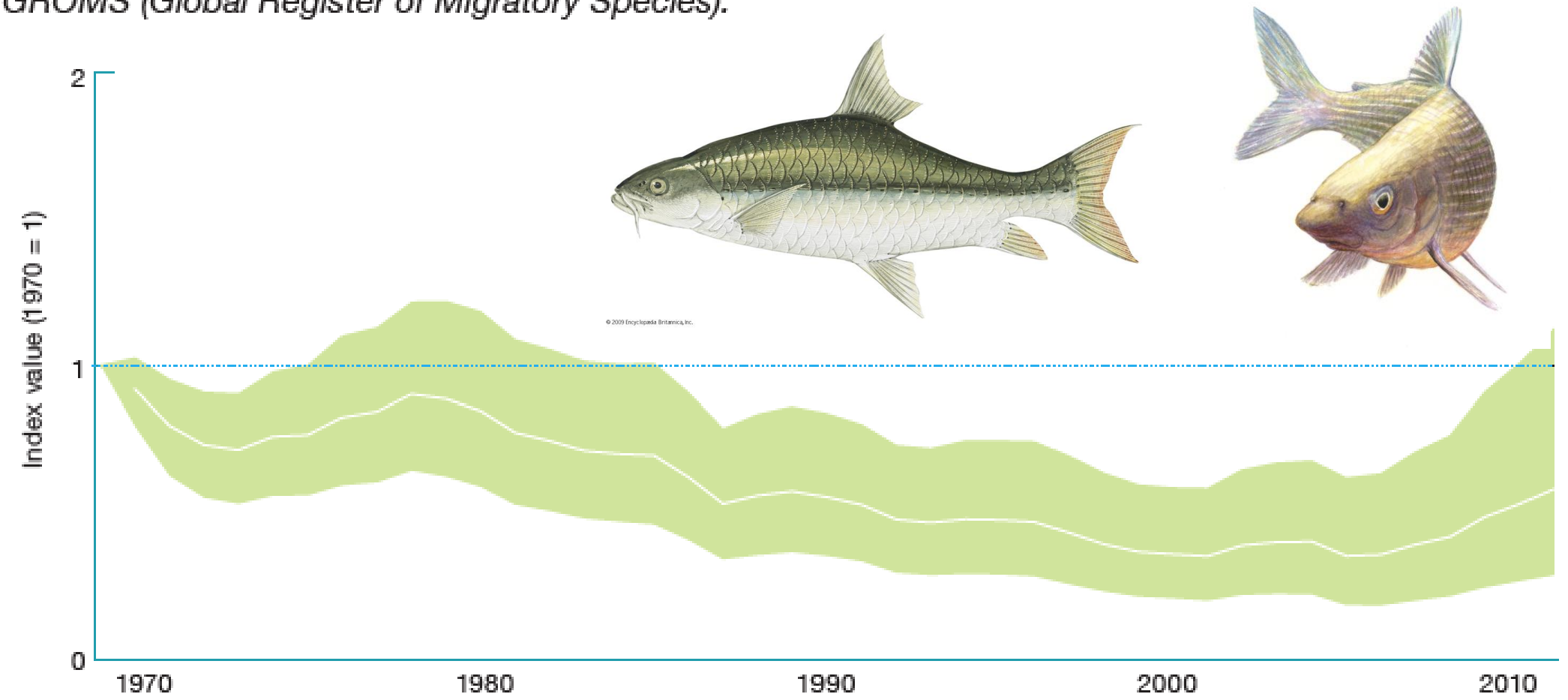
Total downloads: 1709 books


Mississippi Americas flyway
East Atlantic flyway
Atlantic Americas flyway
Black Sea/ Mediterranean flyway
Central Asian flyway
East Africa West Asia flyway
Pacific Americas flyway
East Asia Australian flyway


SWIMWAYS OF THE WORLD

Living Planet Index

Living Planet Index for migratory fish from 1970 to 2012 (WWF, 2016). The LPI from the 2016 report comprised catadromous, anadromous, potamodromous and amphidromous species as categorised by GROMS (Global Register of Migratory Species).



Global situation

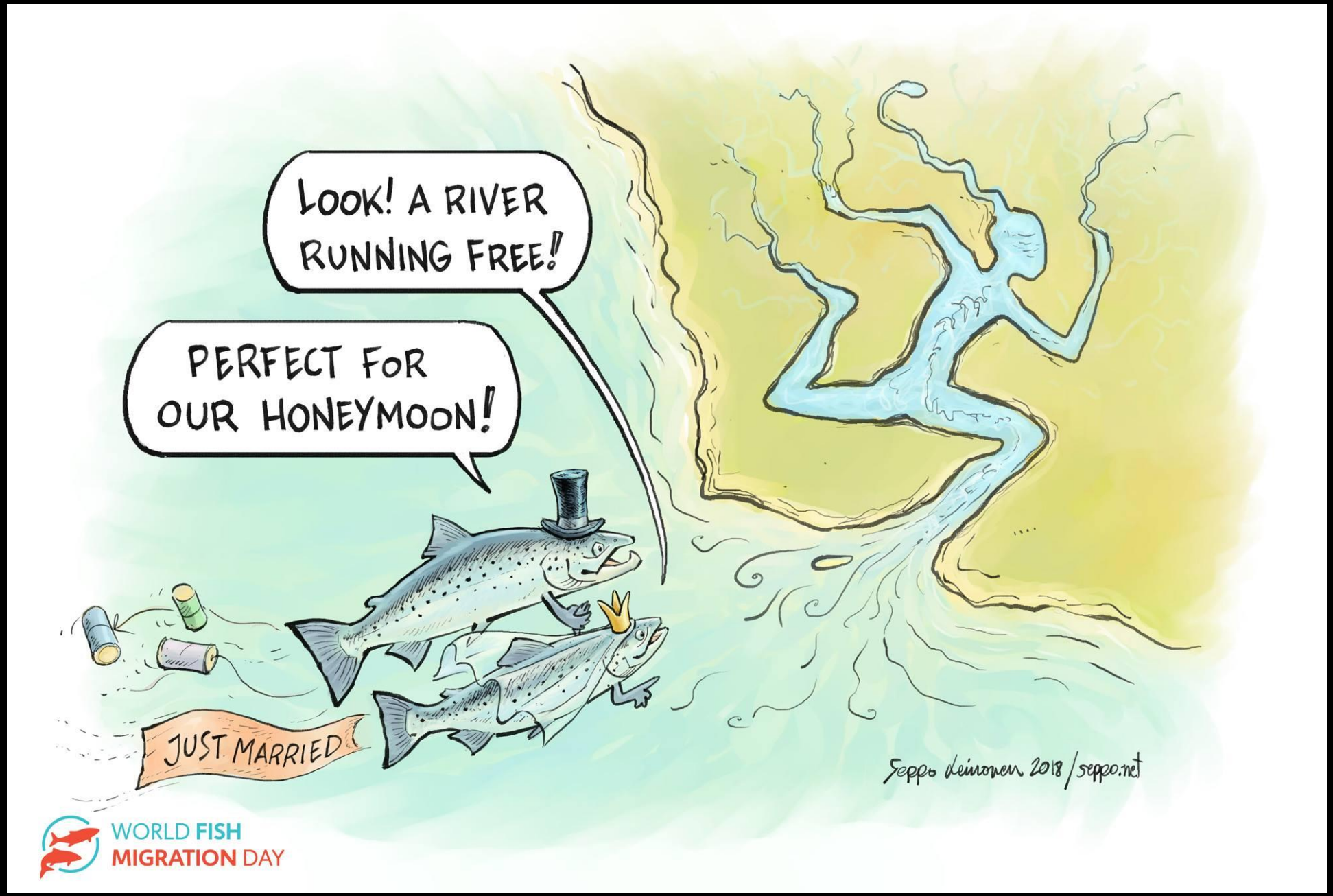
Dam Removals

Boost of new dams

Global message (10,000 people)

Global message (10,000 people)

- We need to act now! With climate change expectations many more new infrastructure will be built


LOOK! A RIVER RUNNING FREE!
PERFECT FOR OUR HONEYMOON!
JUST MARRIED
Seppo Leinonen 2018 / seppo.net
WORLD FISH MIGRATION DAY

Global message (10,000 people)

- We need to act now! With climate change expectations many more new infrastructure will be built
- Cherish free flowing rivers! Growing confidence fish passages do not do the job

Global message (10,000 people)

- We need to act now! With climate change expectations many more new infrastructure will be built
- Cherish free flowing rivers! Growing confidence fish passages do not do the job
- Let’s connect! Making the world a better place with Happy Fish and Happy People

Next World Fish Migration Day: May 16th of 2020

Connecting fish, rivers and people

World Fish Migration Day is a one day global celebration to create awareness on the importance of free flowing rivers and migratory fish. Everyone is welcome to join in on this celebration and organize their own event! This time, we are celebrating our love for fishes and rivers...love flows! Can we count on you?