

Image
Peter Walker



“Bending the curve towards Recovery”

A talk by Andrew Kerr
Chairman of SEG
24 August 2022

Eels and Elvers at Tetbury Goods Shed Art Centre



Sustainable
Eel Group

An overview and then talk around these four linked headings.....

- **Context / History**
- **Conservation**
- **Communication**
- **Commercial**

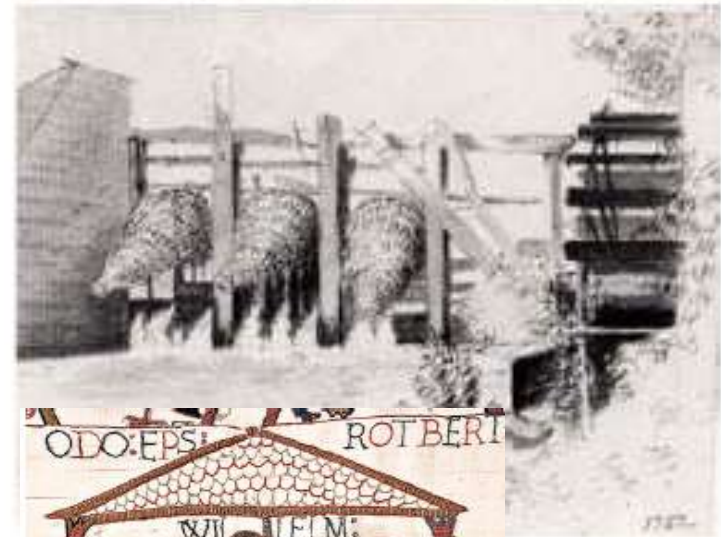
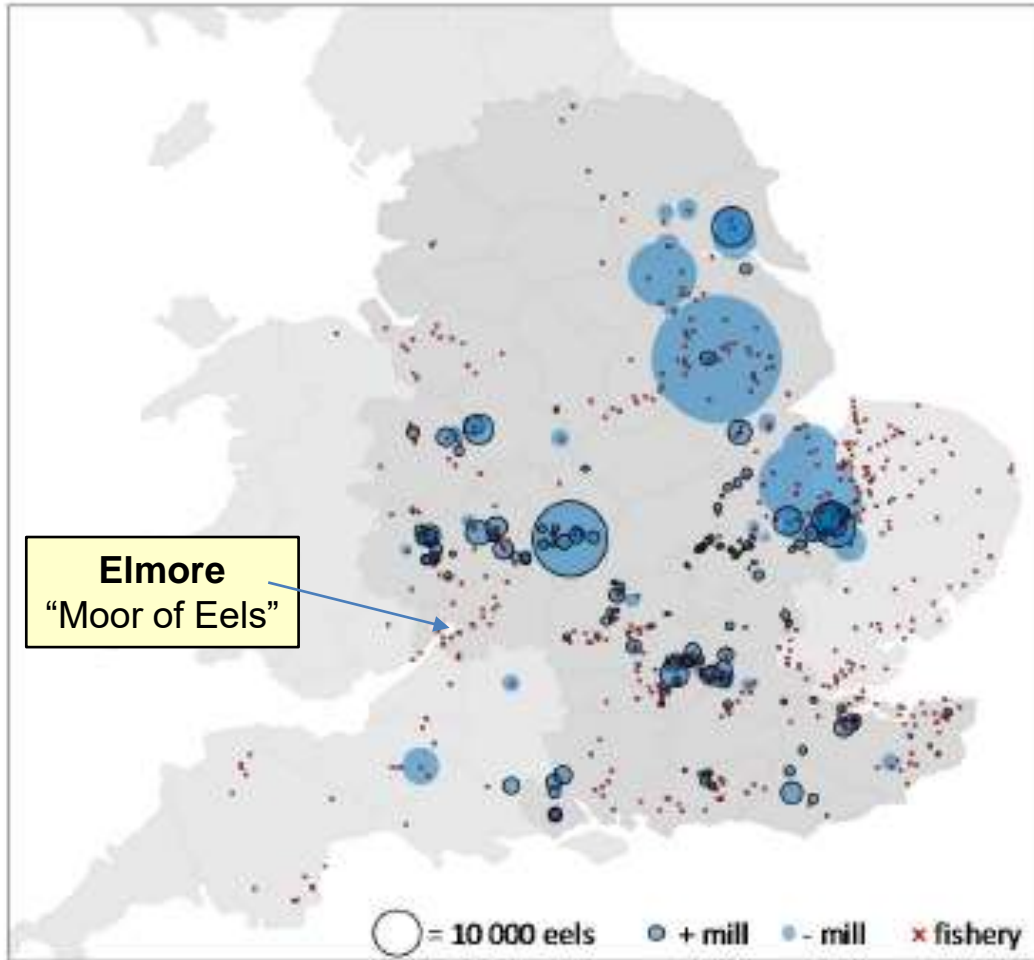


Ancient Egypt



The Bayeux Tapestry

Domesday book 1086



225 fisheries, tax 400 000 eels, ≈ 200 t
+ 400 fisheries, tax in cash, ? 300 t
Today: 39 t

**12th Century Church at
Baunton Gloucestershire
St Christopher**





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A Great Tradition



Domesday book 1086



100 000 eels = 200 t
in cash, 7 300 t
Today: 39 t

**13,000
Fishermen in
1993 (Moriarty)
Today 10,000
people sector
and £500m**

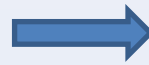


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Recognise the big issues like.....

- **Hemispheric Scale**



Many nations involved so many vested interests **One Single Stock**

- **Complex Life Cycle**



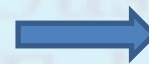
Difficult/costly to understand study, measure **No Golden Bullet**

- **Historic Abundance**



Commercial exploitation
Competition and Conflict

- **Greed & Ignorance**



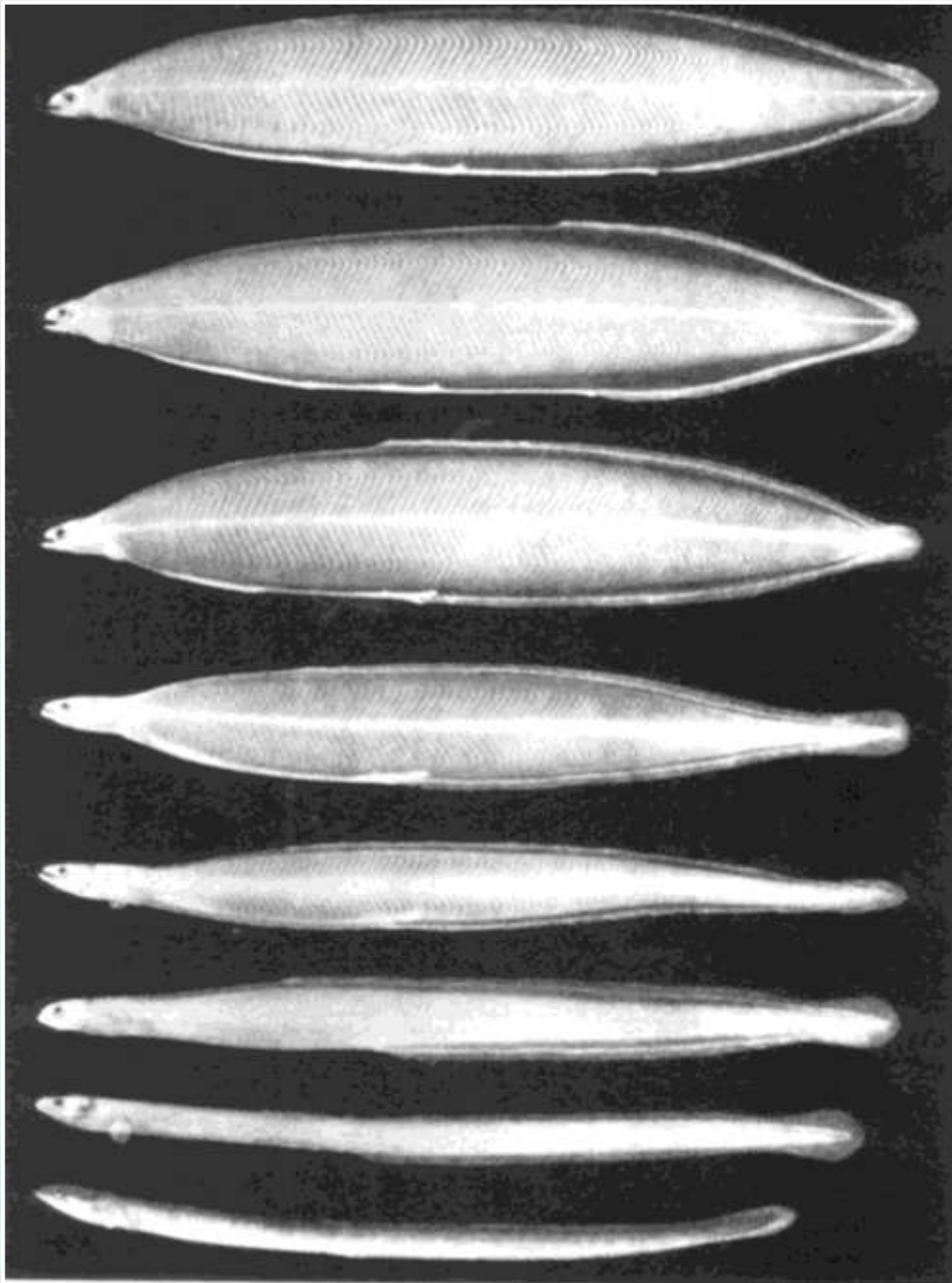
For water, energy, farmland and fish etc **Environmental CRISIS**

The Eel Mystery





Extensive studies and scientific trials have taken place in Japan & Europe in attempts to breed the Japanese Pacific eel in captivity – no one has seen reproduction in the wild



drift



swim

Oceanic (panmictic) migrations

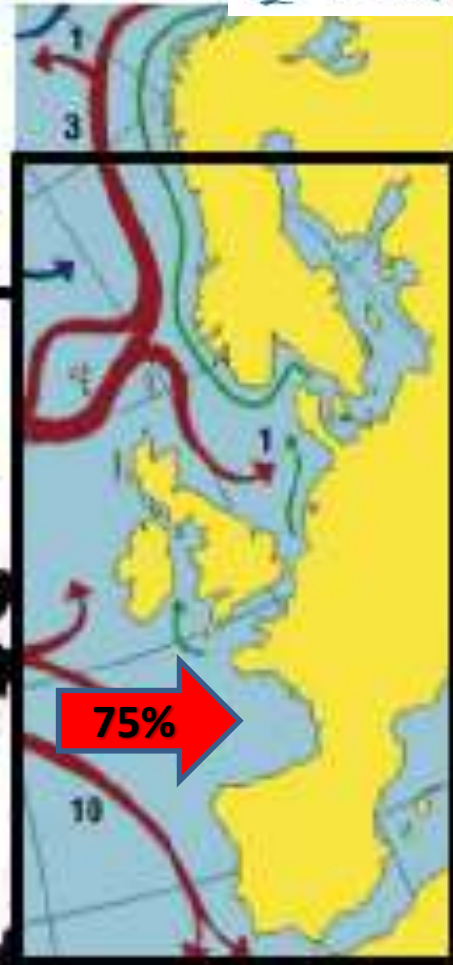
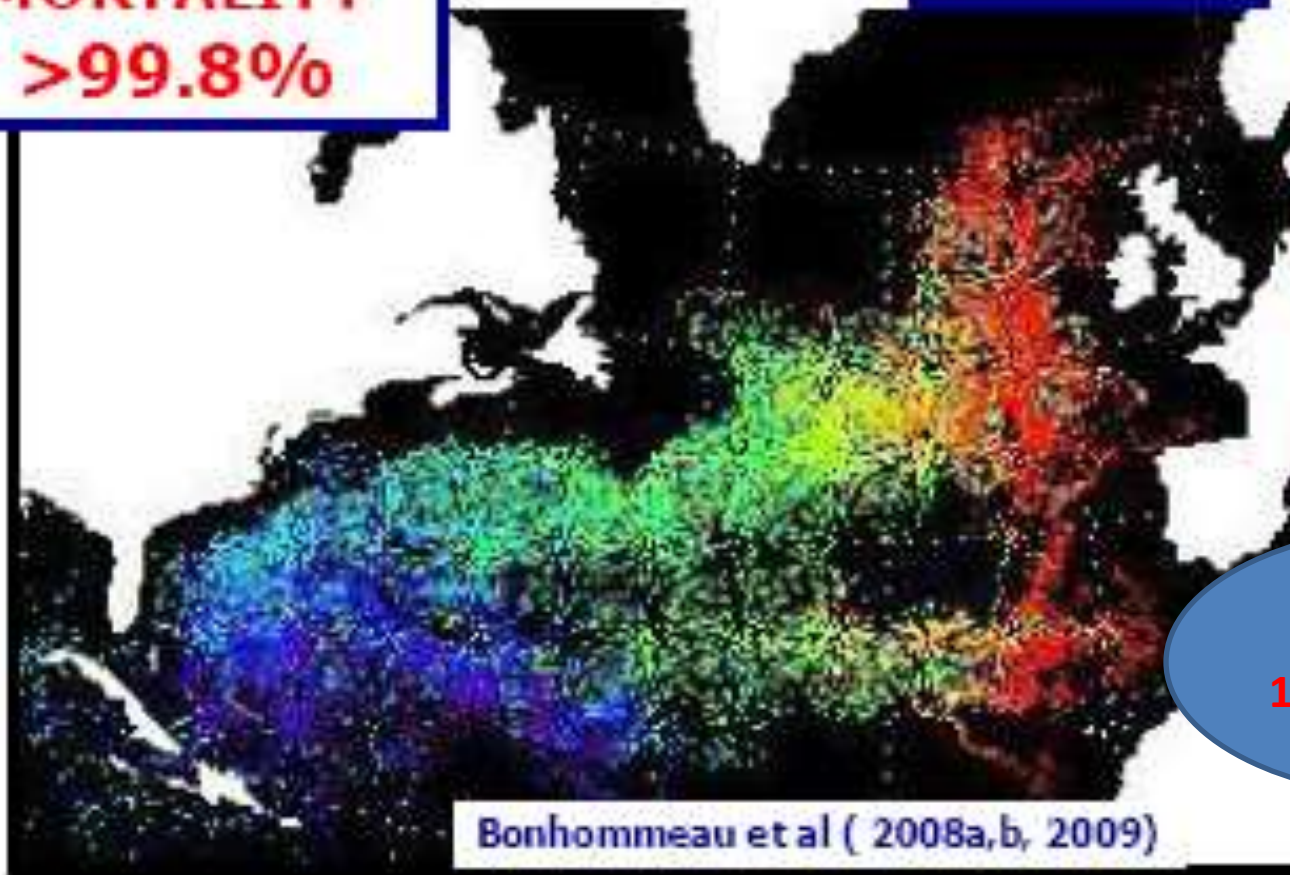
Estimated
leptocephalus
MORTALITY
>99.8%

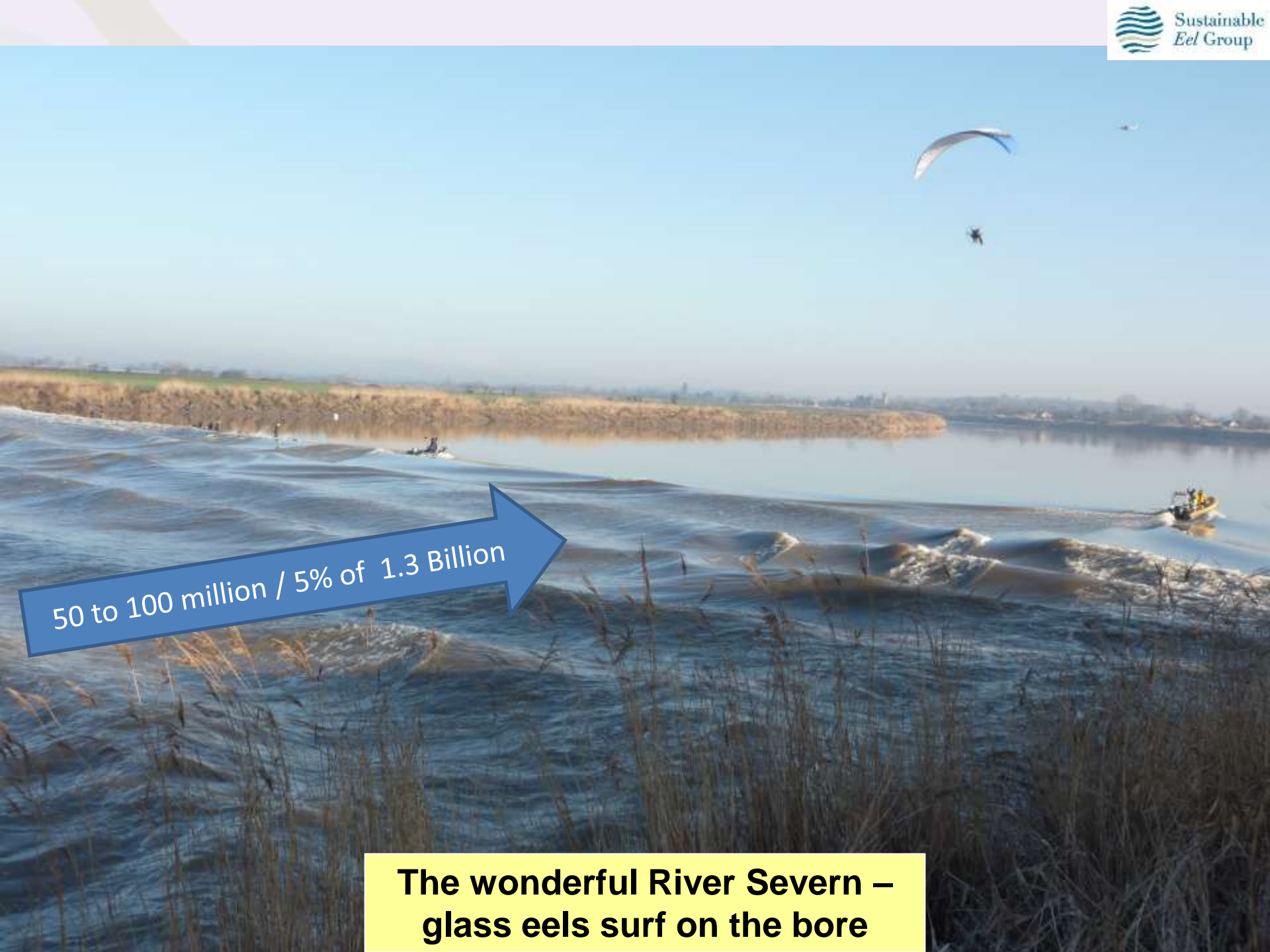
Duration
~ 21
months

75%

Uncountable
1.3 billion arrive

Bonhommeau et al (2008a,b, 2009)





50 to 100 million / 5% of 1.3 Billion

**The wonderful River Severn –
glass eels surf on the bore**

Glass Eels this is what we look like
3200 to a kilo
300 kilos a million





- Growth rates
- Range
- Sex Determination
- Age

A photograph showing a man and a woman at night, working on an eel. The woman, on the left, is wearing a green knit hat and a green jacket. The man, on the right, is wearing a red jacket. They are both smiling. The man is holding a small, dark, cylindrical object (a tag) and is using a pair of pliers to attach it to the eel. The eel is being held by the woman. The background is dark, suggesting it is nighttime. There is some equipment visible on the left side of the frame.

Eeliad Project satellite tagging.....

LOTS OF FACTORS

- **Habitat Loss**
- **Migration Barriers**
- **Oceanic / Climate Change**
- **Hydropower & Water Pumps**
- **Over Fishing and Trafficking**
- **Disease and Pollution**

***IFM and EA Eel
Conference
Bridgwater April 2009***

**Birth
Origin
Governance**



***Forming SEG
Nov 2009***



***Our First of many European Meeting.
At Hamburg May 2010***





**SEG
BOARD**

Sustainability and Eel



**Eel Reg
1100/2007**

Next steps – better implementation

Focus on non-fisheries factors	Continue addressing fisheries impacts	Make use of good practices and projects
Reinforce control and enforcement	Strengthen transboundary cooperation	Improve connectivity RBMPs and EMPs
Increase EU funds uptake	Improve efficiency of reporting	Consider revising EMPs



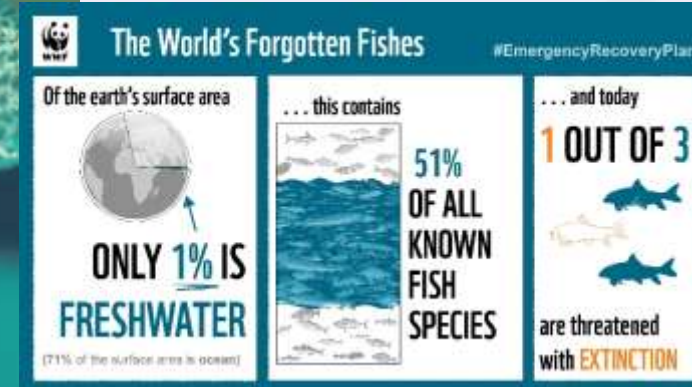
**The SEG
Standard**

SEG Leading Recovery through Protection and Sustainable use



Wetlands are the ideal nursery habitat and over the last 2000 years 85% has been lost. Most of this recently.

WWF State of the Planet Report



**93% Matches
the EEL**

Authors [Chris Baker \(Wetlands International\)](#), Stefanie Deinet (Zoological Society of London - ZSL), Robin Freeman (Zoological Society of London - ZSL), Guenther Grill (McGill University), [Richard Holland \(Wetlands International\)](#), Bernhard Lehner (McGill University), [Jane Madgwick \(Wetlands International\)](#), Valentina Marconi (Zoological Society of London - ZSL), Louise McRae (Zoological Society of London - ZSL), Jeff Opperman (WWF-International), [Stuart Orr \(WWF-International\)](#), Thomas Pienkowski (Oxford University), Jamie Pittock (Australian National University), Kate Scott-Gatty (Zoological Society of London - ZSL), Michele Thieme (WWF-US), [Dave Tickner \(WWF-UK\)](#), Sarah Whitmee (Oxford University)



Blocked migratory pathways
Some are large.....

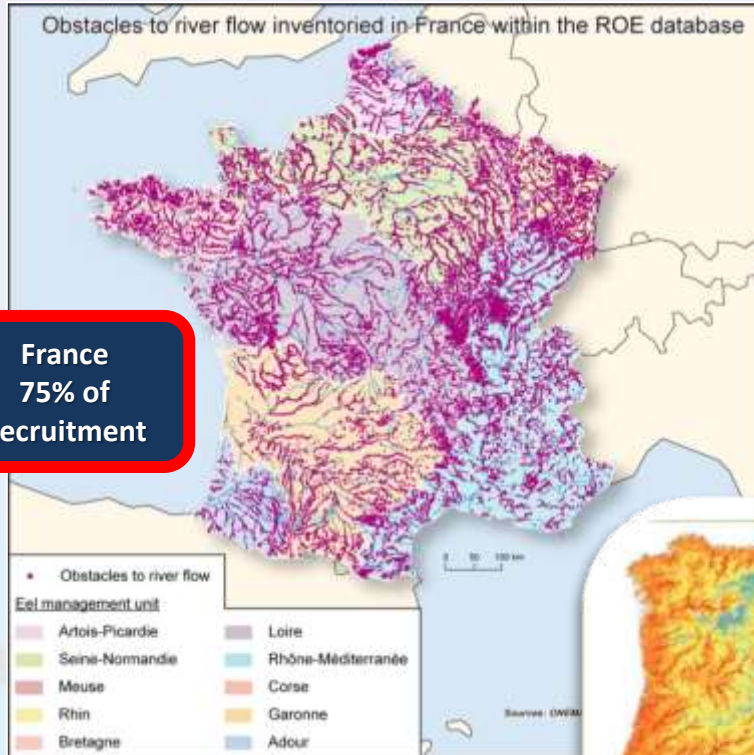


**Some are
small...**

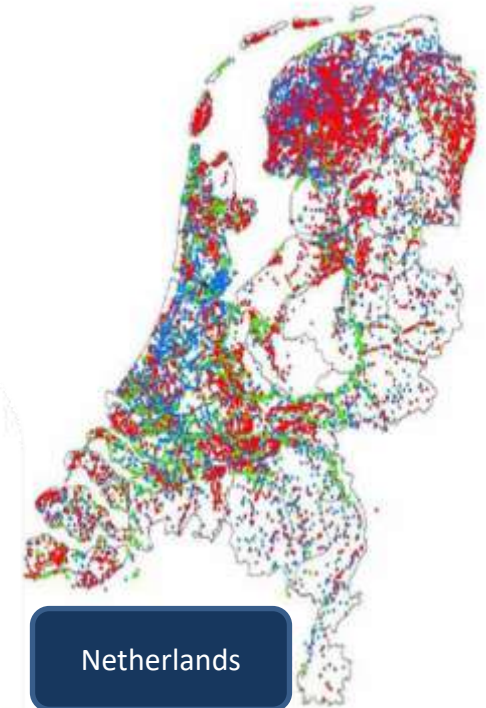


Help Eels to migrate 'Get In and Out'

Over one Million Barriers



- 2,278 Sluice Gates
- 8,488 Dams
- 4,671 Water Pumps
- gemaal (4671)



bron: drs. N.W.P. Brevé, Sportvisserij Nederland
n. 2001, RWS Westkundige Dienst (WIS-BORIS)





**UK
£100m +
2016 -20**



1000 +





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The Unlocking the Severn Project





Vattin Hydro Turbine Sweden

DUPAN 'eels over the dyke'





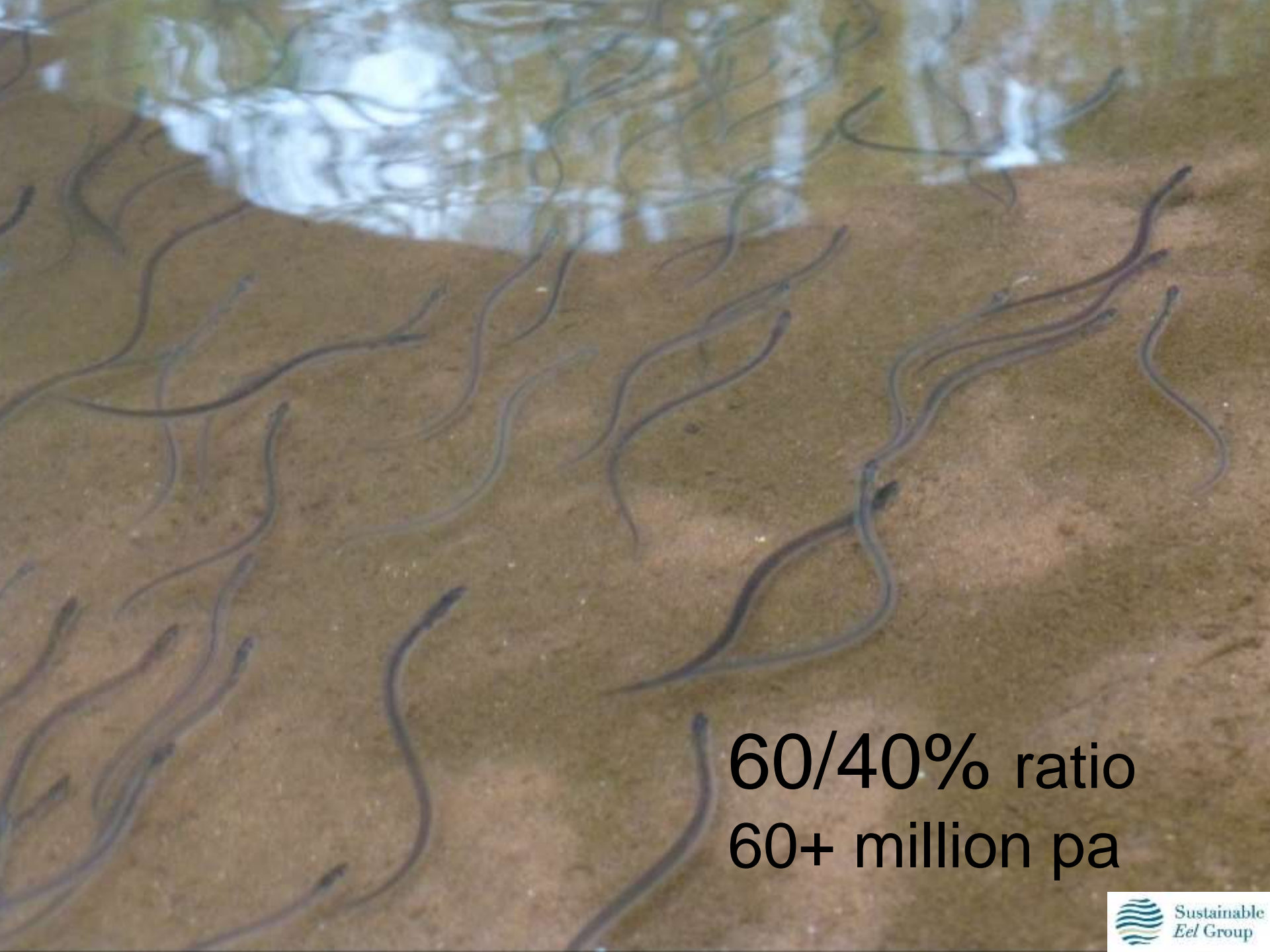
Turbine Mortality

Screening Solutions Thames Water





Eels over the dyke in
the **Netherlands**



60/40% ratio
60+ million pa

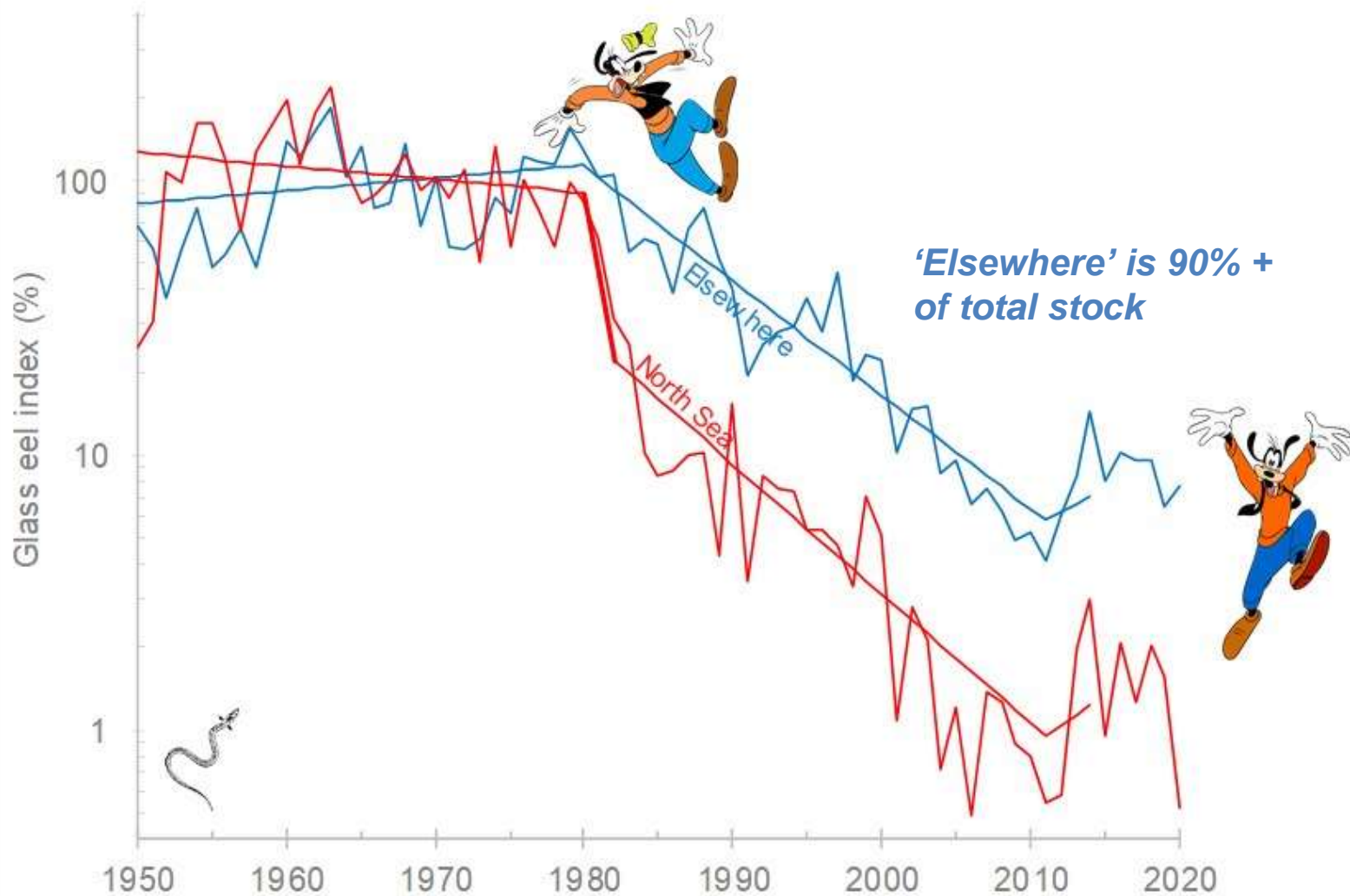


Elverman Dave . Traditional hand net fishing takes place at night and is licensed by the EA. It only 'works' when conditions are perfect



W Dekker. November 2020

*“Recruitment has stopped decreasing in 2011, and remains very low since.
The implementation of the Eel Regulation can be improved!”*



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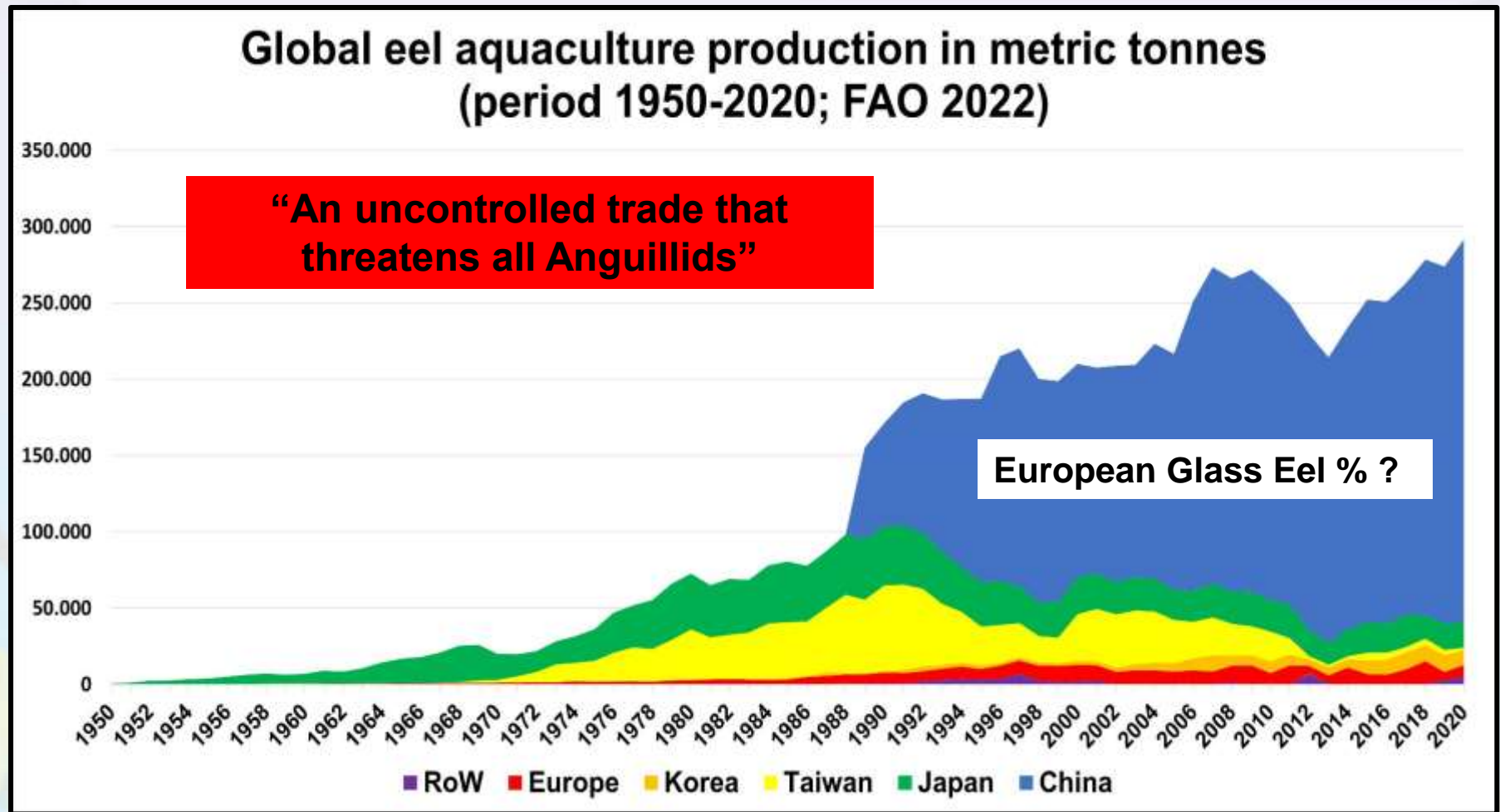
Wilding with Knepp Estate on the river Adur next few years



- **Context / History**
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Continuing investment on captive
breeding !

This situation led to CITES Listing 2007



“Europe is a small player in Global Eel Aquaculture”

A photograph of a cluttered storage room or warehouse. In the foreground, a small brown and white dog stands on a concrete floor. To the left is a large, dark, corrugated metal wall. In the center, there are several large, brown cardboard boxes stacked. To the right, there are several colorful plastic storage bins (yellow, red, and blue) and a large blue plastic container. In the background, there are more items, including what looks like a fan and some papers on a wall. The overall scene suggests a storage area for various items, possibly related to the criminal activity mentioned in the text.

CRIMINAL

300 million
say
EUROPOL
in 2018



**364 Suitcases in
one raid 2018**



Trafficking Continues

- *300,000 plus in 8 Suitcases Schiphol*
- *3 Arrests made*
- *Portugal to NL to Malaysia*
- *11 April 2022*

3 Feb 2022

Eel smuggler hit with world record €7.2m fine



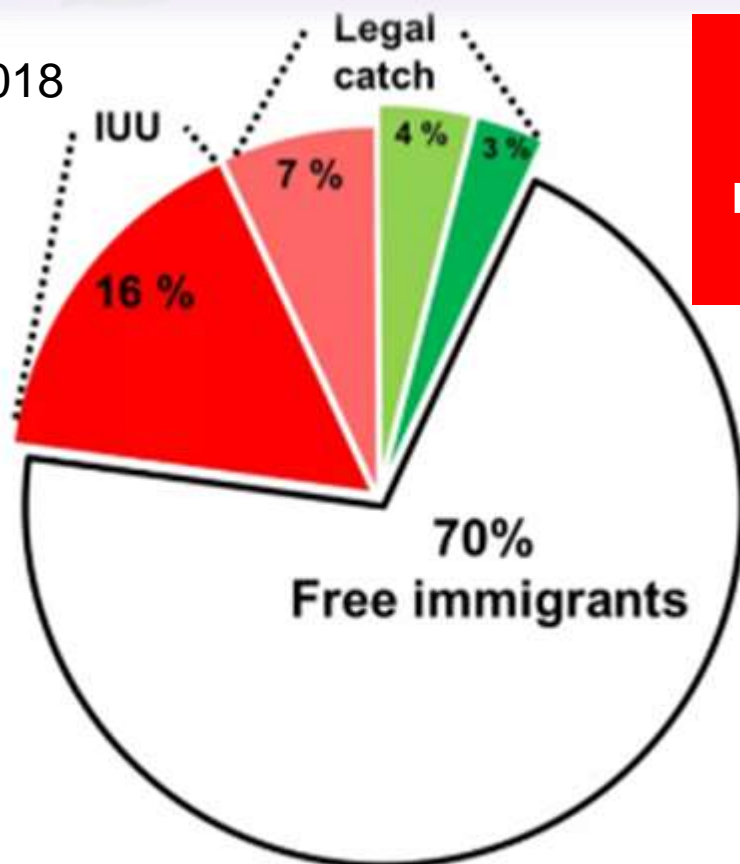
Recent ASIA Press Reports

Suggest 85% Reduction ??

<https://www.sustainableeelgroup.org/counter-trafficking-success-is-reflected-by-crash-in-european-glass-eel-supply-into-chinese-eel-aquaculture/>

**USA Quota Price Per Lbs over
\$2100 in April 2022**

2018



**Eel
Trafficking
reducing the
23% IUU**



- Illegally exported (30 t)
- Illegally exported (70 t)
- Free immigrants (309 t)
- Aquaculture, EU (18 t)
- Restocking, EU (13 t)



2022 so Far

- 49 Arrests reported this season
- EUROPOL, EFCA, OLAF, DG Sante
- 27,701 Inspections
- 24 Countries
- 4.5 million Glass eels seized





The SEG Standard with fully traceable Supply Chain has impact

2021

3/4 of
French
GE Fishermen
certified

France 400 Fishermen
UK all 300 part time

21 million Glass Eel 2018
32 million Glass Eel in 2019
33 million Glass Eel in 2020
64 million Glass Eel in 2021

**110 million for 2022 eel
farming and restocking**



Growing Impact of SEG Standard in building a fully traceable supply chain



18 farms certified
90% in NL, DE, FR and SW

75% of
farms in
Europe



17 Retailers / Smokehouses Certified
in NL and Germany

75%
certified
in NL &
DE



**The Reinvention is taking place - the sector takes on the
Stewardship Role**



+



Fishing mortality down from 42% (Briand data 2007) to less than 8% (FishPass Study) 2020 for the Vilaine, Brittany for the 50 + SEG Certified fishermen

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Eel Group

Working to SEG Standard / Supply Chain and effective counter trafficking save 100s of millions of glass eels annually



**40% of 60 ton or 200m quota
70 to 80 million Glass Eels saved**



**100 tons pa 300 to 350 million Trafficked
Reduced to 20% is about 250m saved**



**TOTAL ANNUAL
SAVING over
300 +
million Glass Eels**

Full Implementation of Eel Regulation....

“the Non Fisheries Impacts”



“Eel Populations are a great indicator of River and Wetland health and there will be no eel recovery without their restoration”



COLLABORATION and Long Term thinking