

*Assessment & Management of European eel*  
*across Europe and beyond*

**Alan Walker**

Saturday 24th October 2015

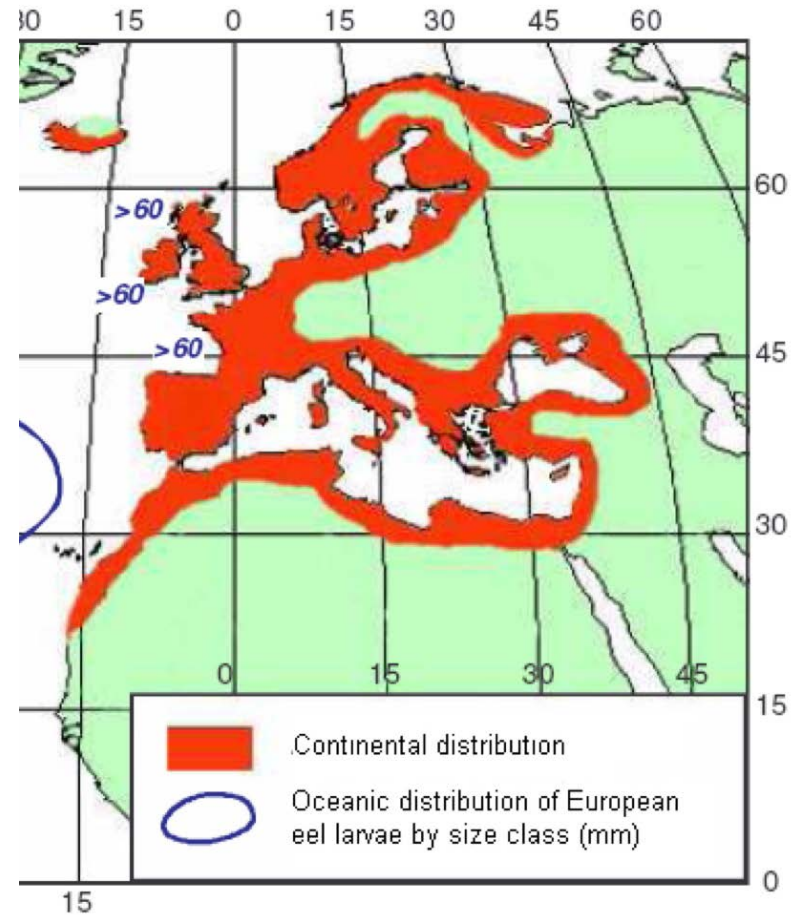


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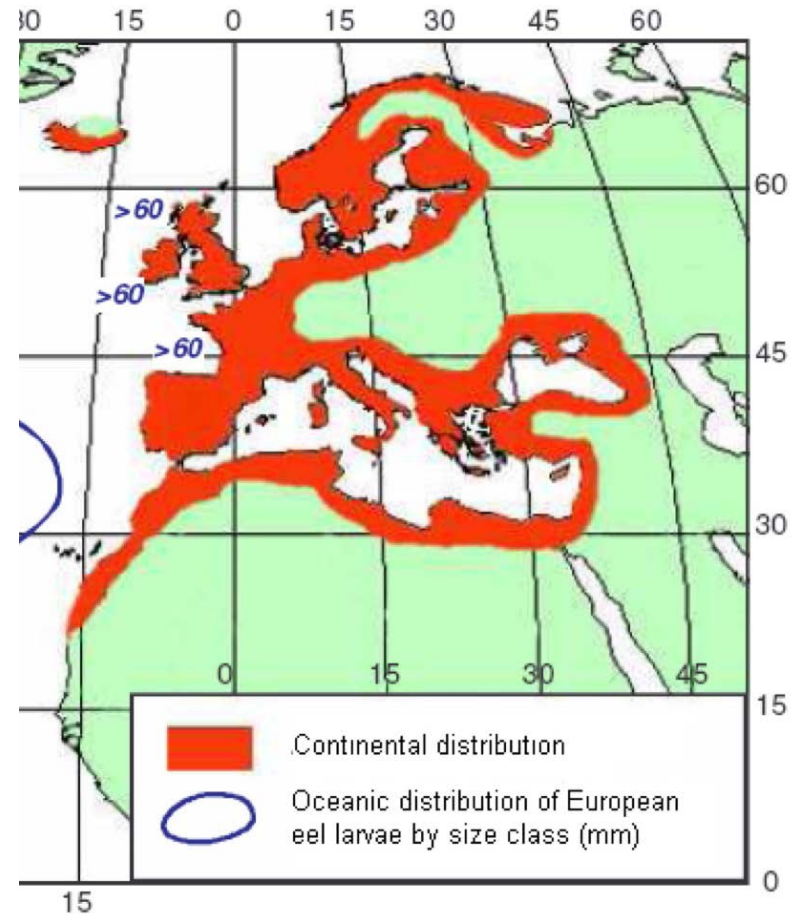
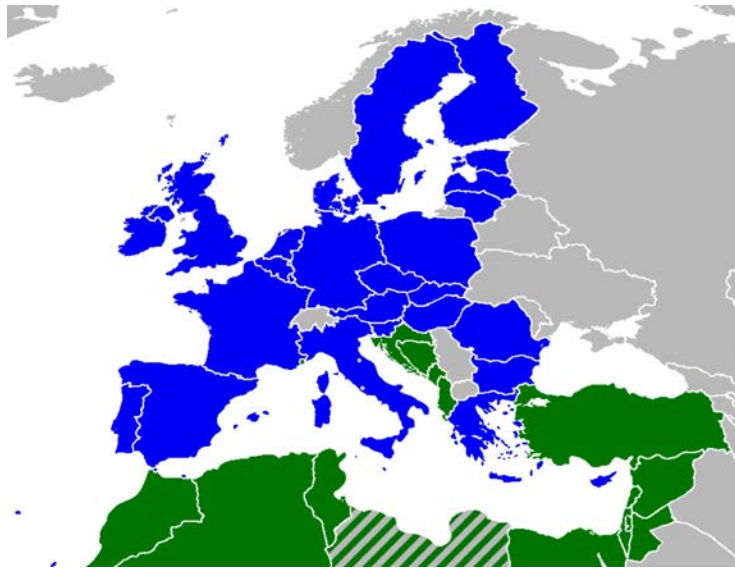
1. Introduction (context)
2. Where we are today
3. How we got here
4. The future



# 1. Introduction – Europe and beyond



# 1. Introduction – Europe and beyond



# 1. Diversity of life history

## Northern

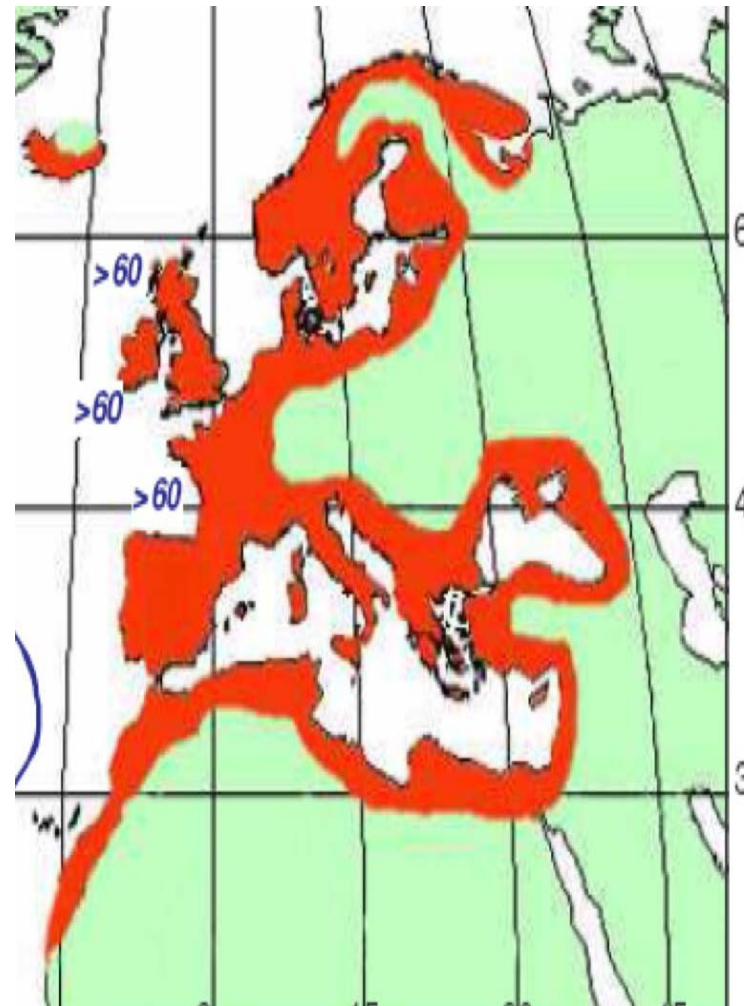
Females dominate

Silvering 10-50+ years

## Southern

Males dominate

Silvering 4-8 years



# 1. Diversity of impacts



## Diversity of solutions

### Fishery controls

- Commercial limits
- Angling – catch and release



### Turbines and pumps

- Screens
- Trap and transport

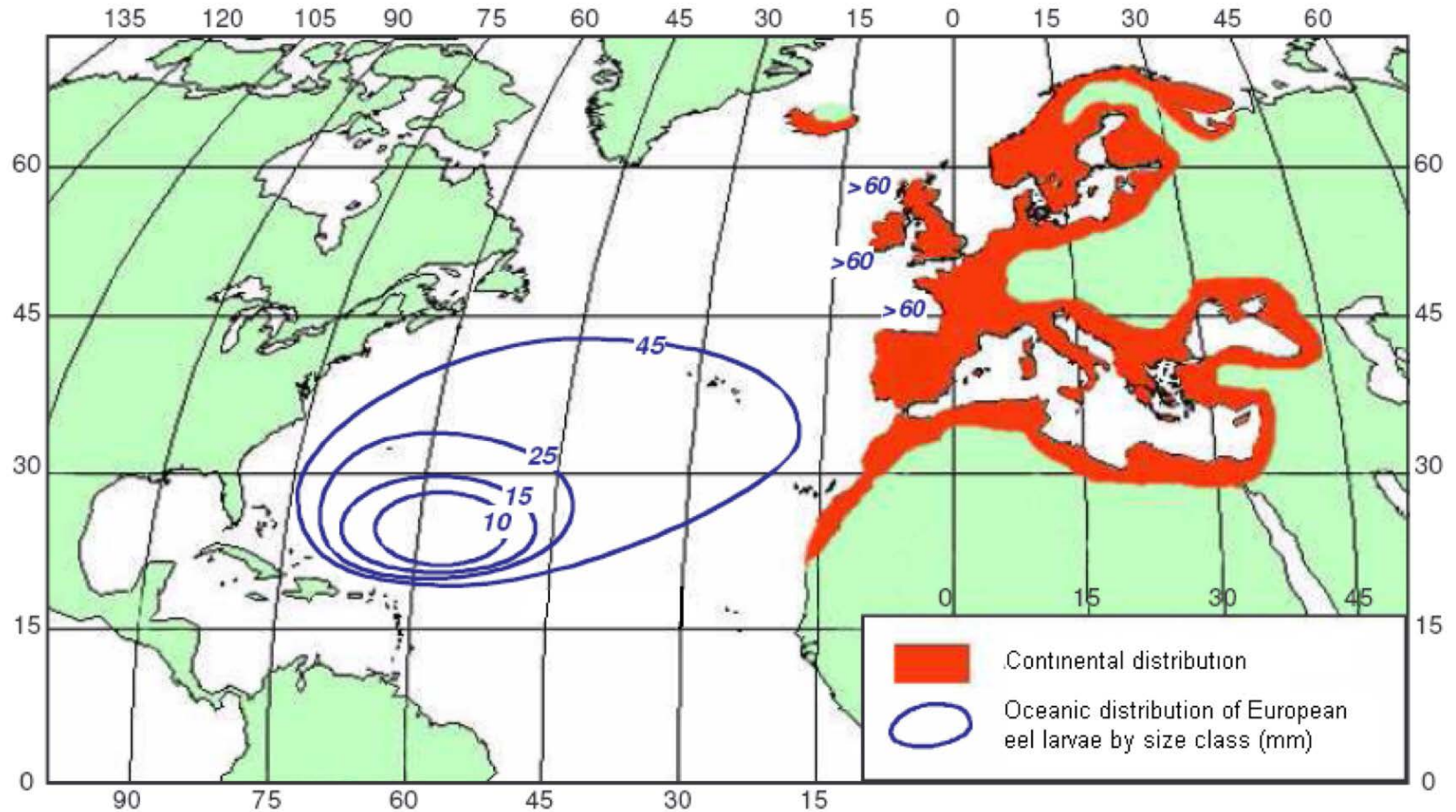


### Eel passes

### Stocking



## Diversity of issues across the range





## 2. Present situation

Panmixia

Whole stock status

International Council for the Exploration of the Seas (ICES)

Management within Europe

EC Regulation sets principles for national obligations

Management outside Europe

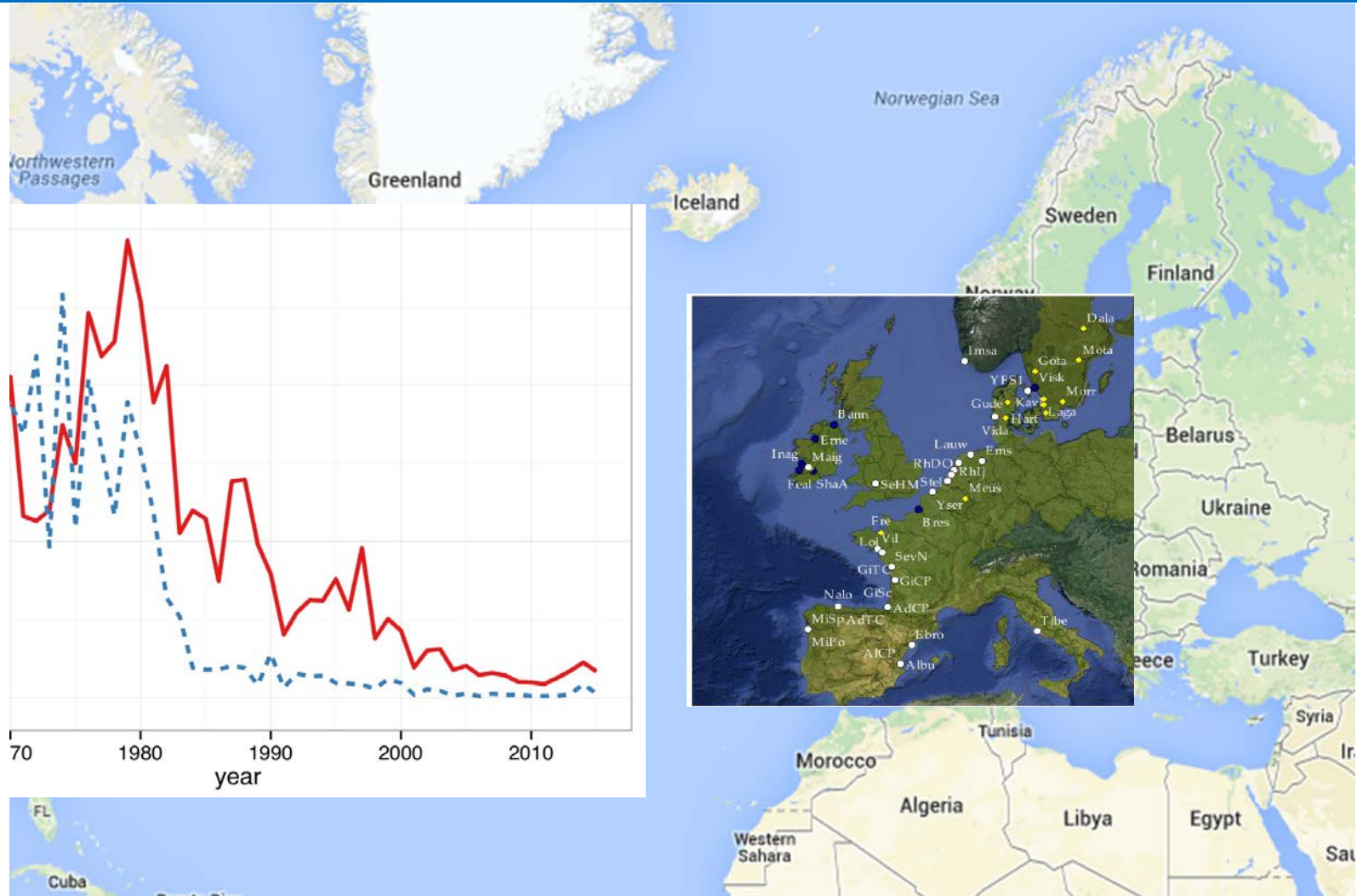
Country by country

Other international drivers

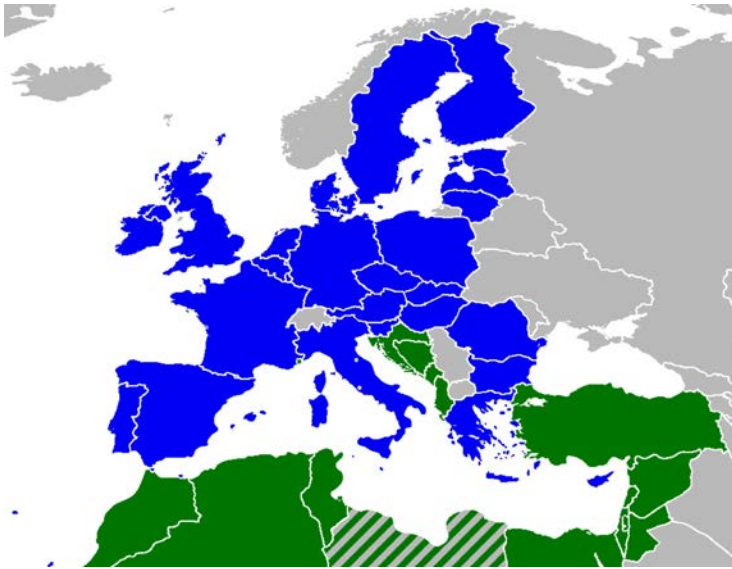
CITES, IUCN Red List, CMS



# Stock status from recruitment indices



# European regional management



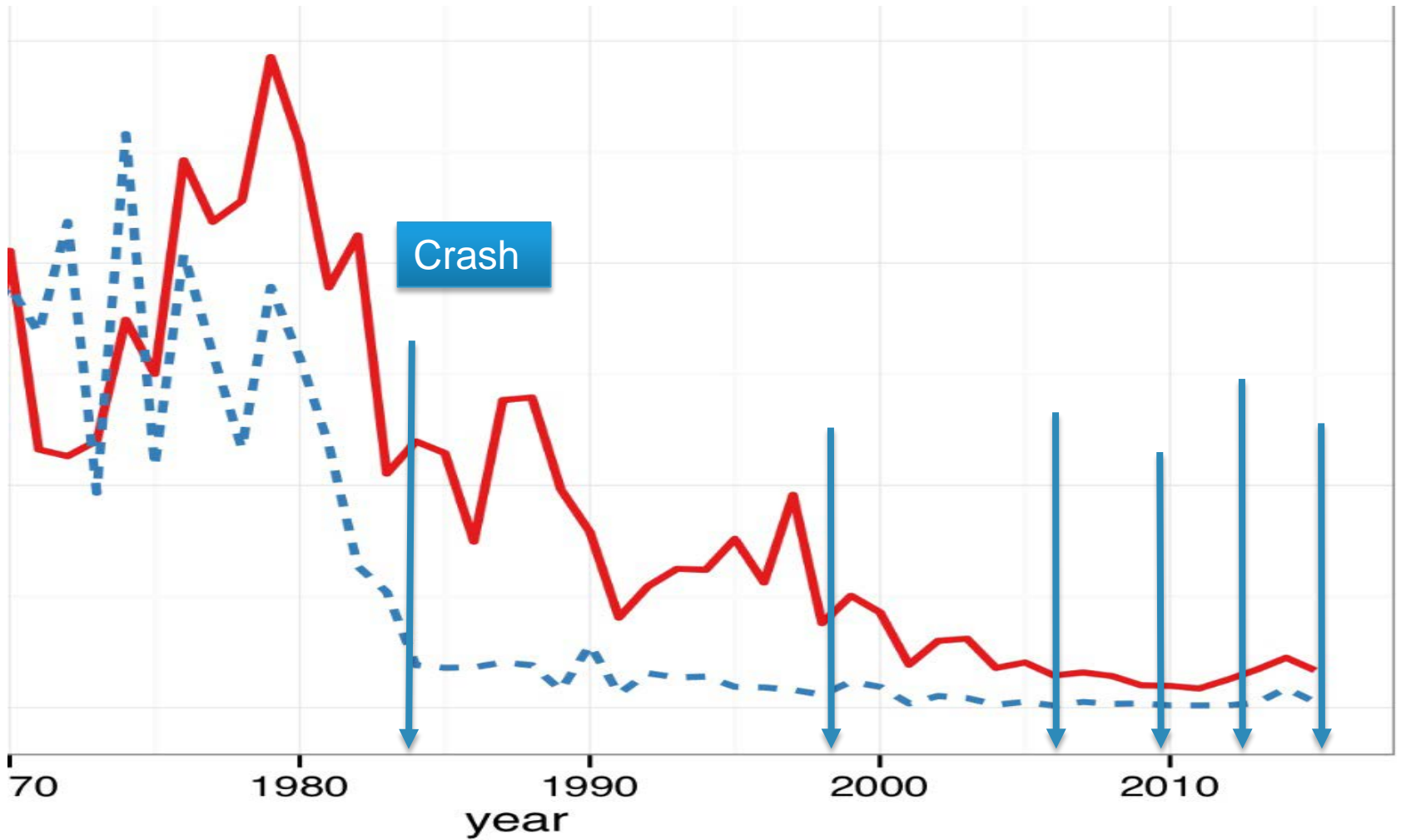
## European Regulation 1100/2007

2009 – develop eel management plans

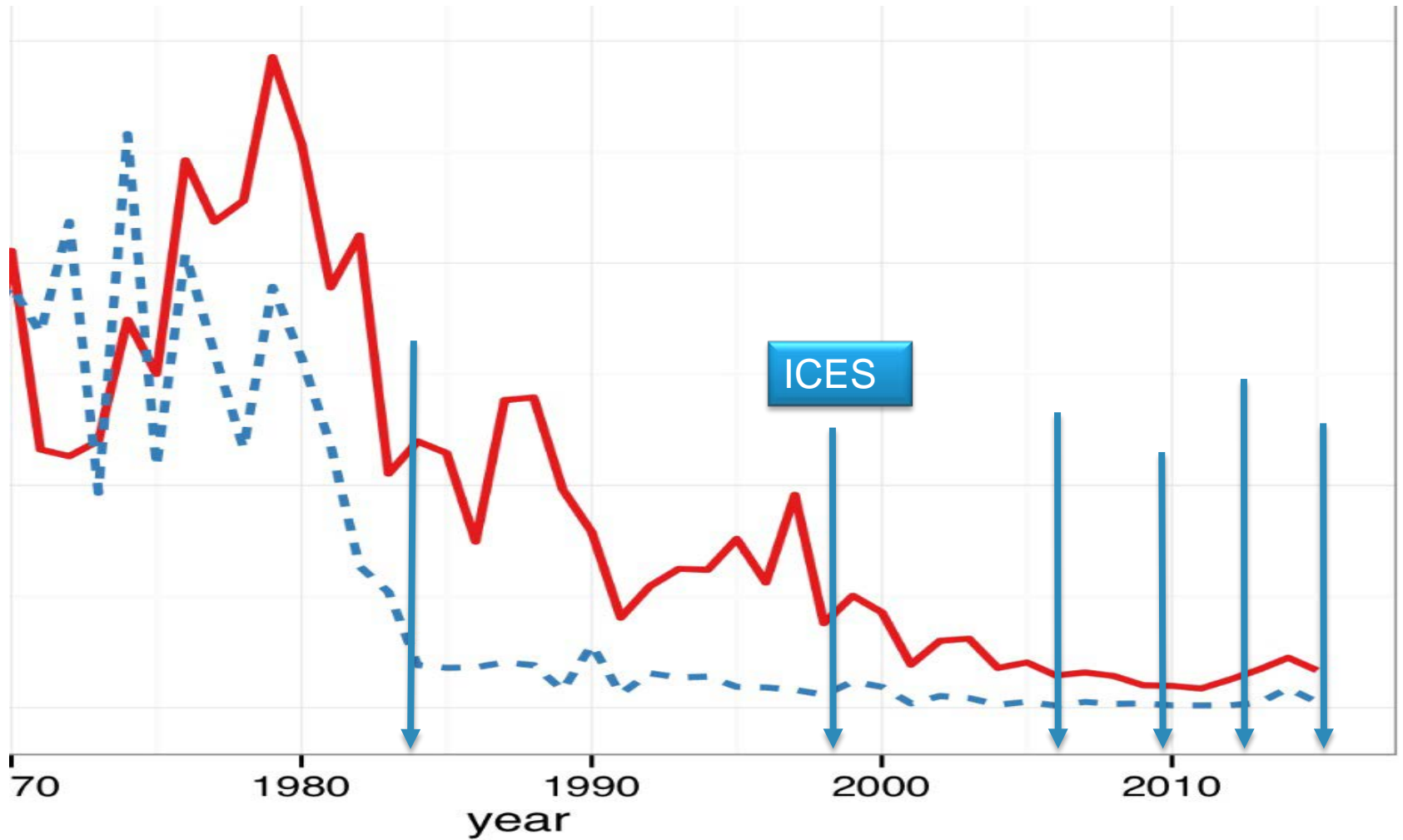
- Define eel producing habitat
- Estimate silver eel escapement today, and in absence of human impacts
  - Absence =? Pristine; pre-1980; ?
- Estimate human impacts now
- Take measures to achieve 40% 'pristine' target
- Report progress 2012, '15, '18, '21, '24 .....
- If not, 50% cut in catch or effort equivalent



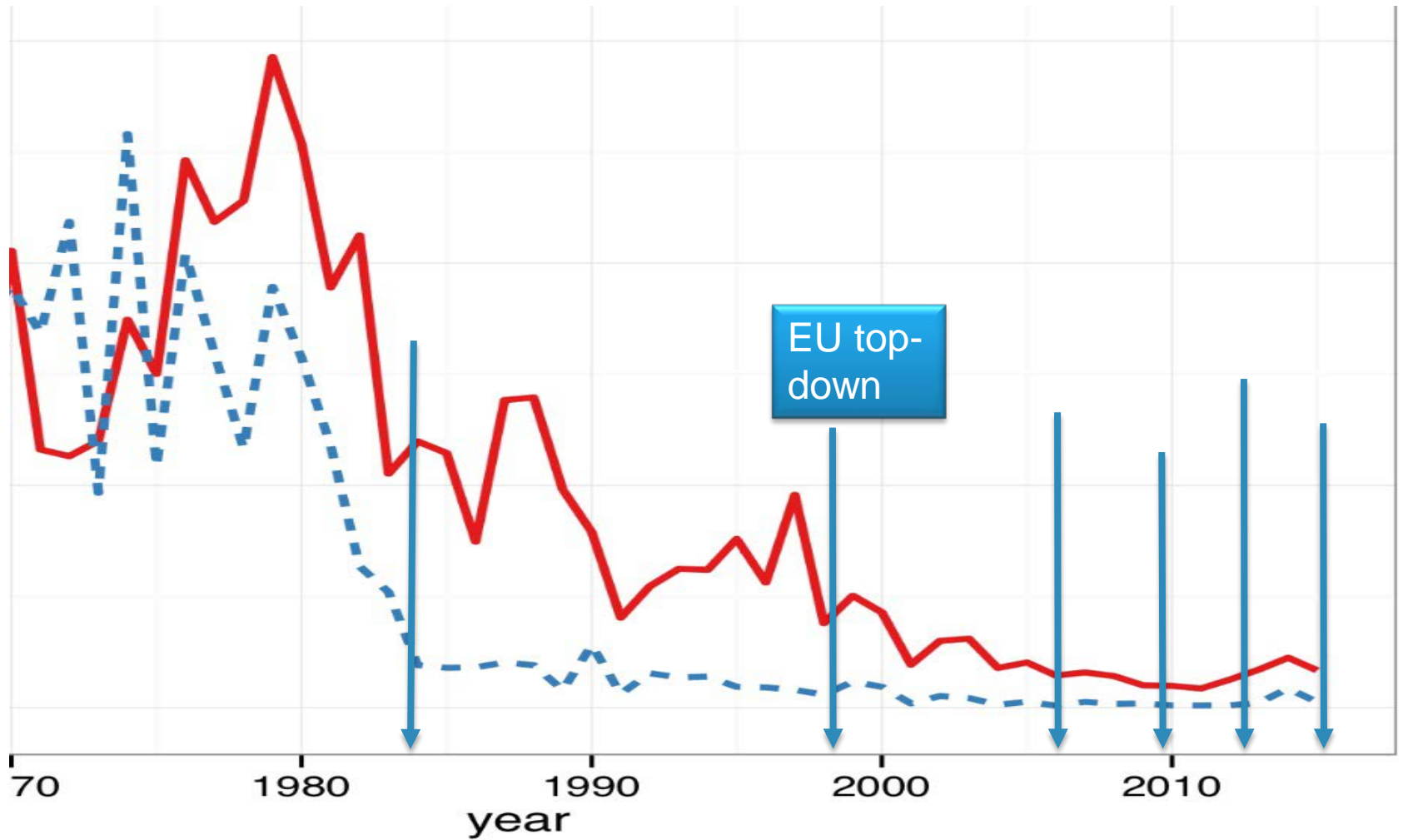
### 3. How we got here



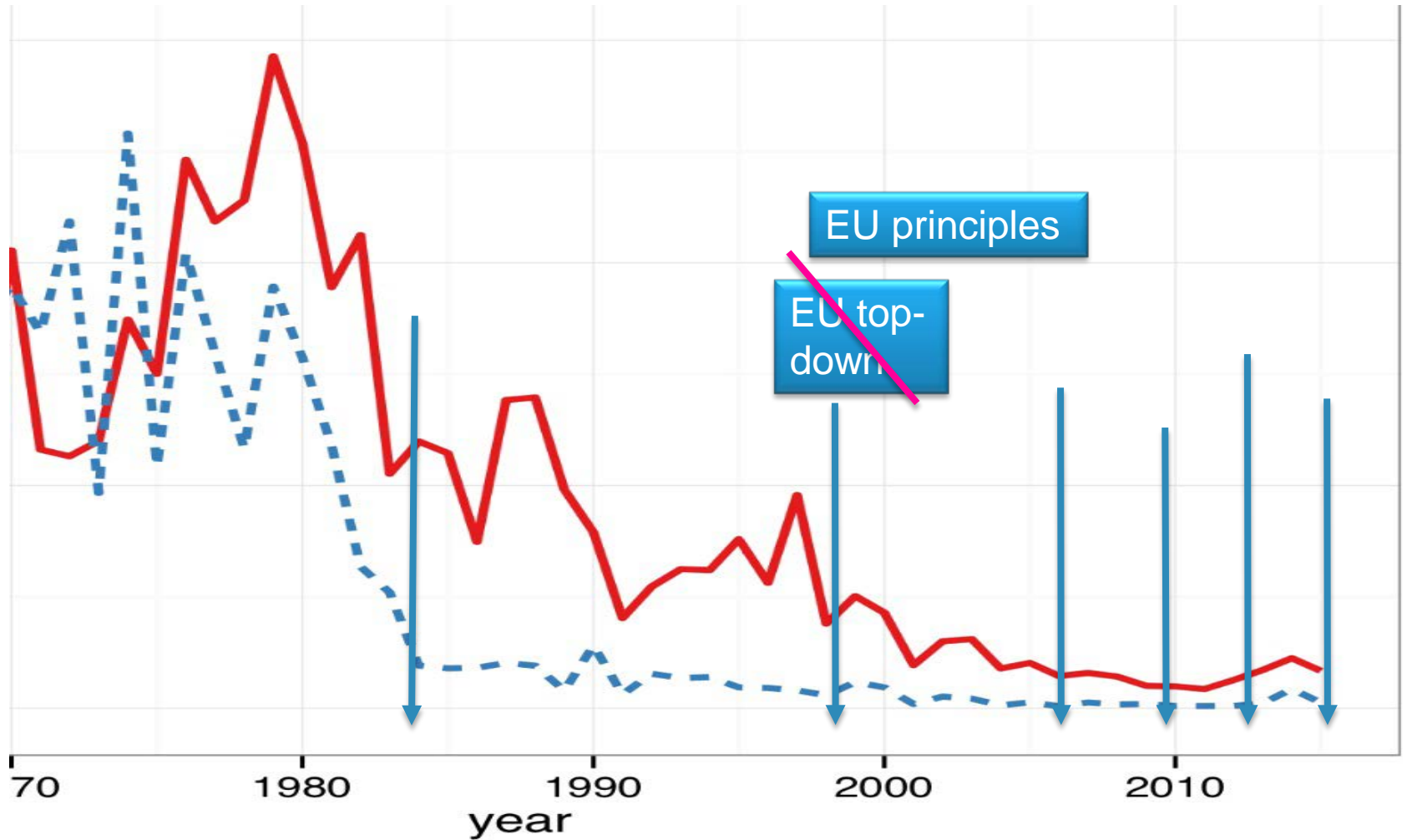
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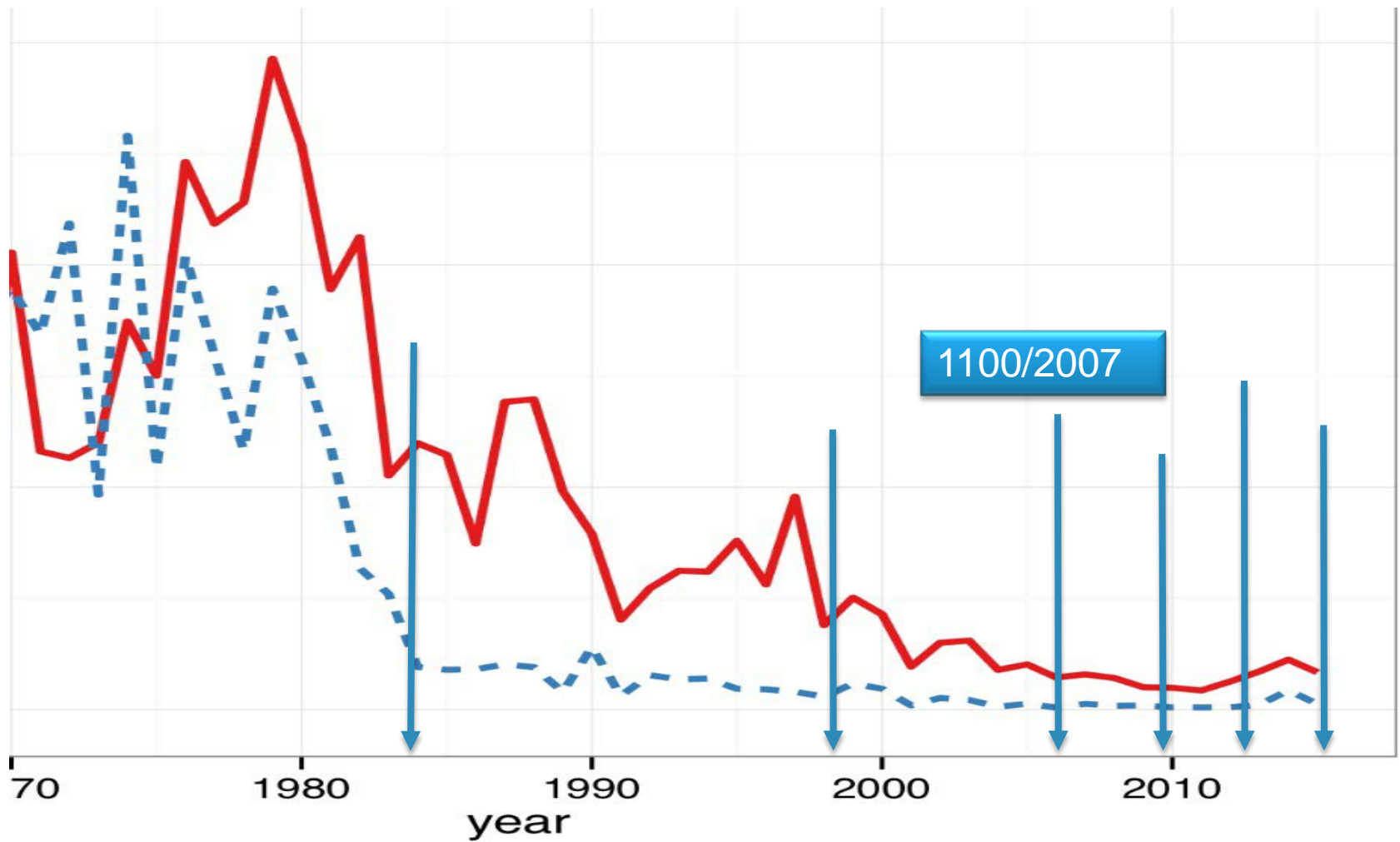


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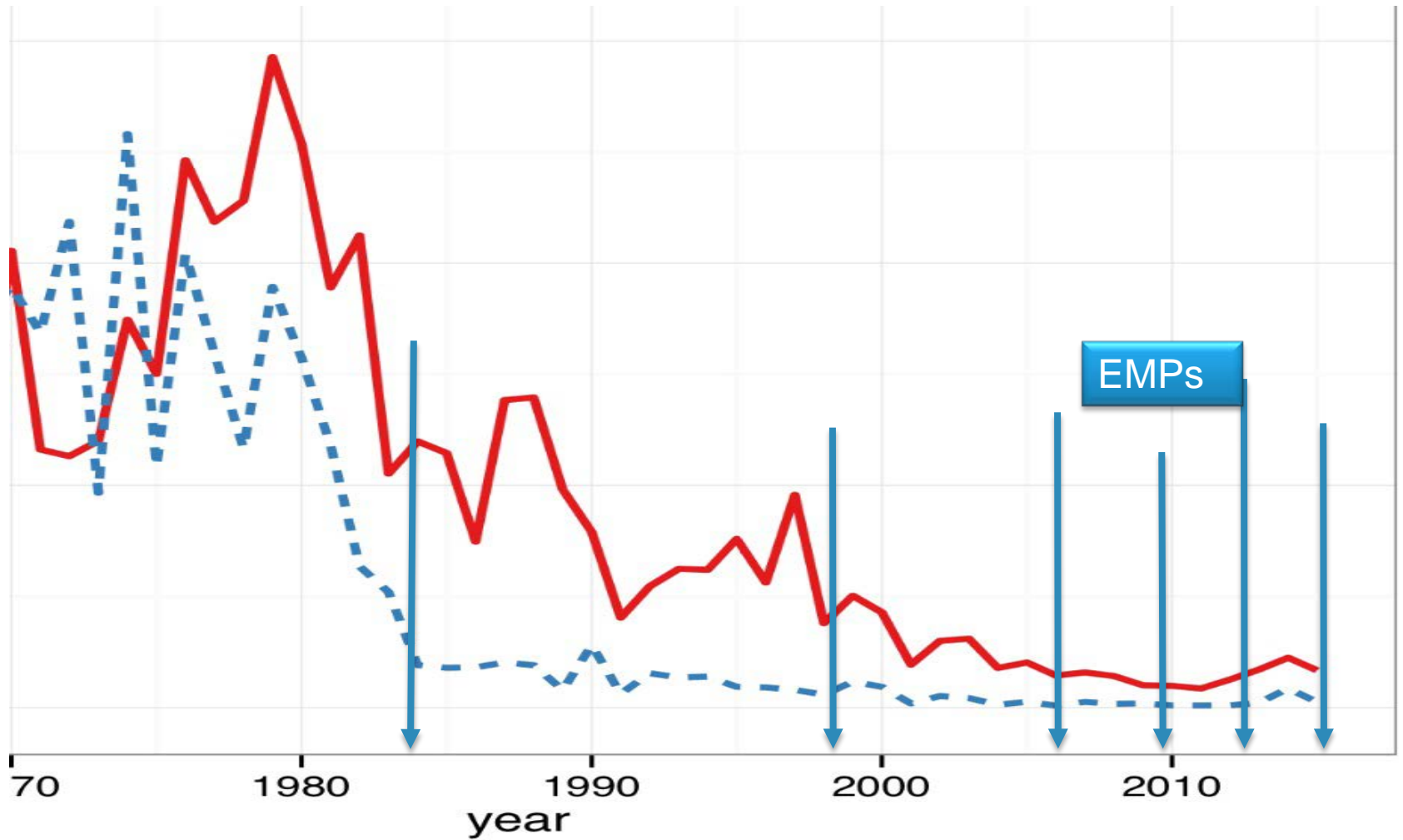




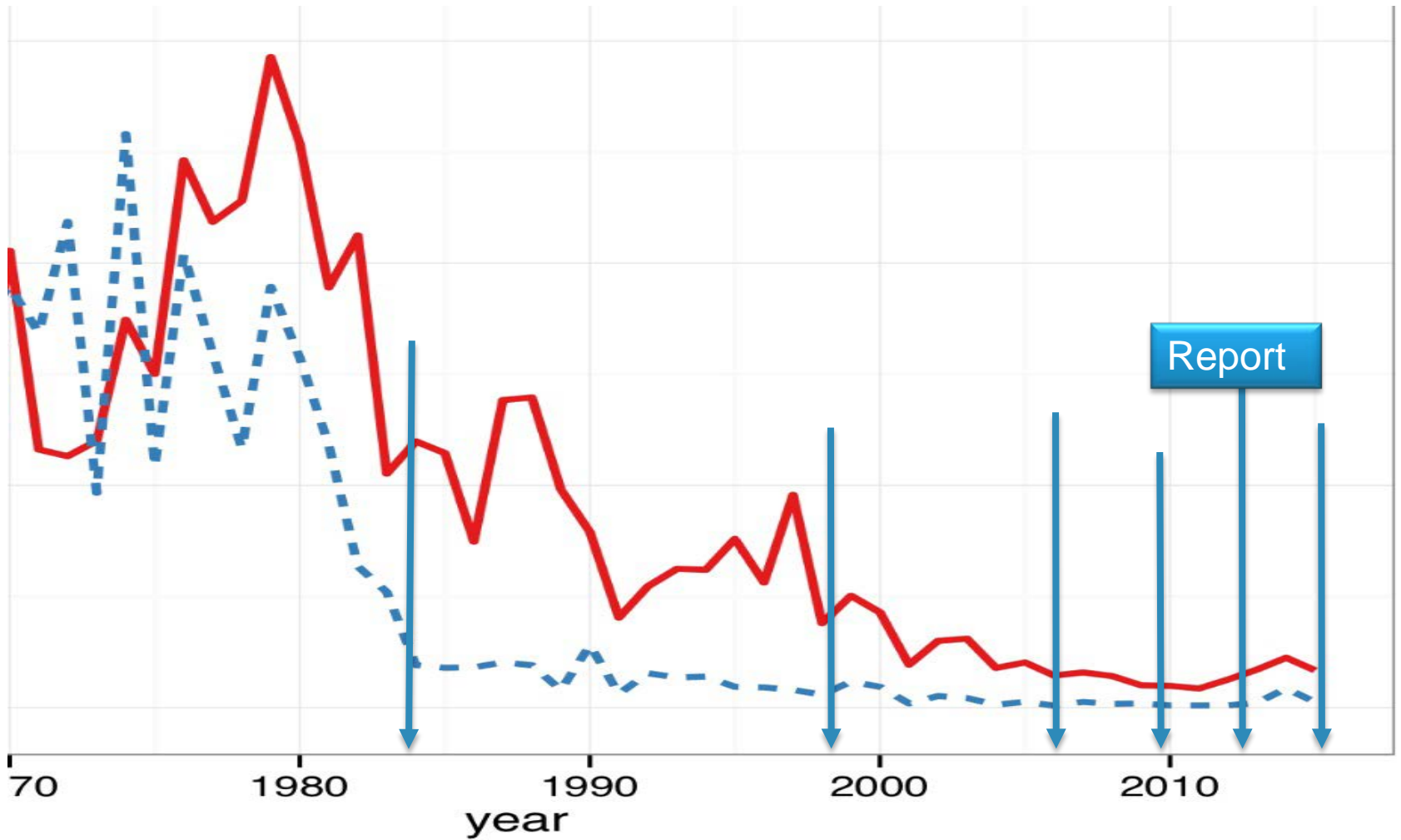
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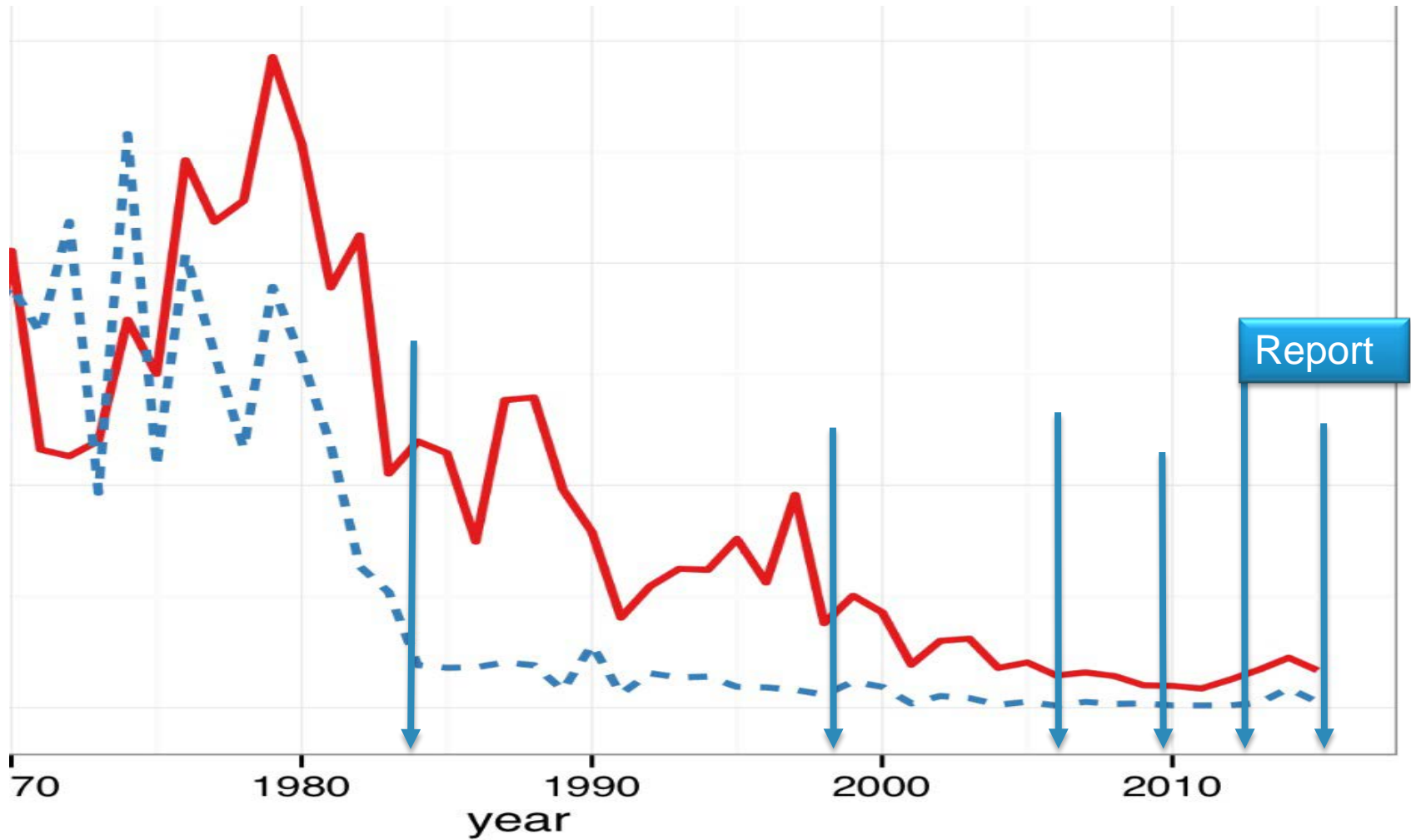
### 3. How we got here



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### 3. How we got here

ICES assesses stock status on recruitment

EC Eel Regulation

sets the target, the principal,  
countries decide targets and actions

Variety of management solutions (e.g.)

Close fisheries

Restore habitat

Bypass hydropower

Stock



### 3. How we got here – the whole stock assessment

#### The assessment framework

EU requests ICES to provide annual stock status, management of fisheries and other impacts

ICES requires member countries to submit data,

EU members: financial support EU (with penalties),  
non-EU members: no carrot, no stick

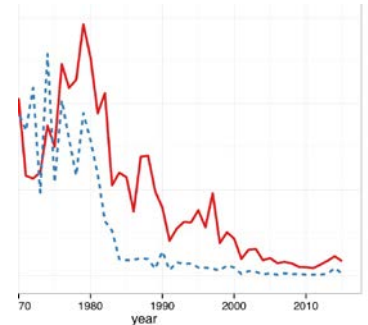


## Developments in stock assessment

### 1) Recruitment indices

Not predictive

Don't identify problems



### 2) Regional assessments

EMPs – silver eel escapement biomass

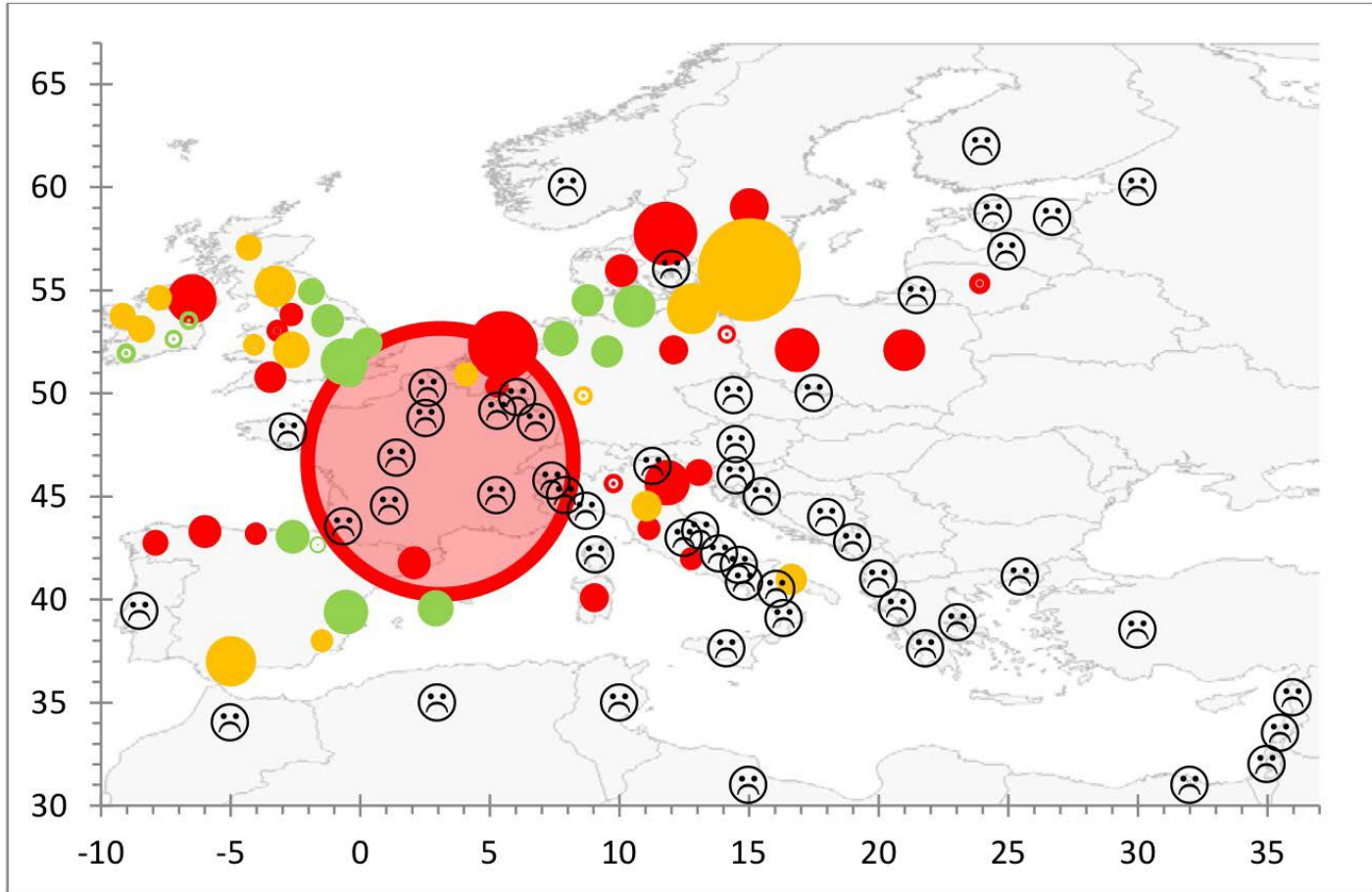
WGEEEL: equivalent mortality target

Sum national indicators = whole stock indicators?

### 3) Classical stock vs recruitment

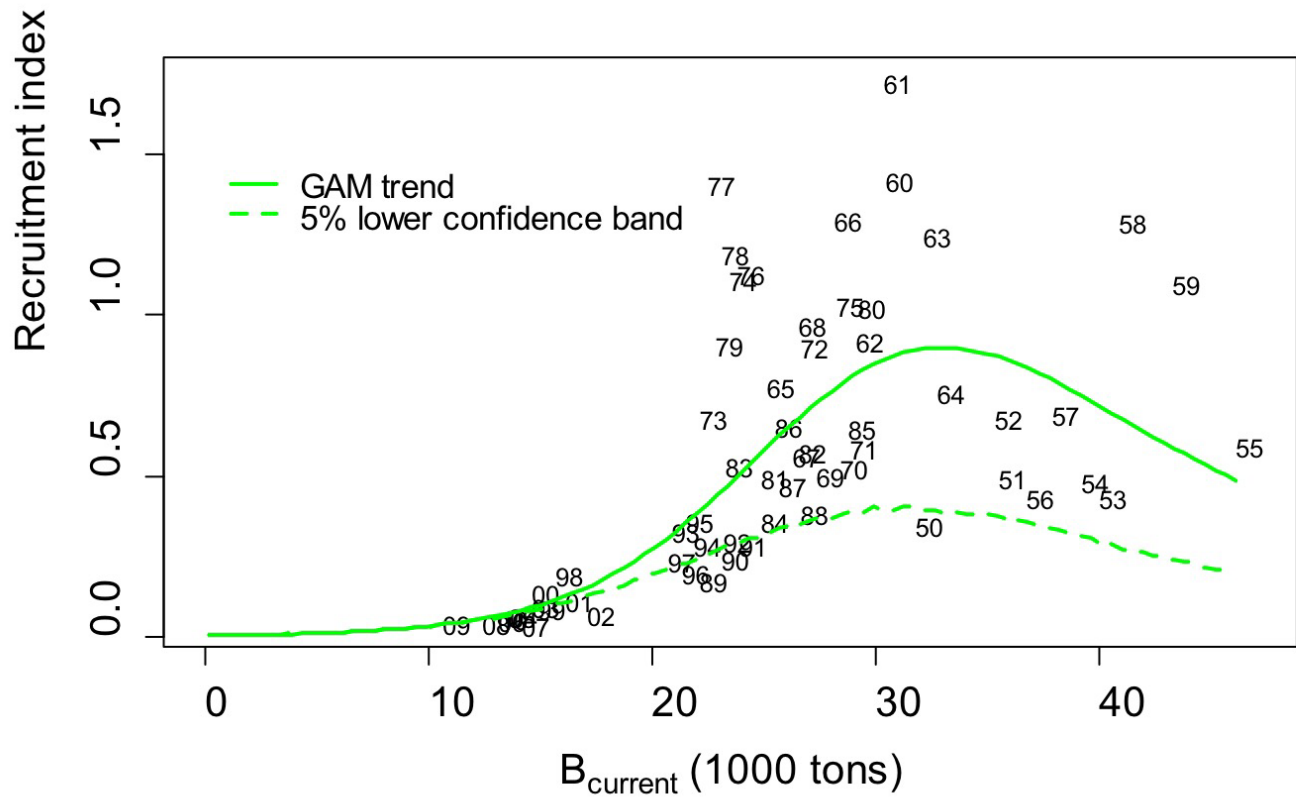


# Biomass & Mortality targets





# Stock vs Recruits



## 4. The future

International regulation has brought action

In Europe: EMP progress reports 2012, 2015

Outside Europe: Management actions; Developing EMPs

Challenges remain, incl.

- Summing national apples & oranges?
  - Addressing all impacts?
  - Quality of data and methods
  - Call for standardisation
- 
- To reward for effort, punish the others?
  - Eel > Europe



*Thank you for listening*

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