

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...



PORTUGAL



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



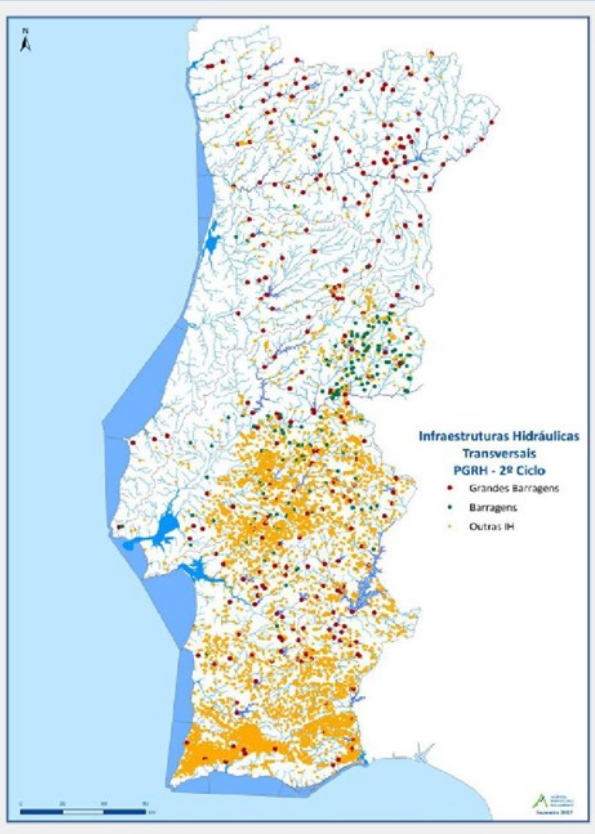


BARRIERS IN PORTUGAL



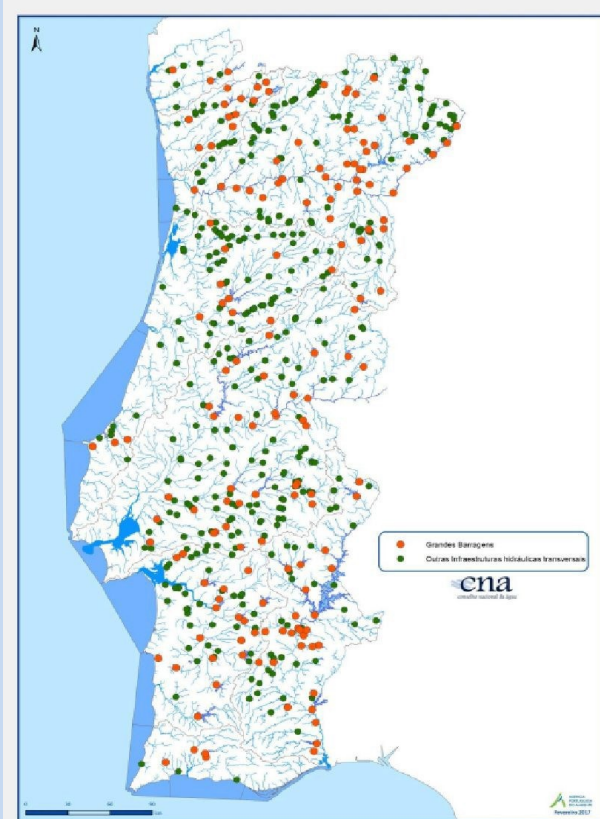
TF National Strategy for Obsolete Hydraulic infrastructures removal (2017)

7687



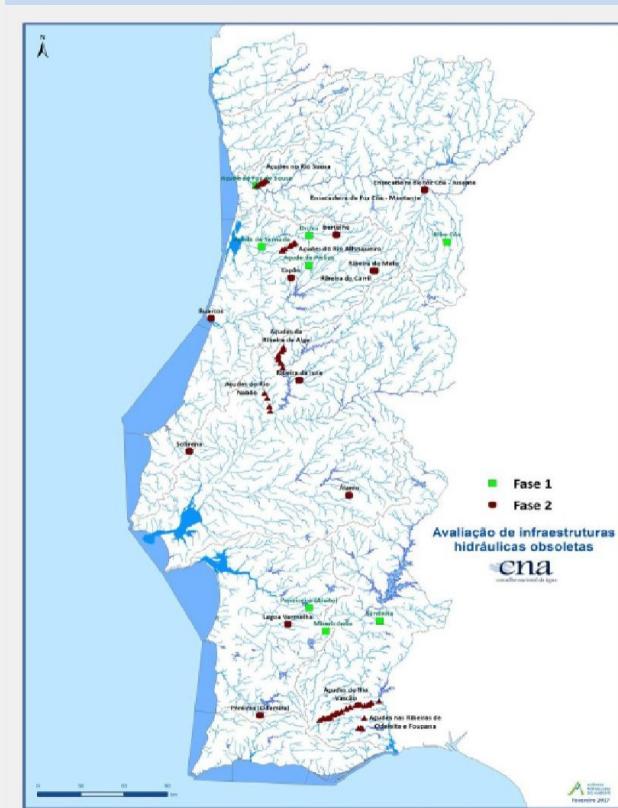
barriers identified by the HRMP 2016-2021

530



selected barriers based on WFD (basins >10km²)

~60

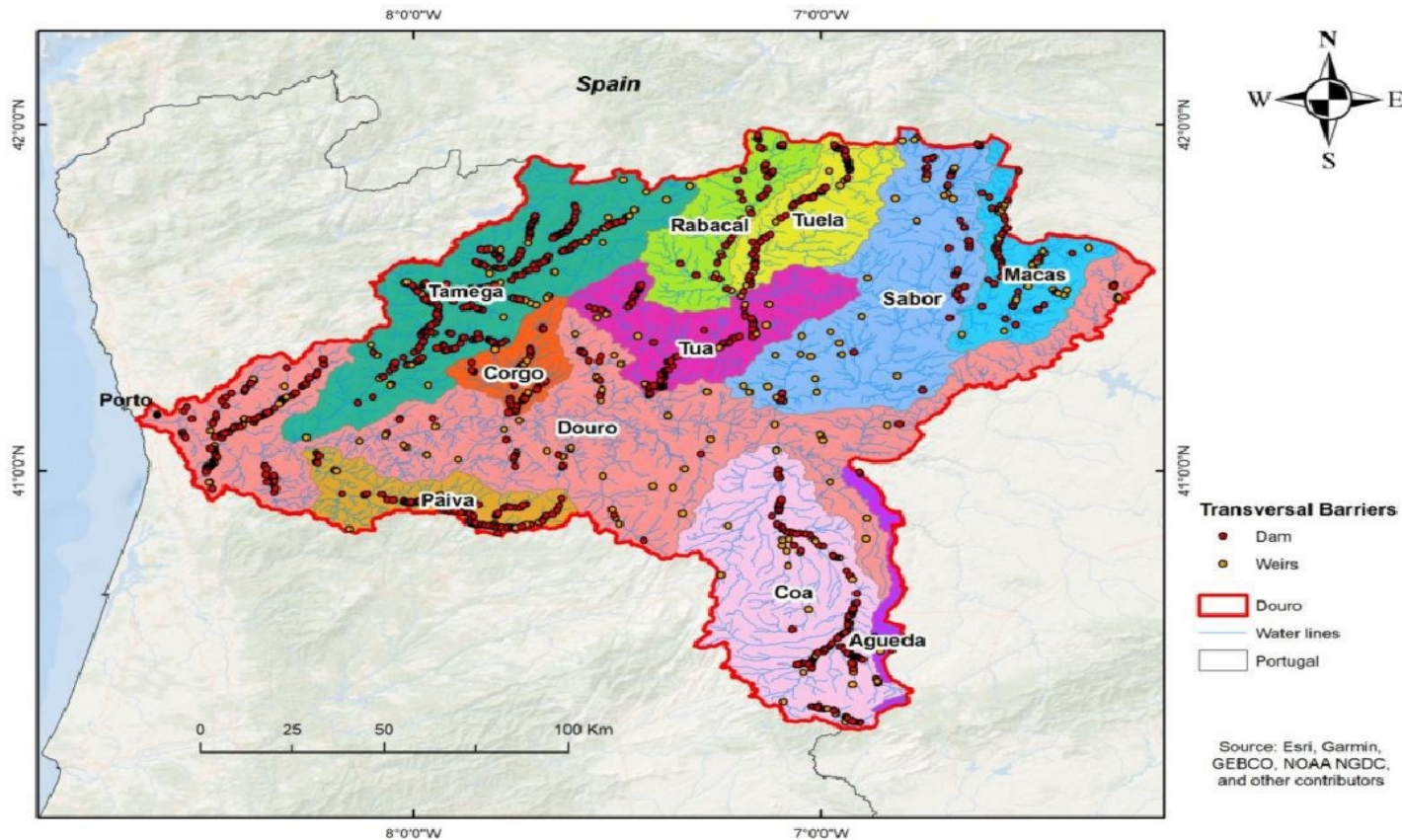


barriers prioritized for removal; wanted to remove 8.

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

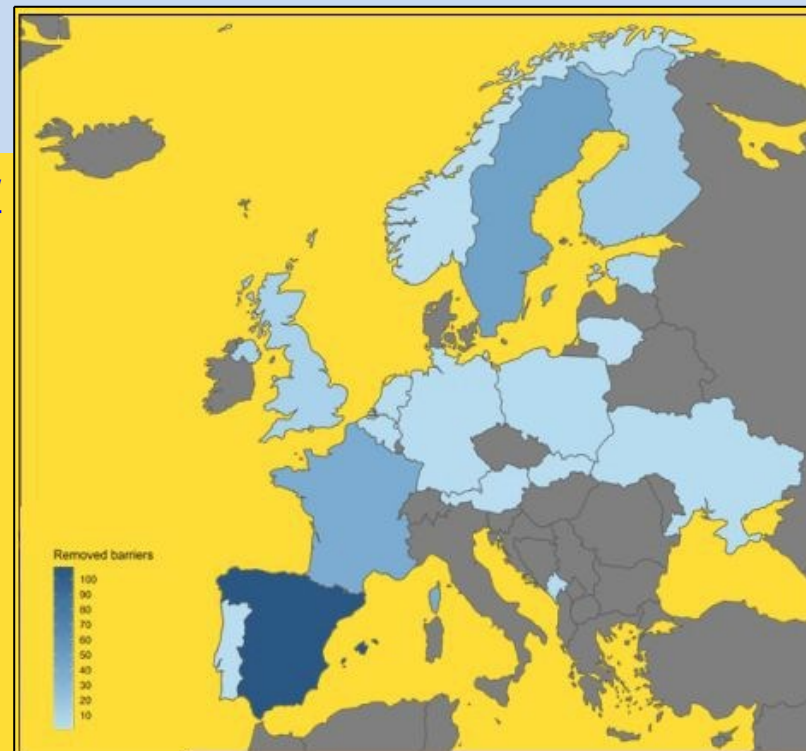
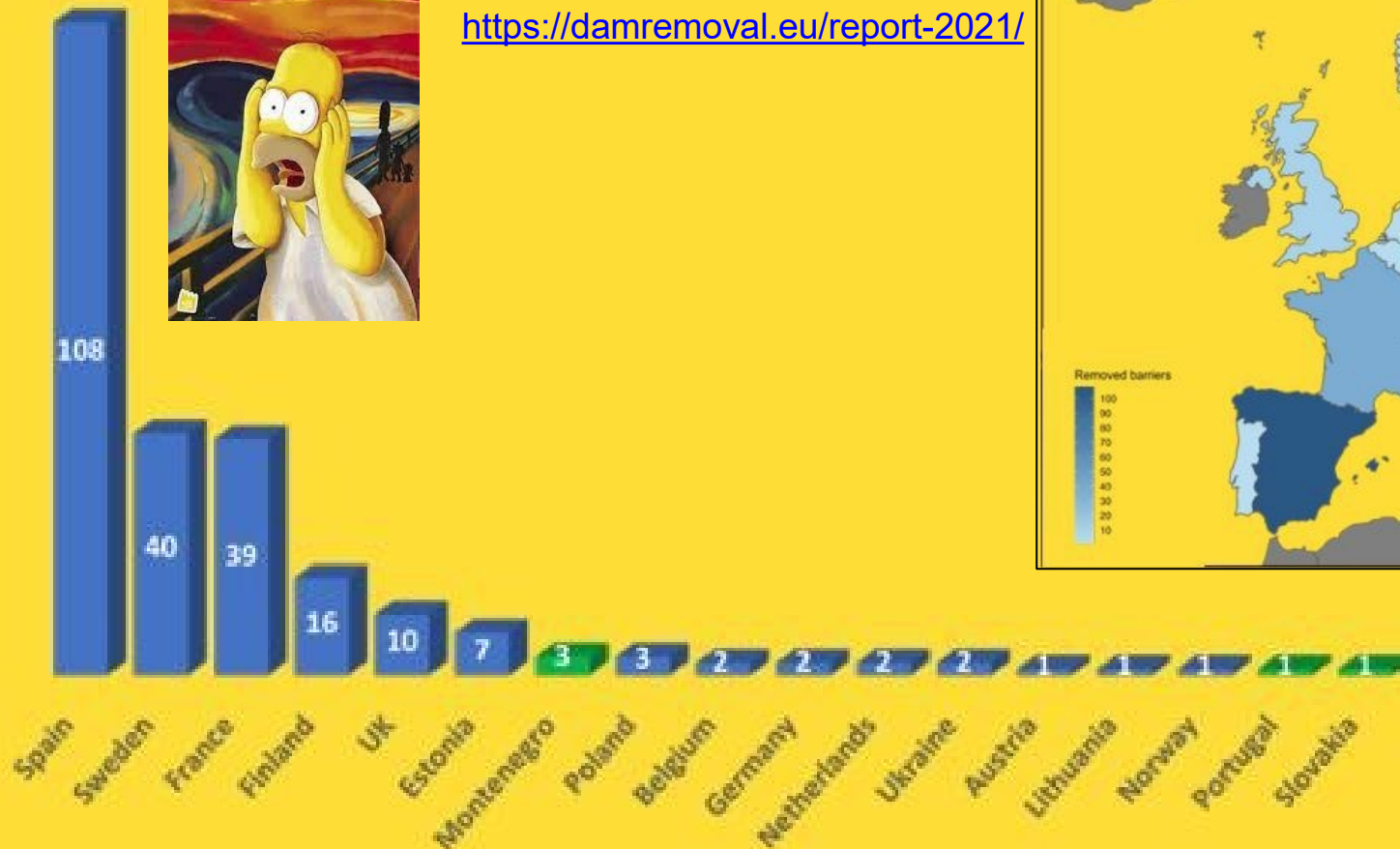


DAM
REMOVAL
EUROPE

Spain:
108!!!

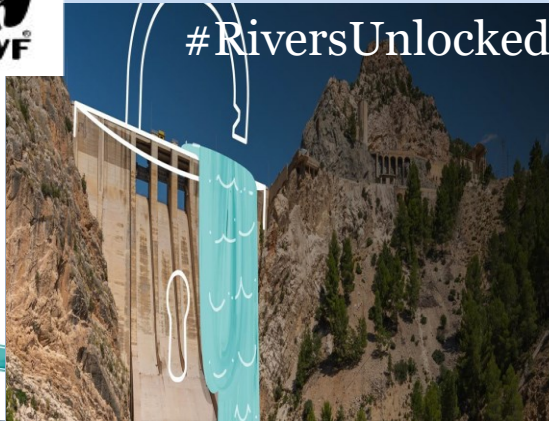
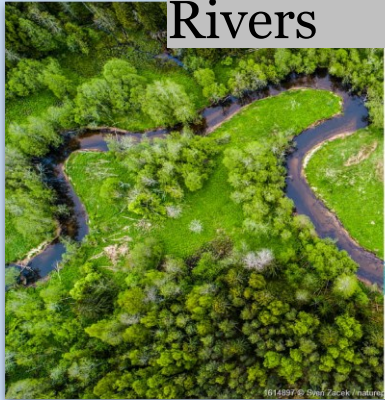


<https://damremoval.eu/report-2021/>

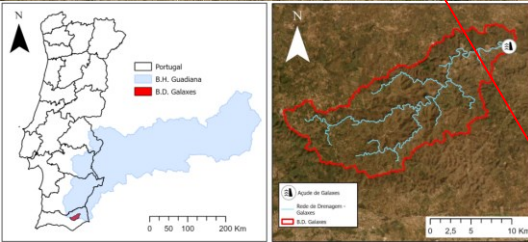


(Activ. 6.1.2 *‘Identification of priority stretches for restoration of the Reconnecting Iberian Rivers project*)

LER Living European Rivers



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



Galaxes weir, Odeleite River, Algarve (Portugal)



March 2023

First removal made by an NGO in Portugal



August 2023



ANP
ASSOCIAÇÃO
NATUREZA
PORTUGAL



ANP in association with WWF

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 (Strengthened 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)

RESTAURO FLUVIAL LIBERTAR AS VEIAS DO PLANETA

60% dos rios, lagos e zonas húmidas da UE não são saudáveis e a Europa tem a paisagem fluvial mais fragmentada do planeta!

60%

93%

Não é, assim, de admirar que estes ecossistemas registem um declínio alarmante da sua biodiversidade: uma em cada três espécies de peixes de água doce na Europa está atualmente ameaçada de extinção e as populações de peixes migratórios sofreram um declínio de 93% desde 1970.

Este declínio faz parte de uma tendência global alarmante, como mostra o Living Planet Report 2022. De acordo com este estudo, os ecossistemas de água doce são os mais ameaçados do planeta e as populações globais de espécies de água doce diminuíram 83% desde a década de 1970².

Para tentar reverter esta tendência destrutiva, a Comissão Europeia publicou em 2022 uma proposta de Lei do Restauro da Natureza³ que prevê metas para recuperar os ecossistemas terrestres, marinhos e fluviais. Existem várias ferramentas que promovem o restauro dos rios, das planícies aluviais (terrenos planos aos lados dos rios formados pela deposição de sedimentos trazidos pelos rios), das galerias ripícolas (densas faixas de vegetação constituída por espécies de arbustos e árvores que vivem ao longo das linhas de água) e das espécies aquáticas, e uma das principais é a **remoção dos obstáculos** - barreiras fluviais

Free to download (in Pt):

https://wwfeu.awsassets.panda.org/downloads/policy_brief_damremoval.pdf

Pop-Up Book on River Restoration (DR)

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

Memory Card Game



Enguia-europeia



Lontra



Saramugo



Em Portugal, existem muitas barreiras fluviais obsoletas que estão a impedir o fluxo natural dos rios, bem como a migração de várias espécies de peixes, muitas delas ameaçadas de extinção. Estas barreiras têm um impacto muito negativo no funcionamento dos ecossistemas ribeirinhos e na qualidade da água, com implicações na saúde e bem-estar das pessoas. Removê-las é a forma mais rápida de devolver natureza aos rios. Apelamos, por isso, ao Governo para que dê a prioridade e urgência necessárias ao restauro fluvial, através da remoção de barreiras fluviais obsoletas.

Queremos que haja verbas para remoção de barreiras fluviais obsoletas em Portugal e empenho dos órgãos do Governo português para acelerar estas remoções.

Nome*
Sobrenome
Código do Distrito*
Email*
Telefone

Quero receber comunicações sobre o trabalho da ANP/WWF, concordando com o contacto pelos dados fornecidos.

SUBMITER A MINHA ASSINATURA

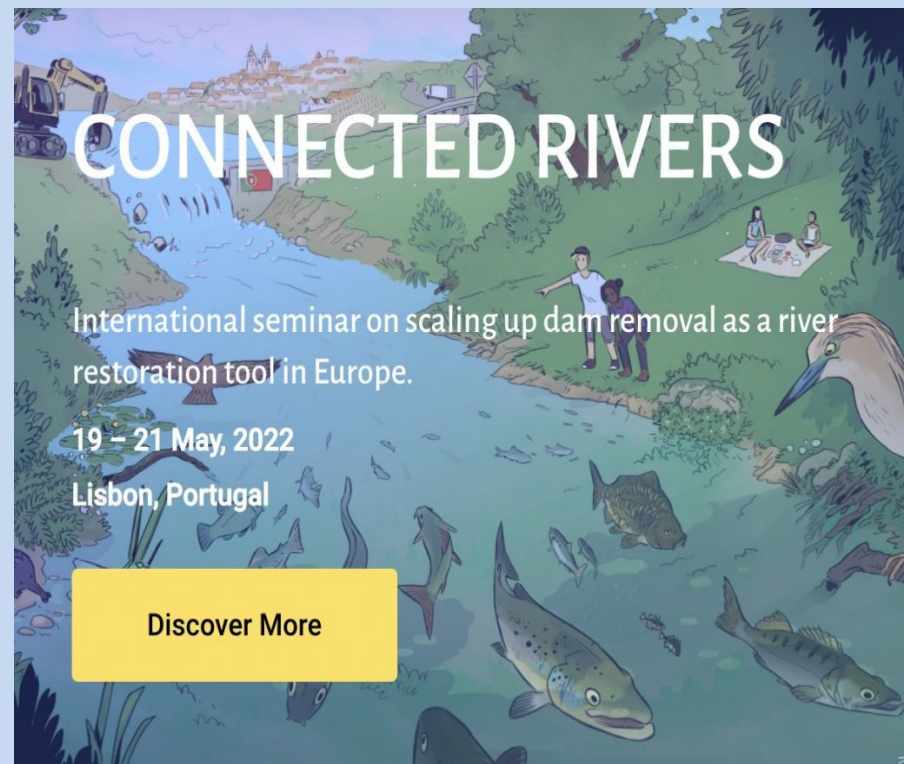
* Os campos obrigatórios



- **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**



CONNECTED RIVERS

International seminar on scaling up dam removal as a river restoration tool in Europe.

19 - 21 May, 2022
Lisbon, Portugal

[Discover More](#)

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**

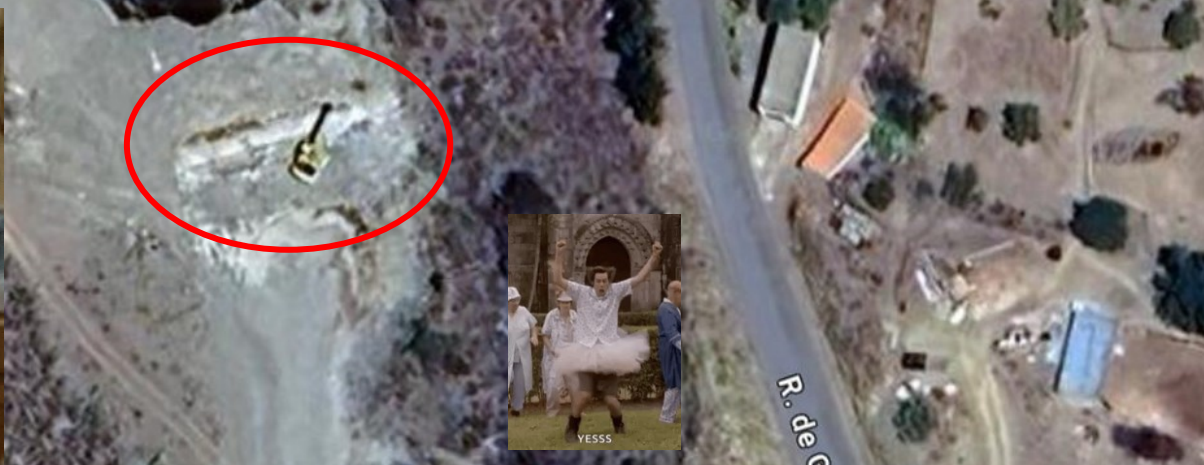
Breaking
Psychological
Barriers



- **Government & investment Funds (Scaling up!!)**
(More/better synergies between civic society & government)
- Endorse **DR** in **National Law** and **Basins Management Plans**
- Increase **Awareness**



GALAXES WEIR REMOVAL ON G. MAPS!!



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

Thanks to:



Additional
co-funding
gathered by
WFMF

Iberian desman

(*Galemys pyrenaicus*)



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.