

Dam Removal Europe



Pao Fernández Garrido

World Fish Migration Foundation

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Dam Removal Europe

We want to make dam removal a river management option by starting to remove old and obsolete dams.



Barrier effects

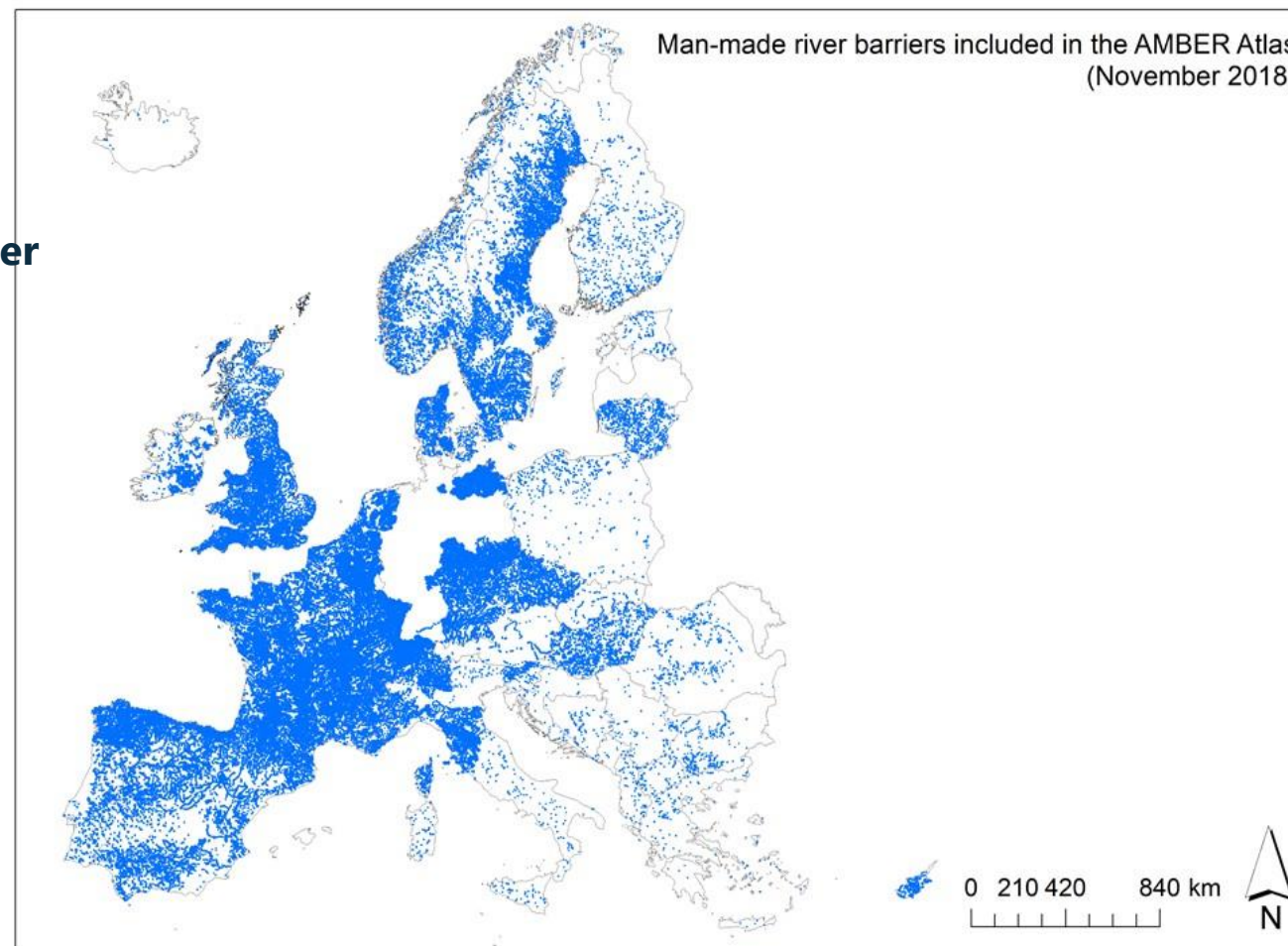
1. Fragmentation
2. Habitat loss
3. Sediment and nutrients
4. Water quality



A barrier almost every kilometer

First indications AMBER project (Horizon2020) after collecting river barrier inventories through all Europe and after 1,000 km of rivers surveyed

- 1. Approx. 1,000,000 barriers**
- 2. Approx. 1 barrier every kilometer**



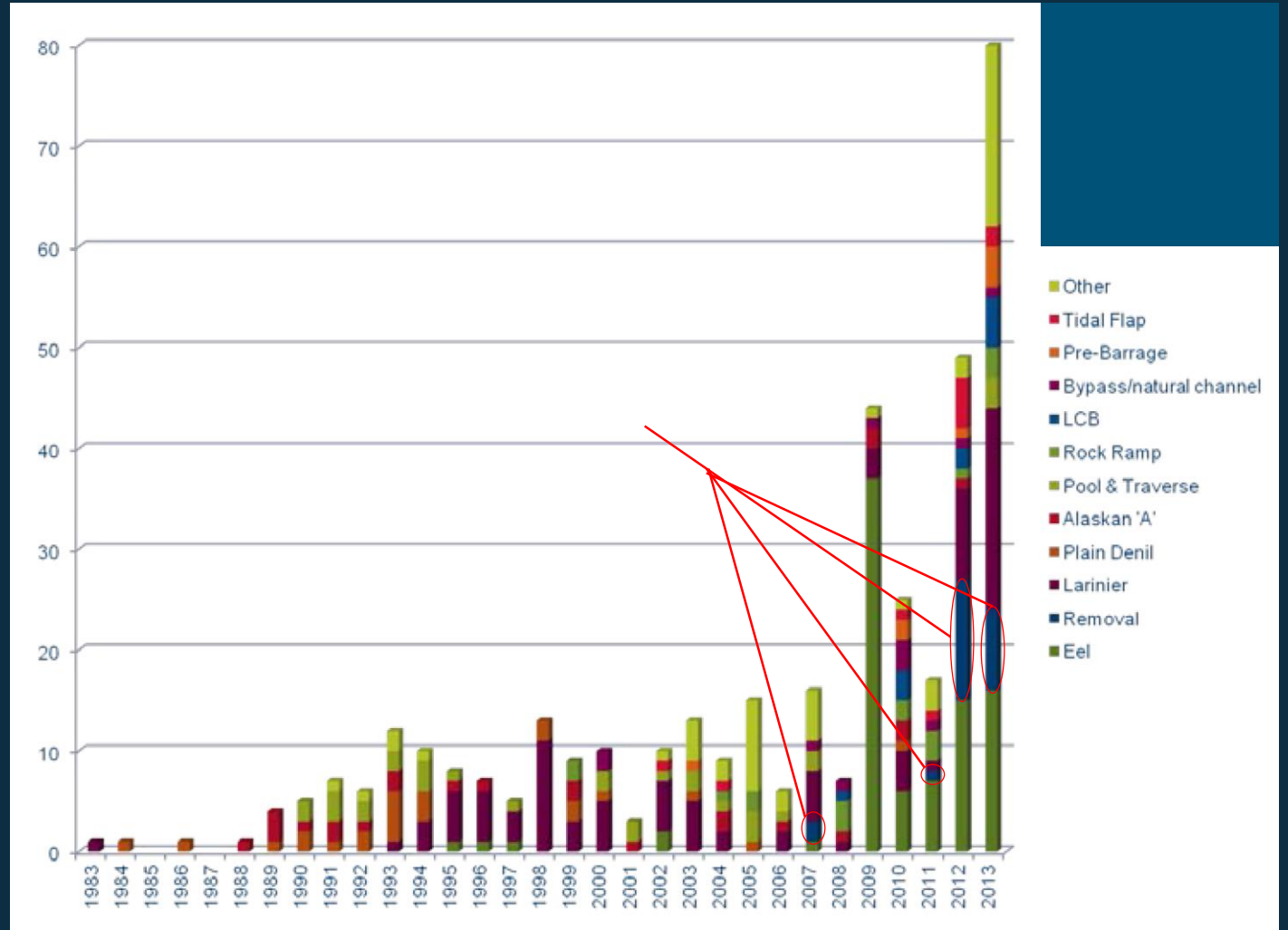
Obsolete dams

1. Expert estimation based on France, Spain, Poland and UK: 30,000 mainly small dams obsolete
2. Number of prioritization tools for dam removals / river restoration grows (f.e. AMBER)



Dam Removals in Europe

- **FRANCE:** 2,300
- **SWEDEN:** 1,600
- **FINLAND** 450
- **SPAIN:** 250
- **UK:** 150
- **NETHERLANDS** 50
- **ESTONIA** 10
- **BELGIUM:** tbd
- **GERMANY:** tbd
- **SWITZERLAND:** tbd
- **DENMARK:** tbd



Why Dam Removals

- Healthy rivers & fish populations
- Hazards for people
- Economical



Kentchurch Weir, Wales, UK

1. Dam to power a watermill in the Monnow River, Zuid Oost Wales
2. Not used in the last 40 years
3. No salmon in the river upstream
4. Cracks in the dam wall
5. Immediately after removal salmon in the river



Robledo de Chavela, Spain

1. Close to Madrid, for water supply to Robledo de Chavela
2. In 2004 renewal of licence
3. Repair more expensive than removal
4. Water quality greatly improved as well as fish stocks



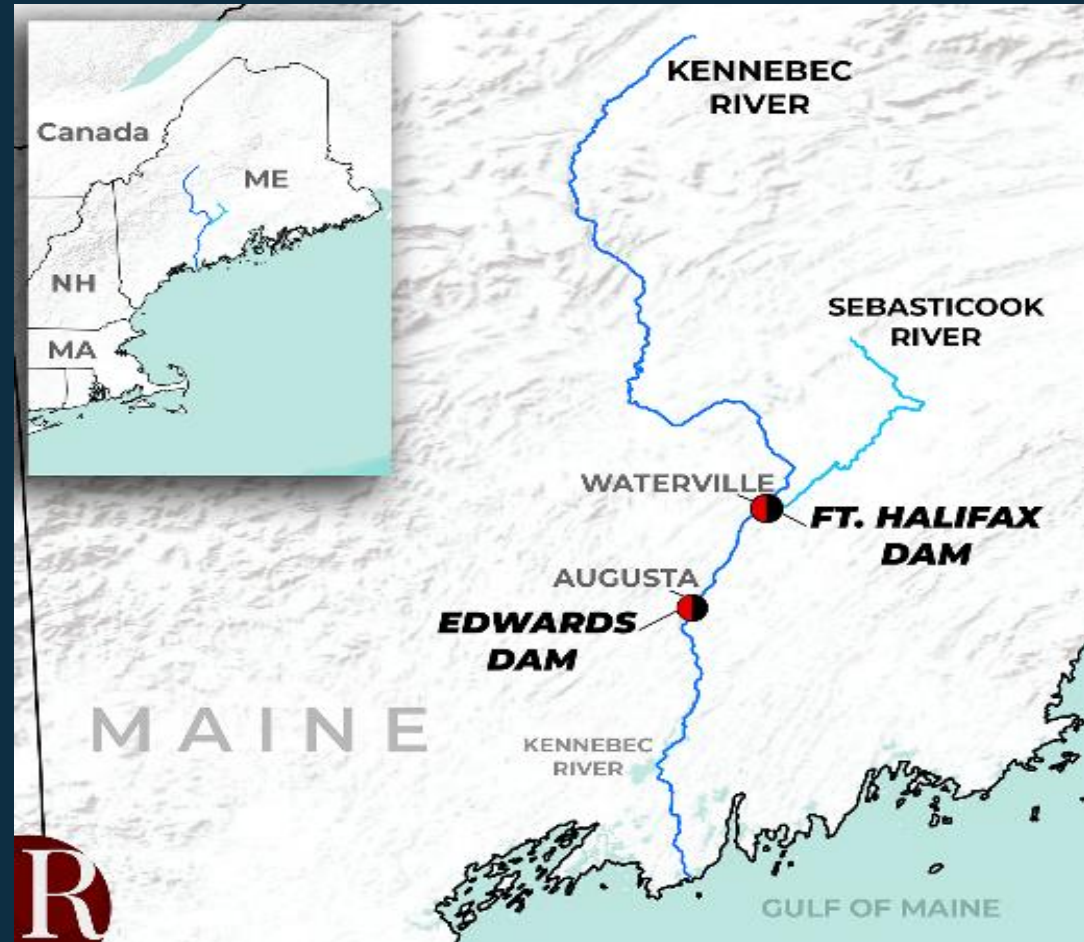
Edwards Dam 1837 (Kennebec River, Maine, USA)

- **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)



Edwards Dam (Kennebec River) and Fort Halifax Dam (Sebasticook River) removals

- First alewife run in approx. 160 years, a run that may be the largest in the United States
- Benton Town locals, under the supervision of a newly appointed alewife warden, **harvested 350,000 to 500,000 alewives for an income of at least \$20,000** into town coffers
- After both dam removals, the number of alewives returning to spawn jumped **from 78,000 in 1999 to 5.5 million** last year



After Edwards Dam and Fort Halifax Dam removals

- President of Alewife Harvesters of Maine: “Fishermen are lining the banks to catch these Atlantic **cod and haddock**, which now **can be found bountifully** in grocery stores and fish markets around the state”



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The
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Trust



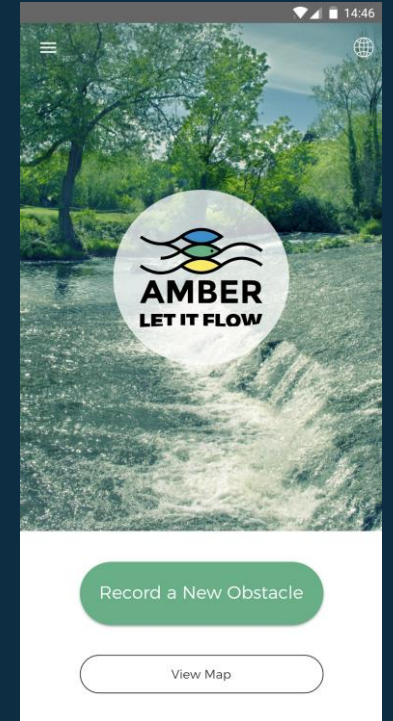
Policy Report: Four strategies to catalyze the removal of obsolete dams across Europe

- Mapping of all small and large dams in Europe and creation of a priority list for dam removals
- Dam Removal is integrated into River Basin Management Plans
- Involvement of local communities in dam removals
- Alternatives to building new dams should be seriously considered and prioritized.



Policy report: what you can do...

- Check Barrier Tracker and find out about data quality of identified barriers
- Start priority list for dam removals
- Include dam removal in new River Basin Management Plans
- Share knowledge about involving local communities



We believe this is a great opportunity!

- **Authorities and other organizations (like NGO's) can apply for funding for Dam Removals. For example:**
 - ✓ **European Maritime & Fisheries Fund (EMFF) : "EMFF may support the management, restoration and monitoring [...], and the rehabilitation of inland waters [...], including spawning grounds and migration routes for migratory species**

We believe this is a great opportunity!



- ✓ **Dam Removal Crowdfunding WWF NL Campaign:**

<https://crowdfunding.wnf.nl/?locale=en>



Thank you for your attention!

ABSENT 50 YEARS, SPAWNING TOMCOD RETURN TO
A RESTORED BROOK IN MAINE AFTER DAM REMOVAL

