[1] L. Quaglietta, [2] R. Rocha

Affiliations:

[1] ANP|WWF, CIBIO

[2] ANP|WWF, WFMF

Galaxes weir removal: an ORP-funded project kickstarting the civic movement for the restoration of river connectivity in Portugal

How it started…

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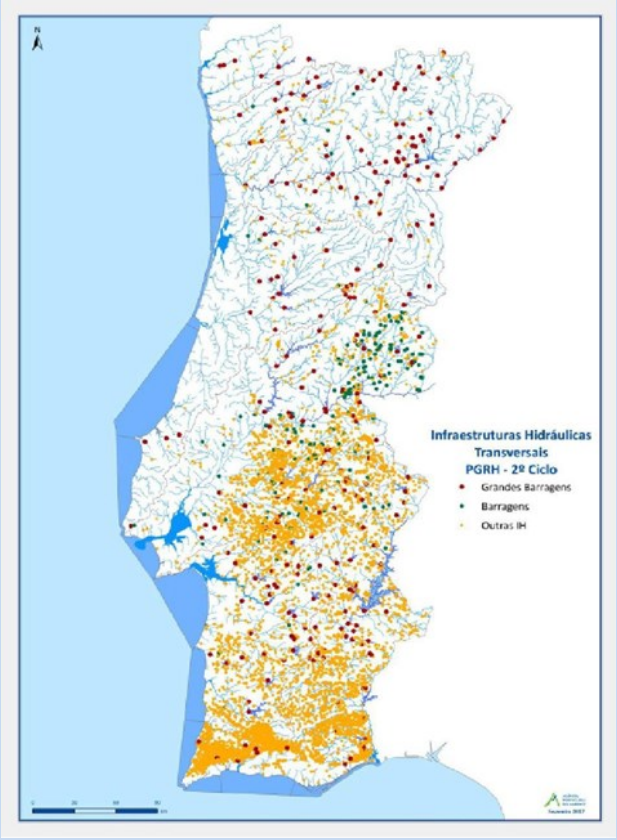
PORTUGAL

- > **8000** Hydraulic infrastructures
- **~260** large dams - different uses (e.g., irrigation, public supply & energy production)

BARRIERS IN PORTUGAL

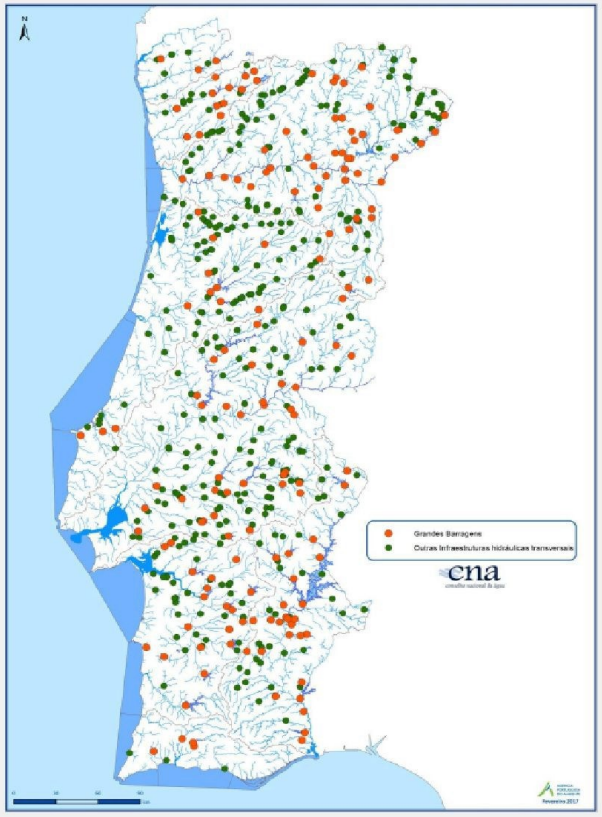
TF *National Strategy for Obsolete Hydraulic infrastructures removal* (2017)

7687



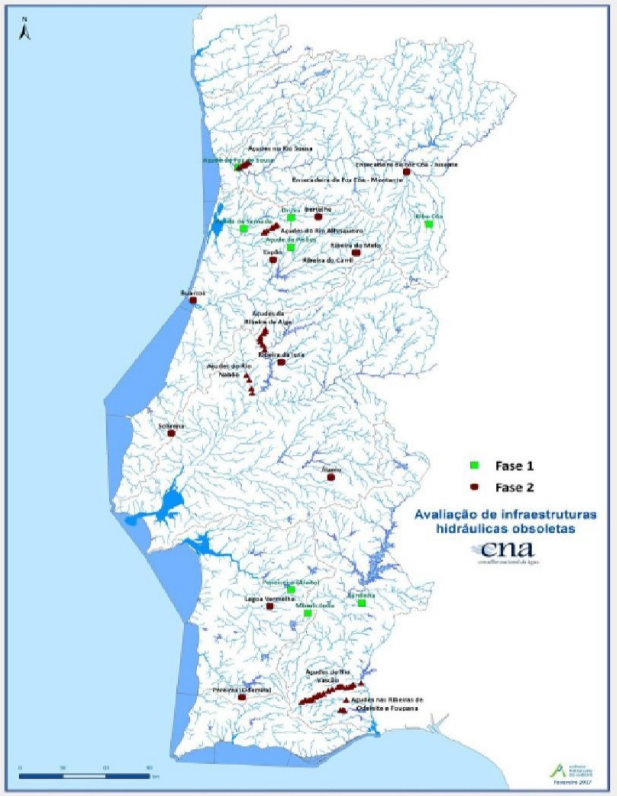
barriers identified by the HRMP 2016-2021

530



selected barriers based on WFD (basins >10km²)

~60

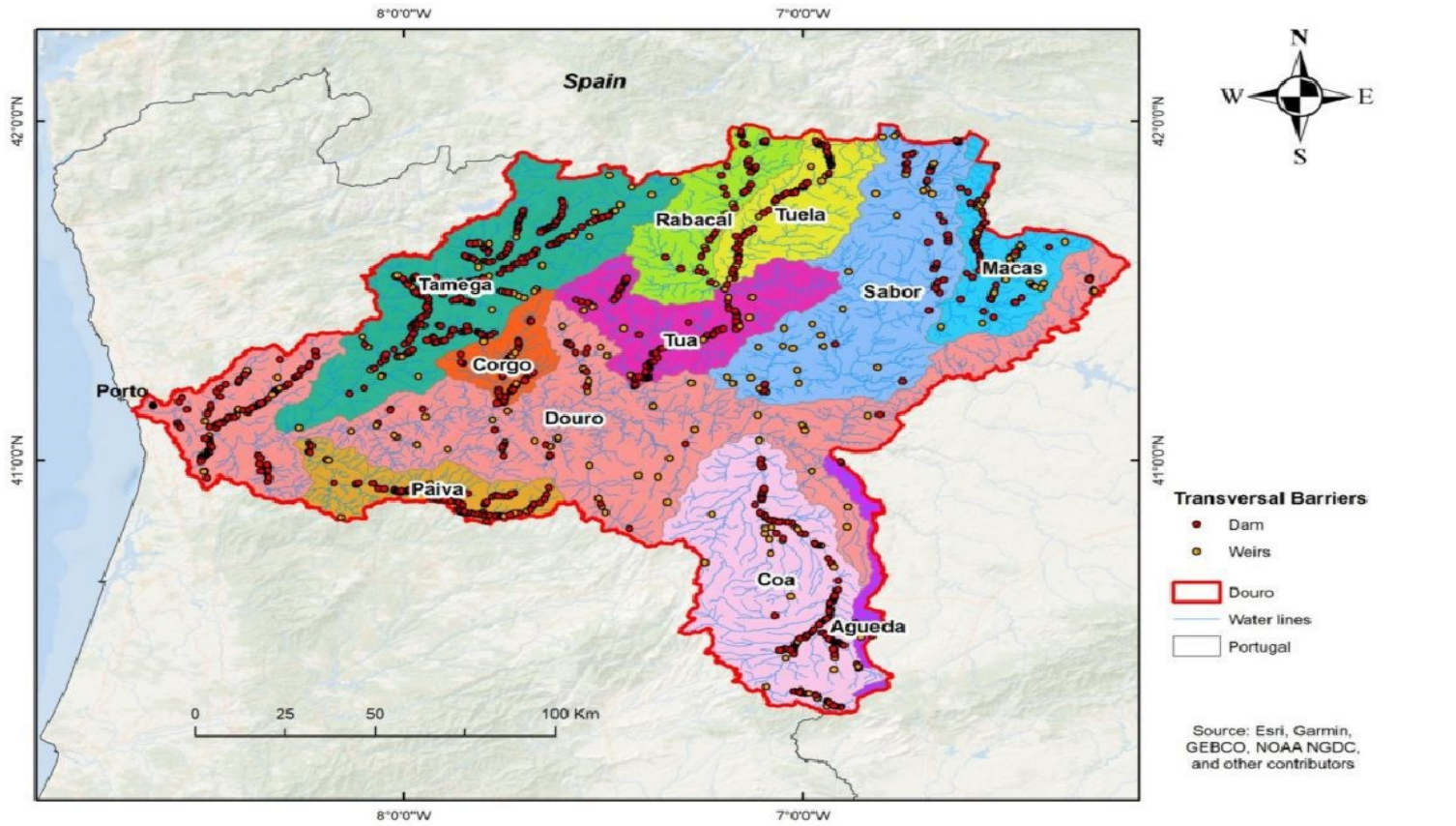


barriers prioritized for removal; wanted to remove 8.

2 removed!

New dam!! (Pisão)

BARRIERS in the DOURO BASIN



Cortes *et al.* (2019)

- **1201** (TF identified 100)
- > 25 % (**255**) obsolete!

STATE OF THE ART

2021

DAM REMOVAL EUROPE

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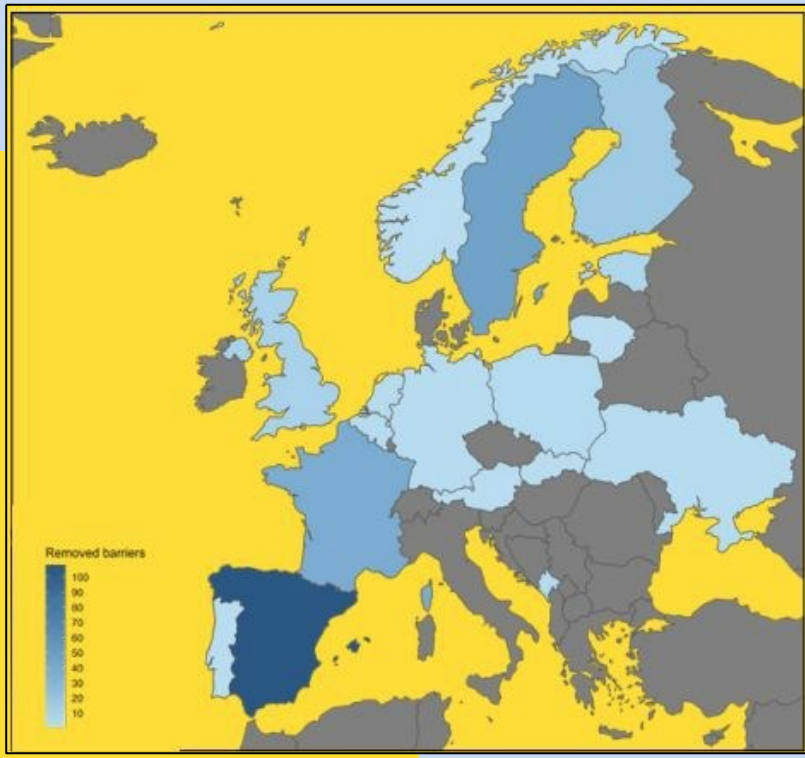
Spain: 108!!!

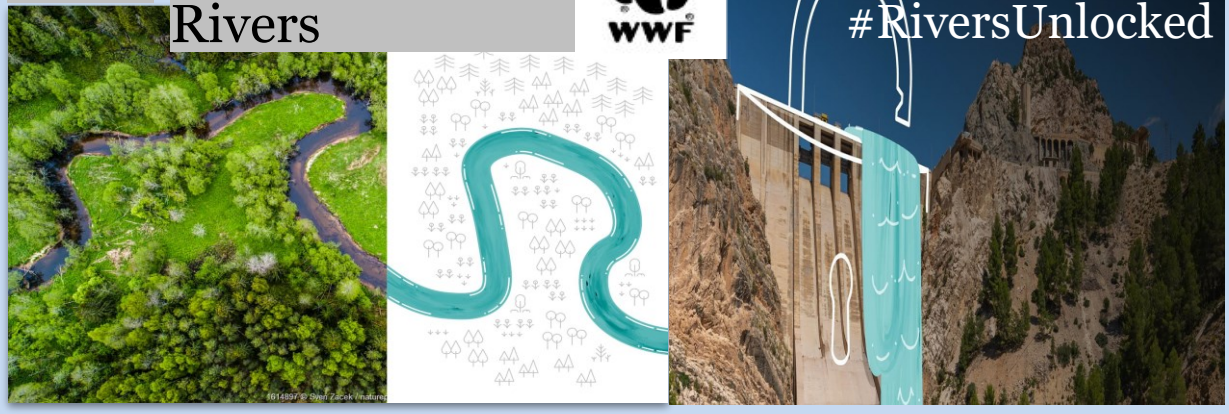
https://damremoval.eu/report-2021/



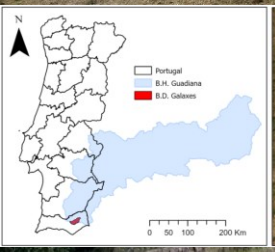
ANP|WWF PT Dam Removal Pro

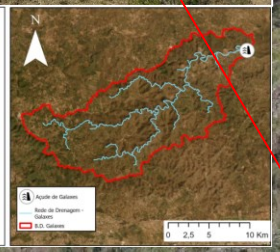
(Activ. 6.1.2 '*Identification of priority stretches for restoration*' of the **Reconnecting Iberian Rivers** project)

LER Living European Rivers



- Identify removable barriers & their potential for reconnecting rivers
- Owners and legal procedures





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Galaxes weir, Odeleite River, Algarve (Portugal)


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JCB
March 2023
First removal made by an NGO in Portugal


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August 2023


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January 2024

- Restored 7.7 km of river connectivity
- Improved habitat for Saramugo, eel, otter, Iberian lynx

- Meeting to inform local community
- Environmental education session in a local school
- Several meetings with relevant stakeholders (Strenghtened relationships with **ICNF** and **APA**)
- Fish and sediments sampling and visual materials

- Communication/Awareness tools to scale up DR in Portugal →

Policy Brief on River Restoration (mostly DR)

Free to download (in Pt):
https://wwfeu.awsassets.panda.org/downloads/policy_brief_damremoval.pdf

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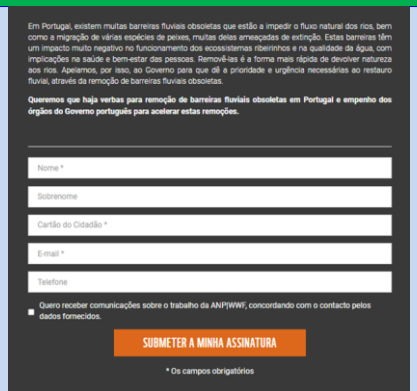
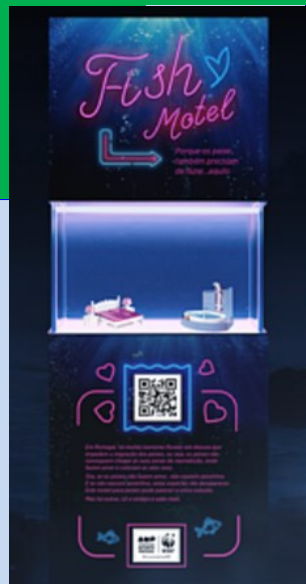
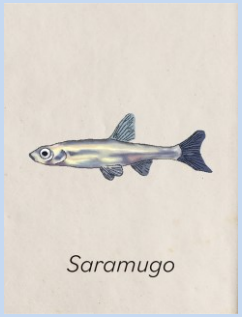
Pop-Up Book on River Restoration (DR)

Petition for DR to be included in the PT Government's state budget





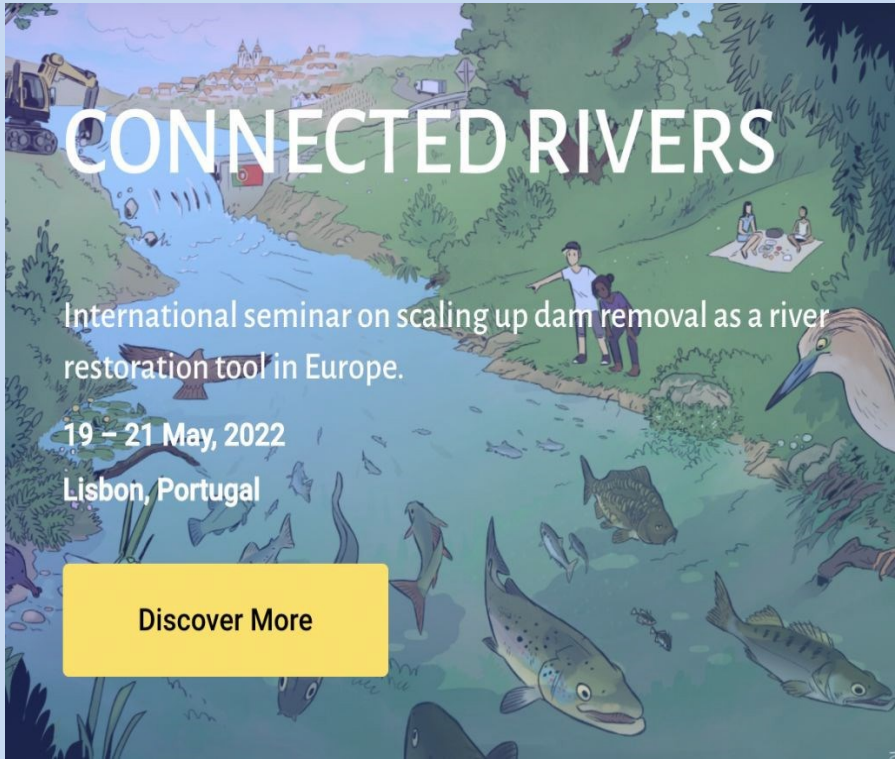
Memory Card Game



...

- **Other 4 EoIs** approved:
  - **Odeleite** and **Vascão** Streams
  - **Sabor** River
  - **Sousa** River
  - **Perofilho** Stream (Removal upcoming!)

- Other **2 proposals submitted** (Oeiras River)



- Co-hosted 7th **Dam Removal Europe International Seminar**

CHALLENGES (Lessons learnt)

- **Agriculture lobby & public beliefs:**
  75 % water used for agriculture;
  "*river reaching the sea is wasted gold*"

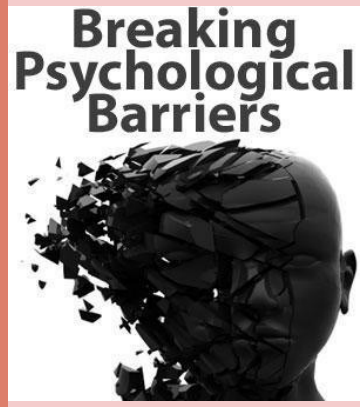
- **Public perception** of **water availability**

- **Lack** of **legal framework** for removal

- **Incipient funding**

- **Lack** of **awareness** on **dam impacts/DR benefits**

- **Lack** of **Technical Expertise**



WAY FORWARD

- **Government** & **investment Funds** (Scaling up!!) (More/better synergies between civic society & government)

- Endorse **DR** in **National Law** and **Basins Management Plans**

- Increase **Awareness**

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GALAXES WEIR REMOVAL ON G. MAPS!!

OBRIGADO!

Lquaglietta@natureza-portugal.org
Freshwater consultant for ANP|WWF PT

Thanks to:

OPEN RIVERS PROGRAMME

ARCADIA
A CHARITABLE FUND OF
LISBET RAUSING & PETER BALDWIN

WORLD FISH MIGRATION FOUNDATION

Additional co-funding gathered by WFMF

Iberian desman
(*Galemys pyrenaicus*)

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NATIONAL GEOGRAPHIC
PHOTO ARK
JOEL SARTORE

Q2: How many for hydropower? How many >10MW and <10MW?

~120 Small & 59 Hydroelectric Power Plants in operation. 49 HPs → >10MW capacity.
All Small + ~15 HPs with 10/30 MW capacity → total installed capacity of > 660 MW.

Q3: Who owns or is responsible for them?

APA manages the water domain, and HPPs are granted to companies (e.g., EDP, Iberdrola), while those for irrigation belong to municipalities. Some are built for waste management from mines and other industrial activities (e.g., SOMINCOR).

Q4: Do dam permits expire and if so, how long are the permits for?

Licensing maximum 75 years (APA site).

Q5: Do dam permits include obligations for nature e.g. Fishways, e-flows etc.

As far as we know, no.

Q6: Is there a procedure to revisit obligations in the permits?

No. Law doesn't foresee dam removal at the end of concession, but the reversal to the State.

Q7: Do your River Basin Management Plans/similar include dam removal?

No, and there is not a budget for this either.