



# Dam Removal Europe Freeing European rivers



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European Rivers Symposium 26<sup>th</sup> May 2021

Session 1 - How can the EU Biodiversity Strategy help achieve the WFD objectives, and vice-versa?

### THE TEAM





Share Inclusive Inspire Connect Support



<u>\*</u>

410

WORLD FISH MIGRATION

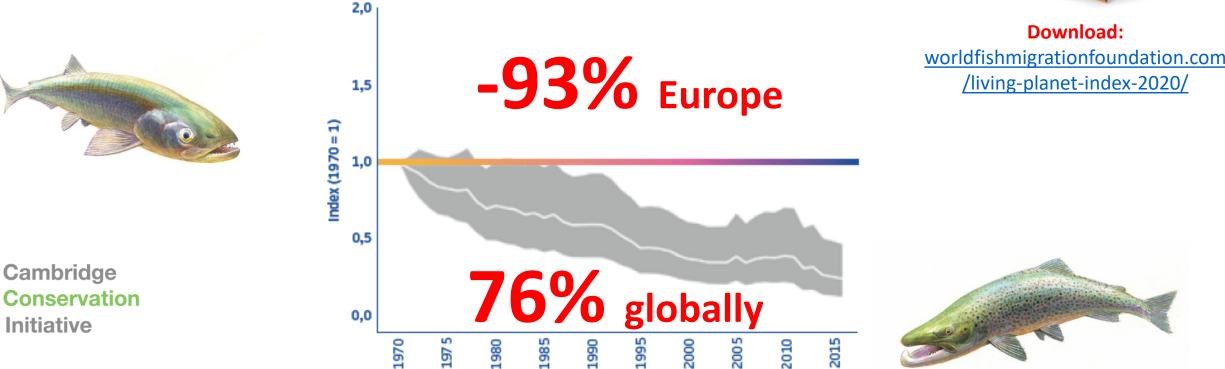
# SAVE MIGRATORY FISH IN RIVERS

© Jeremy Shelton

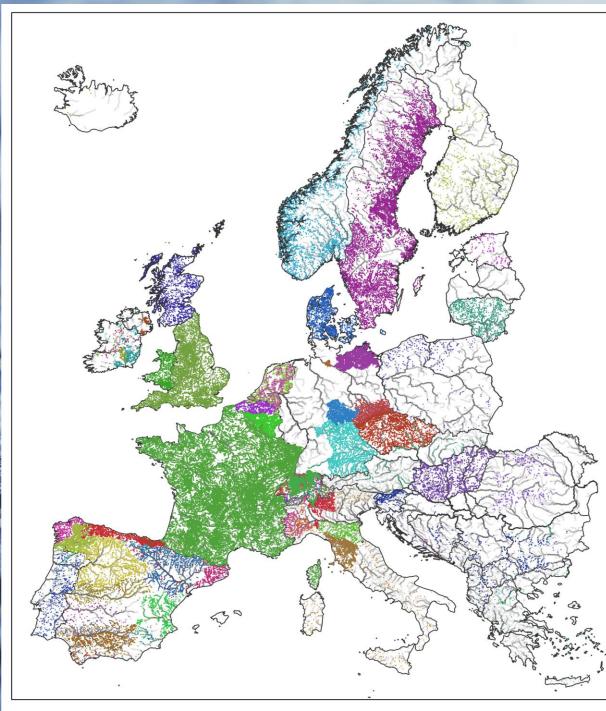


# LIVING PLANET INDEX **FRESHWATER MIGRATORY FISH**





Initiative





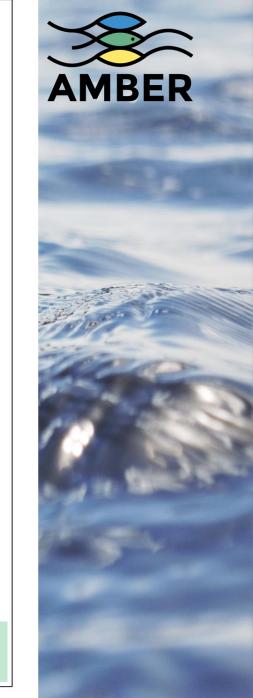


### 630,000 collected barriers

## >1.2 MILLION BARRIERS

## >156,000 OBSOLETE





# 7,200 BARRIERS COLLECTED





is project has received funding on the European Union's Horizon 20 research and innovation ogramme under grant agreement 5, 689682.

# >1,600 USERS

APP STORE: Barrier Tracker

https://portal.amber.internationa

Track barriers with the barrier tracker and help reconnect European rivers

AMBER Citizen Science project



2 miles

REL

UR RIVERWI

FIRM

RENOW

# **MOVEMENT TO SUPPORT**

PRACTITIONERS





# Crowdfunding campaign 2018-2020

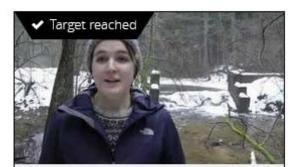
- 1899 funders
- 15 Dams crowdfunded
- 88,869€ from **18 countries**



Lostunets-dam in Ukraine

€ 16.045 raised (100%)





Brazuole-dam in Lithuania

€ 15.195 raised (101%)





Removal Danube Delta Dams, Ukraine

€ 14.086 raised (100%)

View >



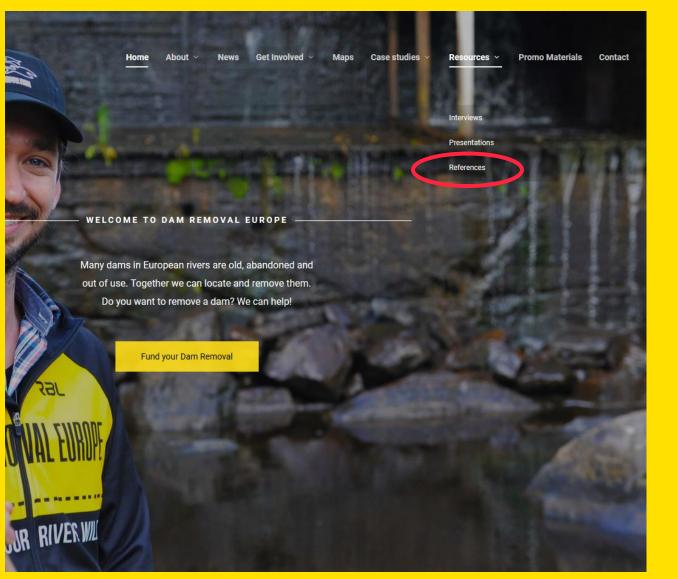
Removal Crosthwaite culvert, Lake District UK

€ 10.004 raised (100%)





# www.damremoval.eu



### **Dam Removal Policy Report**





# https://damremoval.eu/



Source: Dam Removal Europe Map

## \* Collapsed + man removed

FRANCE	>2.400*
SWEDEN	>1.600*
FINLAND	>500
SPAIN	>300
UK	>200
NETHERLANDS	>50
ESTONIA	>5
ITALY	3
SWITZERLAND	1
GERMANY	hundreds (no inventories)
DENMARK	hundreds (no inventories)



## Scotland: Water Environment Fund (WEF)

WEF is an annual fund of around £2-3million coming from the Scottish government and administrated by the Scottish Environment Protection Agency (SEPA)

## Route to successful

Action is now under way to open up the redundant man-made barriers which prevent salmon across Scotland from using their ancient migration routes, says **Francis Hayes** 

CY cotland has much to boast have been identified and prioritiser about when it comes to for action by 2021 Investigations the condition of our riv have already started into what soluers. Many are icons of the landscap tions may be possible at each structhe Tweed, the Dee, the Spey and ture, to improve fish migration past the Tay-all with internat each obstruction and into unstream owned fisheries The salmon is famous for its abil ity to swim against these power ul currents in its hunt for long remembered nursery gravels. The

annual sight of their silver bodies ing flung over foaming cascade ghts anglers and non-anglers ke. These streamlined athletes are not alone in this incredible igration. Sea trout, eel and sea prey all undergo similar ody s, between river and ocean However, the industrial use of ou rivers which has provided numer ments for fish. ous benefits to society has some times left redundant and unmain tained weirs and dams in place without suitable fishways, creating barriers to these ancient migration routes. In many cases fish contin-

routes. In many cases fish continue to arrive, only to butt up against unforgiving stonework. Thy sholin to Levis Action is now due to tackle these problems. SEPA has calculated that needs action of the second River Basin Manager ment Plans, SEPA and partners in other public authorities, charaties and trusts, now have the ambition to beal some of this harm. The resment Plans, SEPA and partners in other public authorities, charaties and trusts, now have the ambition

toration of access for native fish

oulations into obstructed rivers

habitats. Fish ladders, by-pass channel or even full weir removal will be werconsidered. Final option choice will be informed by taking into account is. The locally important issues such as hisodies cades arrhy bridges and riverbanks. glers Additionally the Water Environteers ment Lund, administered by SEPA be on behalf of the Scottish Governordys- for those responsible for eligible in: unused dams and weirs, to help e of our achieve the necessary improvement more for fully.

The environmental strategy may be national in scale but groundworks take place in local areas and rely on local support. For example, alongside our partners in vari ous fishery trusts and boards, we have already removed barriers from Twynholm to Lewis, Dunecht to Pluscarden. Removing artificial bottlenecks can bring many kilometres of benefit to whole river networks. A single project can improve the ecology and quality of multiple upstream rivers, and provide permanent ber efits for generations to come. SEPA recognises that we only have

one planet. Mending damaged rivers and the services they provide – food production, flood defence, recreation – is an essential tactic for sus-





Source: The Scotsman, 28<sup>th</sup> March 2017 12



## Tarff Creamer Weir, Scotland, UK

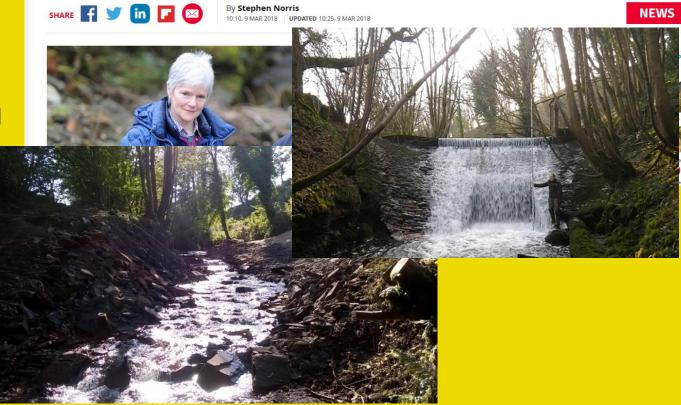
- Built in 1920
- Almost 5m high
- Removed in September 2016 thanks to WEF fund
- Opened up 10km of river
- Monitoring after removal: salm sea trout, eel and lamprey are back

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#### R News > Local News > Galloway News

### Salmon return to Stewartry burn after an absence of almost a century away

The removal of a barrier in a burn at the former Tarff Creamer at Twynholm has allowed the fish to return

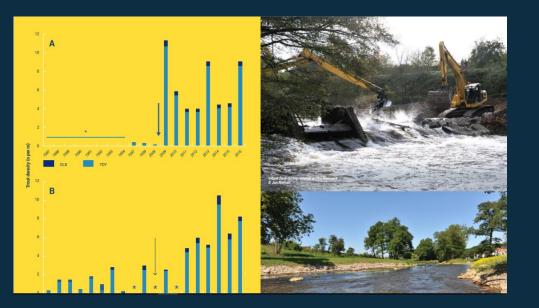


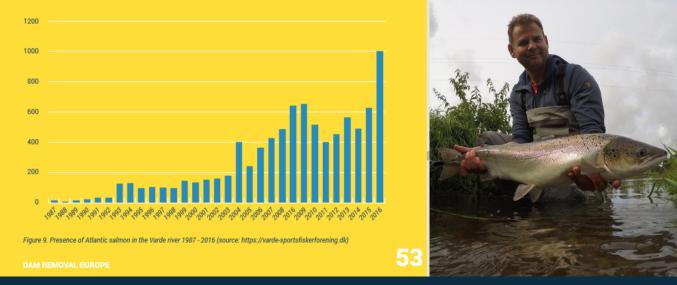


# Denmark

## Vilholt Dam, Gudenå River

## **Removal of dams in Varde River**





https://damremoval.eu/wp-content/uploads/2019/03/DRE-policy-Report-2018-digitaal-010319.pdf

Dam Removal Europe resources: https://damremoval.eu/references/



# France Vezins Dam (Selune River)





Source: https://www.ern.org/en/selune-libre/





## Vezins Dam, Selune River

VIDEO FROM VEZINS DAM REMOVAL



Photo: Roberto Epple - European Rivers Network



### Robledo de Chavela Dam, Madrid Region

<u> https://damremoval.eu/portfolio/robledo-de-chavela/</u>





# USA

# Edwards Dam 1837 (Kennebec River, Maine)

### • **Before construction:**

- Salmon catch per season: 500
- Sturgeon catch per season: 320,000 pounds
- Shad industry
- After construction:
  - Salmon catch per season (1850): 5
  - Sturgeon catch per season (1880): 12,000 pounds
  - Shad industry: closed (1867)





## Free river after 160 years

- Alewives returning to spawn jumped from 78,000 in 1999 to 5.5 million in 2019
- Benton Town locals, harvested 350,000 to 500,000 alewives
- The town typically nets about \$20,000 during alewife harvesting
- Alewives return has benefited the rest of the state's fish population, especially coastal cod and haddock.

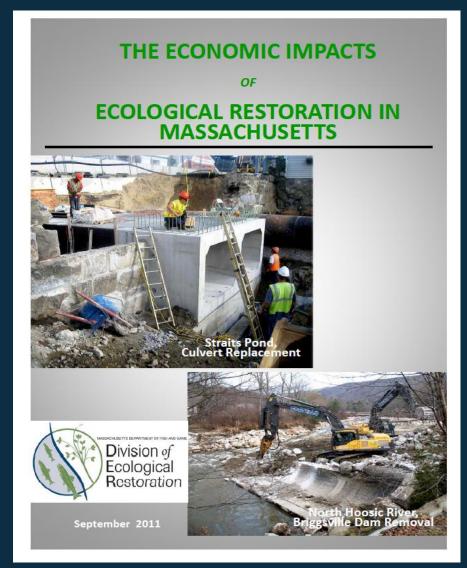
### **1999 - Edwards Dam removal 2007 - Fort Halifax Dam removal**





New concept "Restoration economy"

# Restoration projects generate equal to or greater economic benefits than other types of projects such as road and bridge construction".







# Thank you very much!!

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