

Threats to diadromous fish at sea



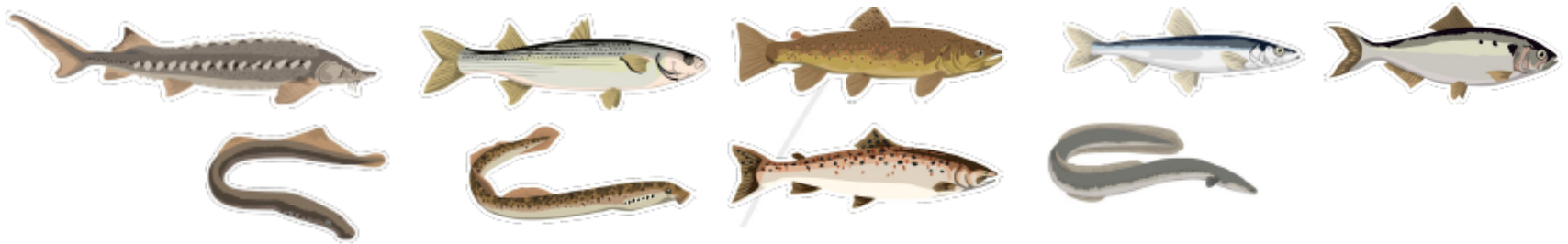
Sophie Elliott and Dylan Roberts

Time at sea

- Lots known about freshwater but little about marine stage...

- **CR** Critically Endangered
- **EN** Endangered
- **VU** Vulnerable
- **NT** Near Threatened
- **LC** Least Concern
- **DD** Data Deficient

Species	Freshwater	Marine	IUCN status
European eel	5-20 years	~4 years	CR
Atlantic salmon	1-6 years	1-4 years	VU
Trout	1-7 years	1-3 years	DD
Shad	1-3 years	2-7 years	DD
Sturgeon	~1 year	10 years	CR



Monitoring at sea – poor!

- **At sea** ~2% of fishing vessels (mainly demersal, salmon = pelagic).
- **Onshore** – diadromous fish miss-identification/reporting.
- **Logbooks** – under-reporting.

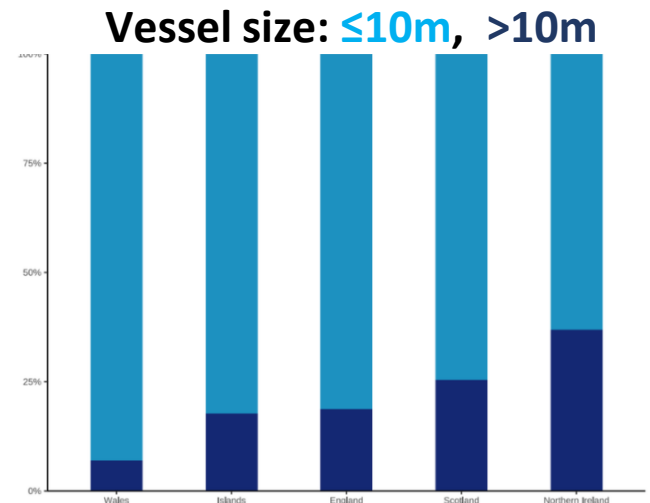
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- **International Council for Exploration of the Sea (ICES) Working Group on Bycatch of Protected Species (WGBYC)** - Atlantic salmon & European eel not included.



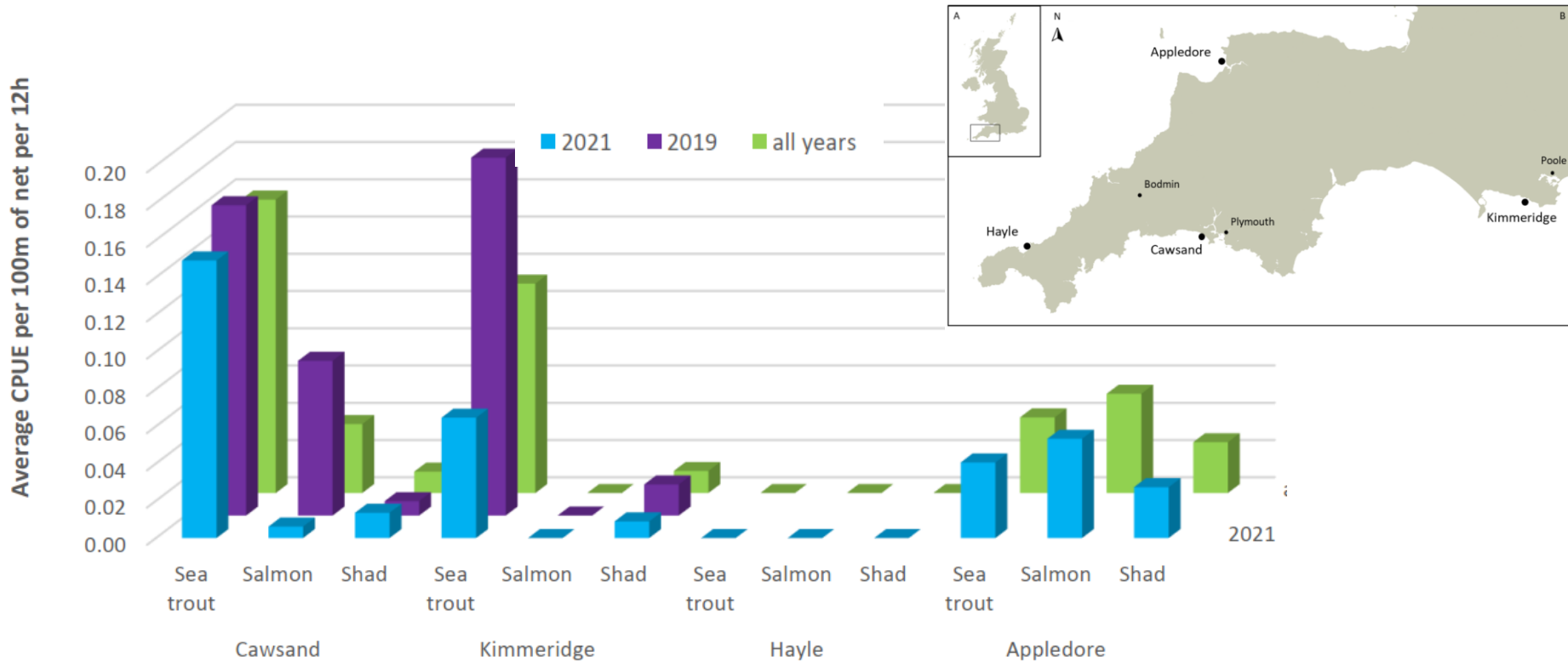
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- MMO annual fisheries statistics – little on <10m vessels.



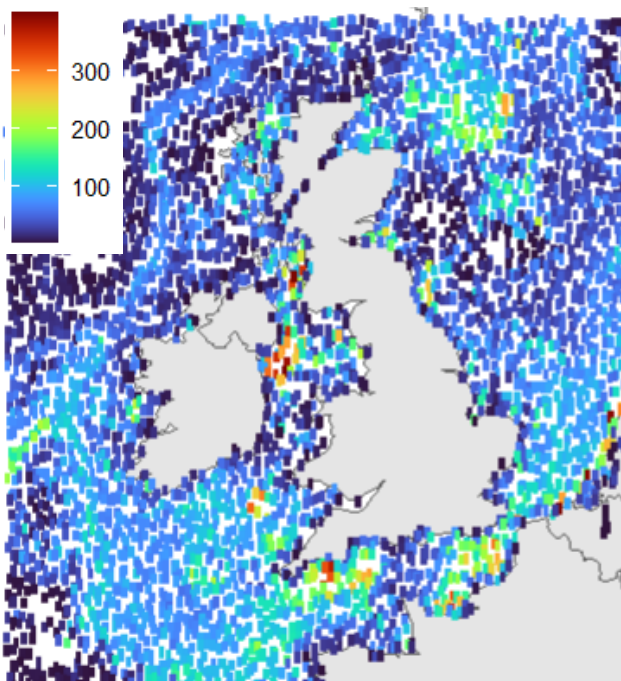
Bycatch risk

- Mainly from gillnets and pelagic vessels.
- No UK bycatch risk assessment exists to date.

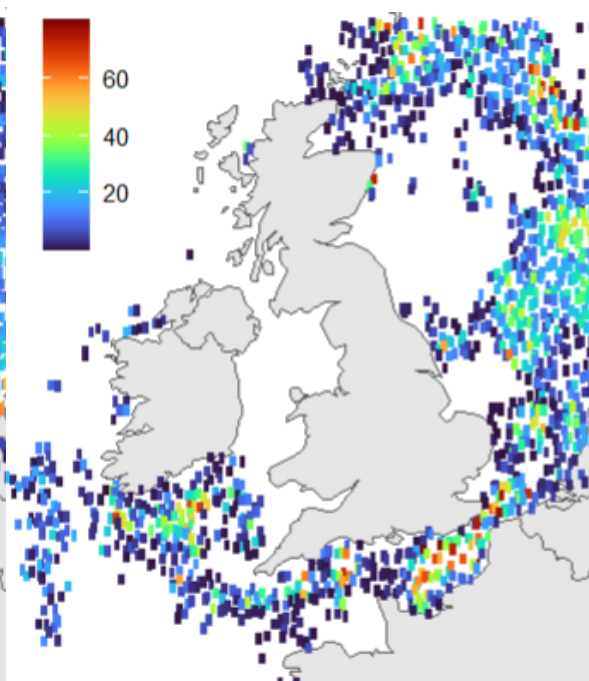


Bycatch risk

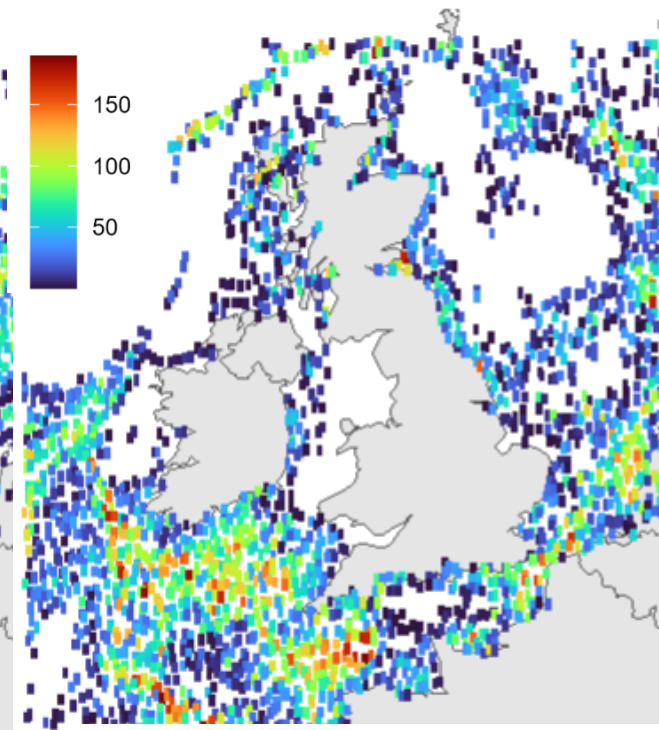
- Global Fishing Watch effort data



Trawlers



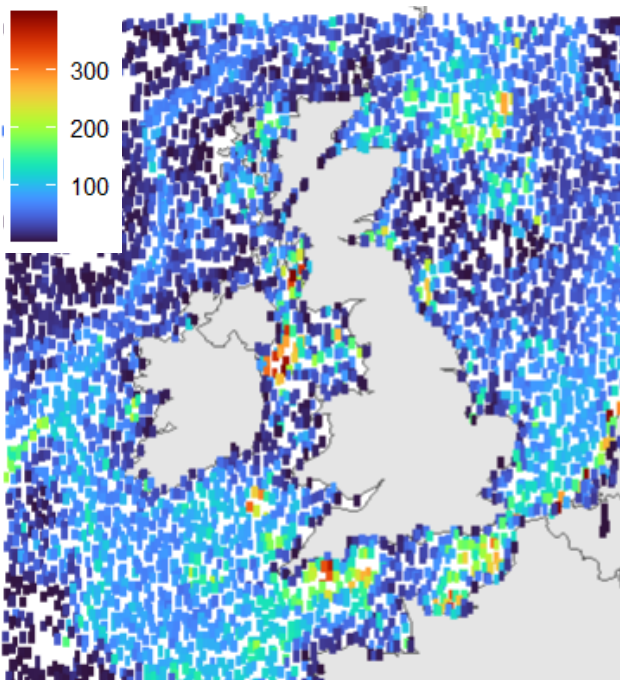
Seiners



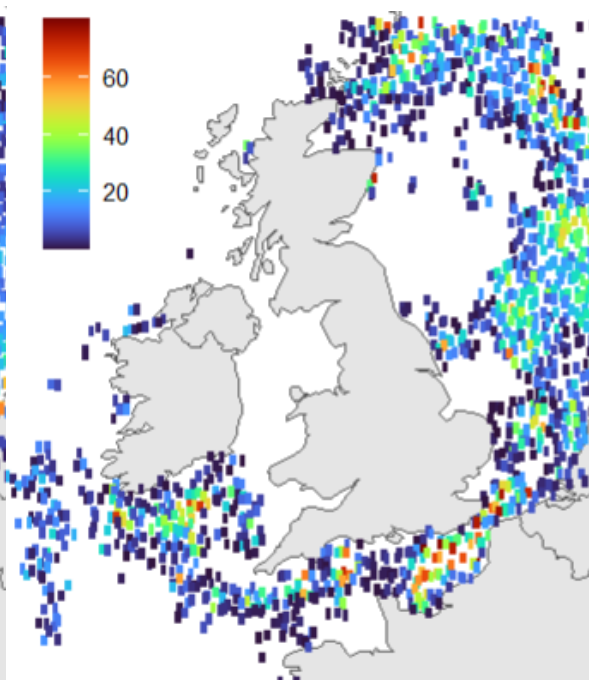
Gillnetting

Bycatch risk

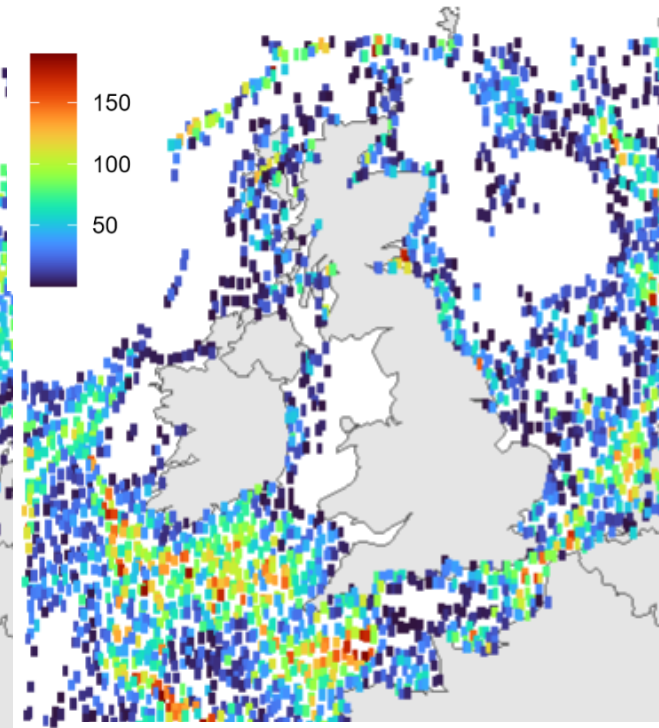
- Global Fishing Watch effort data
 - Unable to distinguish gear categories well.
 - Unable to identify vessels <12m well.
 - >80% of English vessels = <10m.



Trawlers



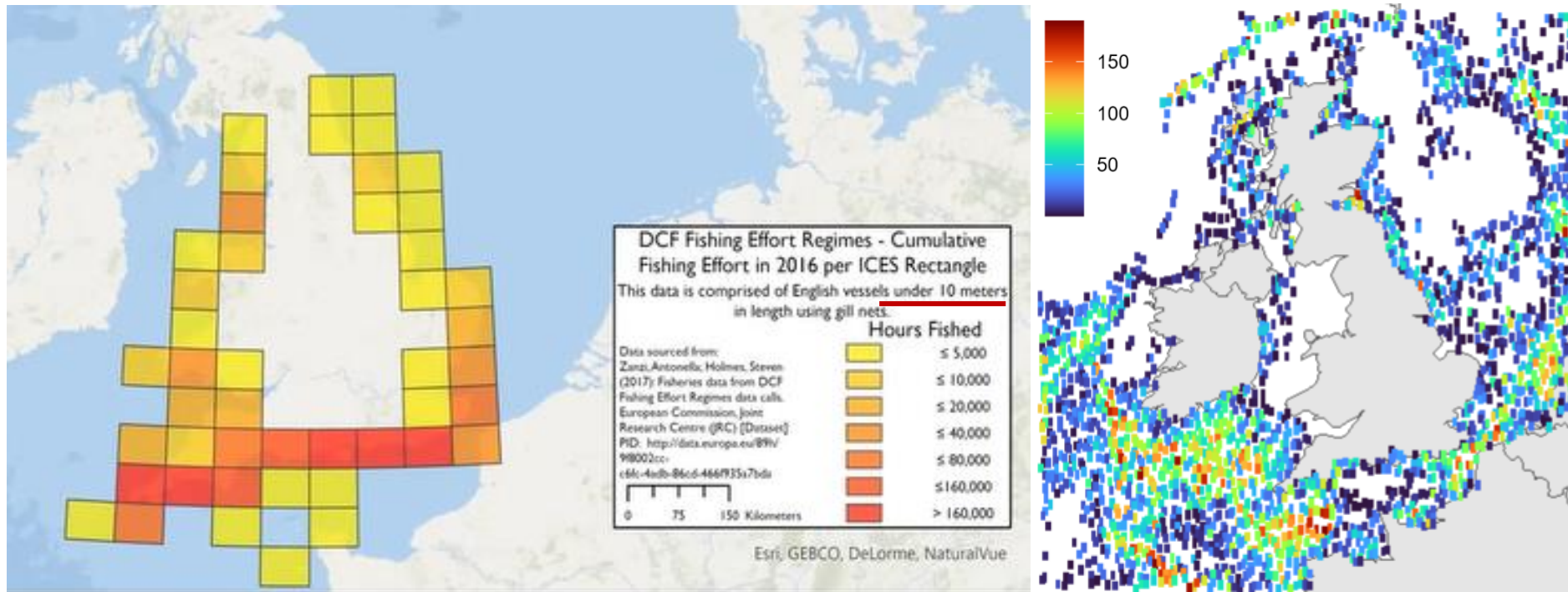
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Gillnetting

Bycatch risk: Need for fine-scale data

- Inaccessible fine-scale Vessel Monitoring System Data owned by DEFRA.



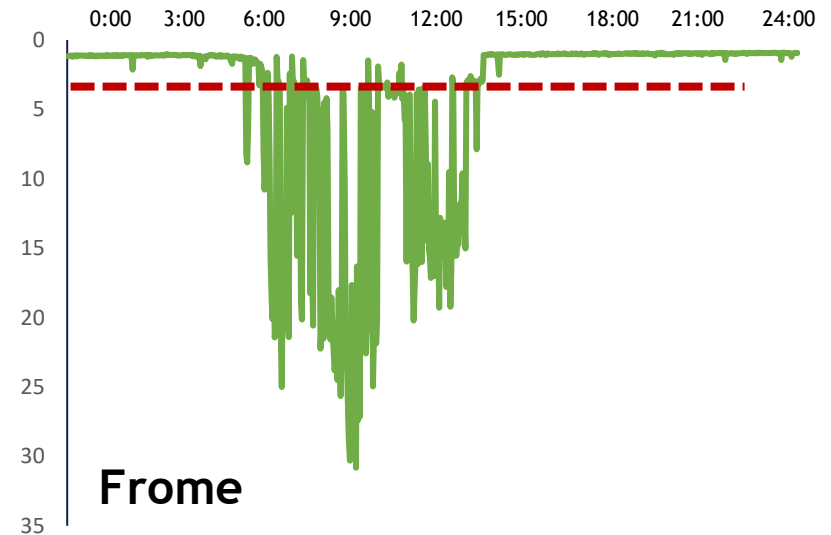
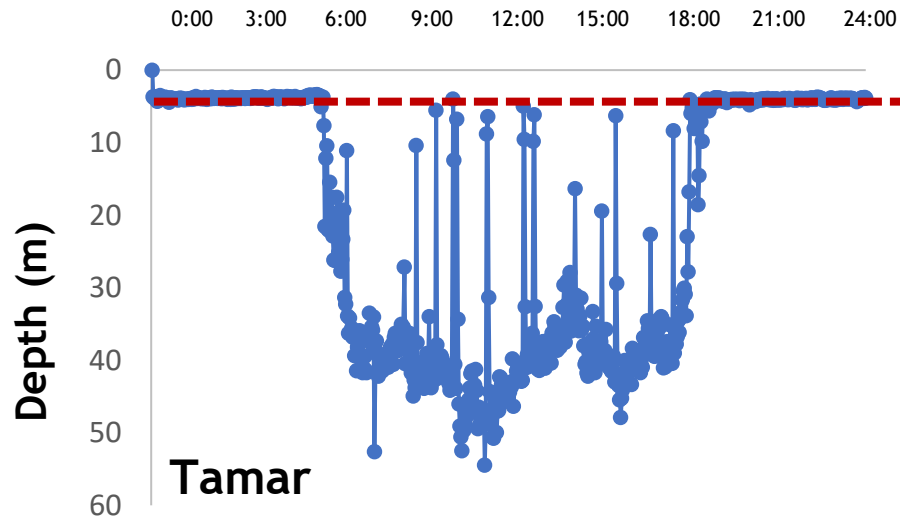
Gillnetting

Bycatch risk: gillnetting bylaws ineffective

- 3-5m min depth gillnetting legal requirement.

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- 3-5m min depth gillnetting legal requirement.
- Salmonids dive deeper.

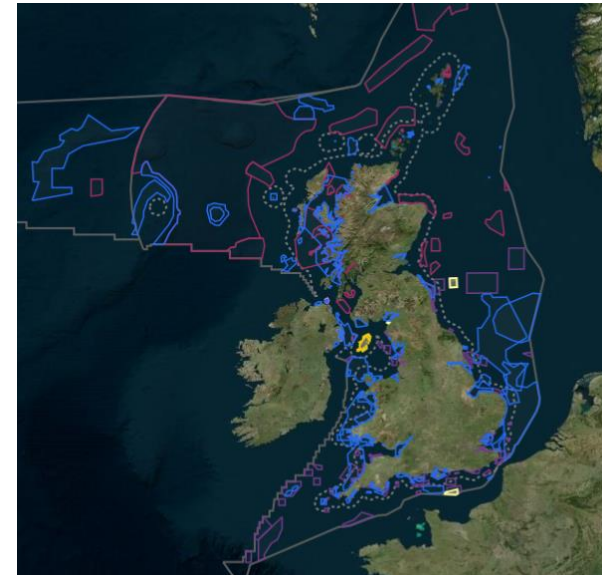


What we can do to work towards *'world-class fisheries management'*

- Protection and management:
 - Diadromous fish need to be recognised as freshwater & marine species.

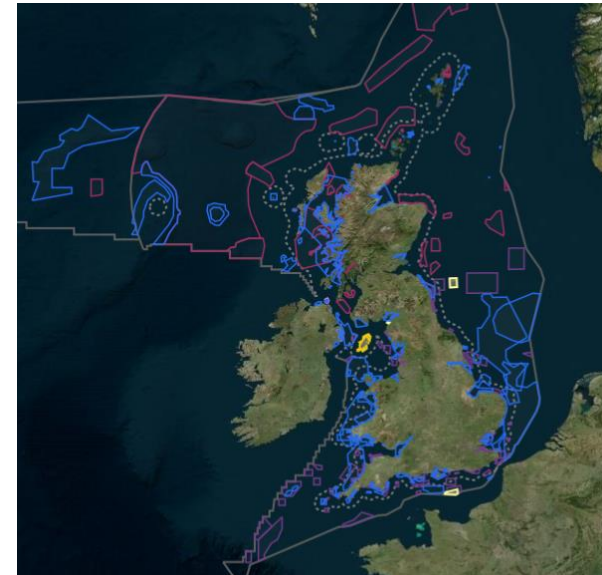
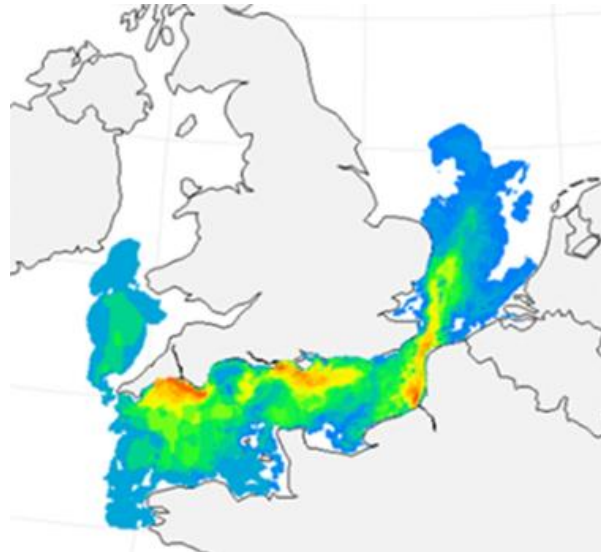
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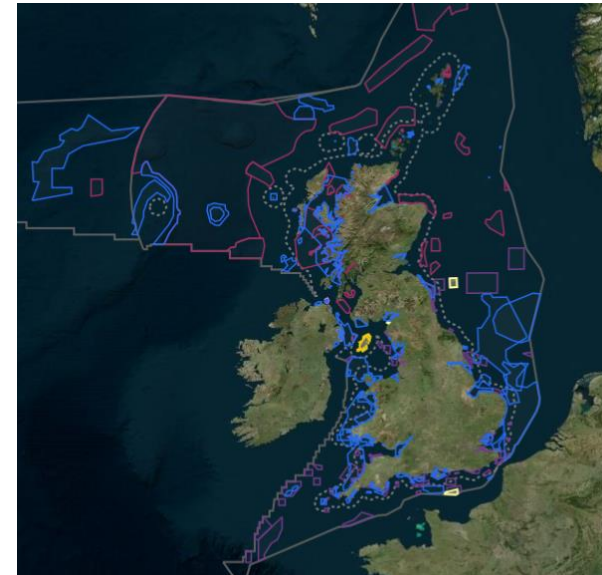
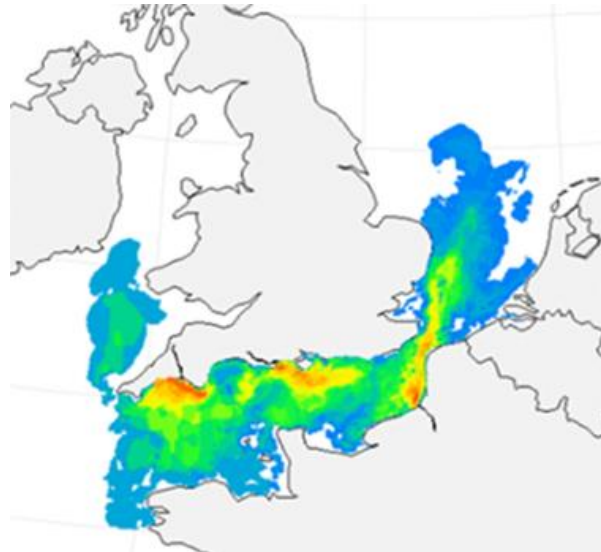
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 - Provide resources to undertake fish-tracking studies for protection.
 - Avoid gillnetting in estuarian & surrounding areas that connect to natal rivers.



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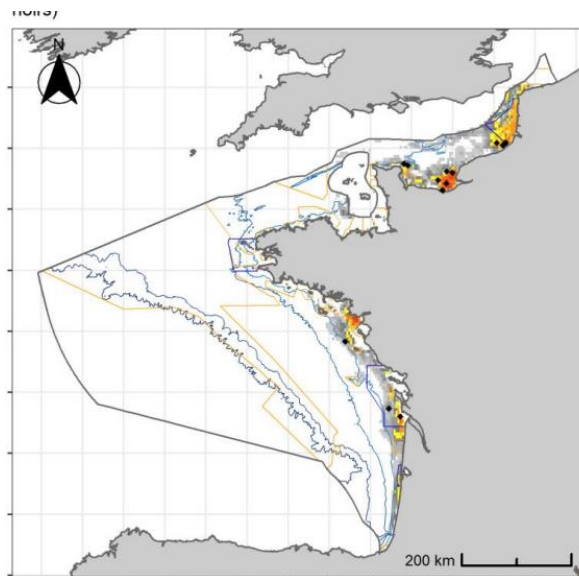
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Marine traffic: 24th April 2022



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 - Scale up the onboard observations for bycatch (inshore & offshore).
 - Need for diadromous fish bycatch risk analysis.

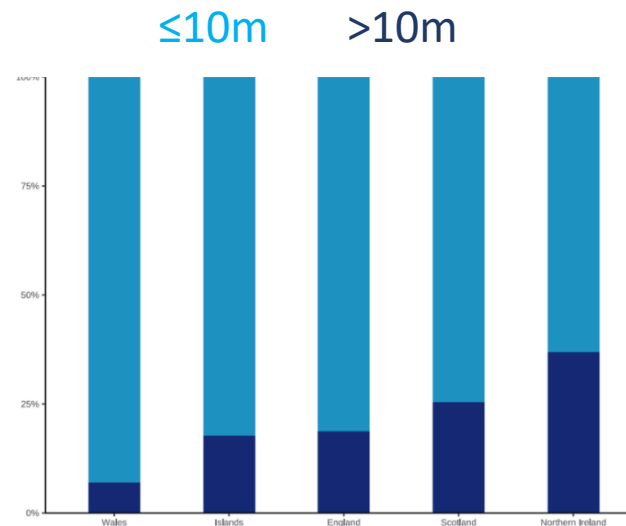
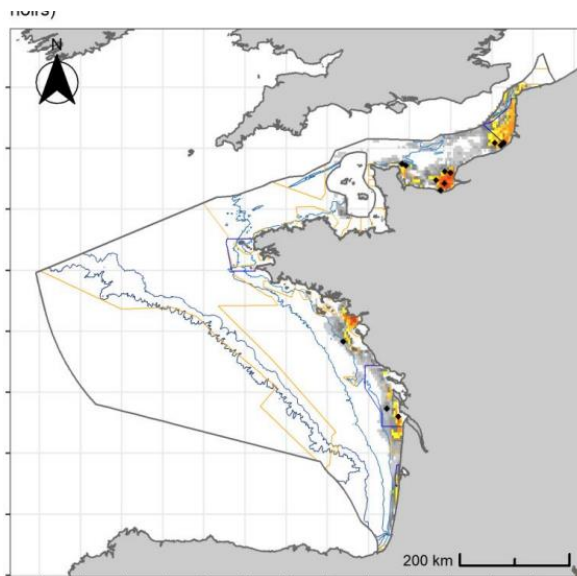


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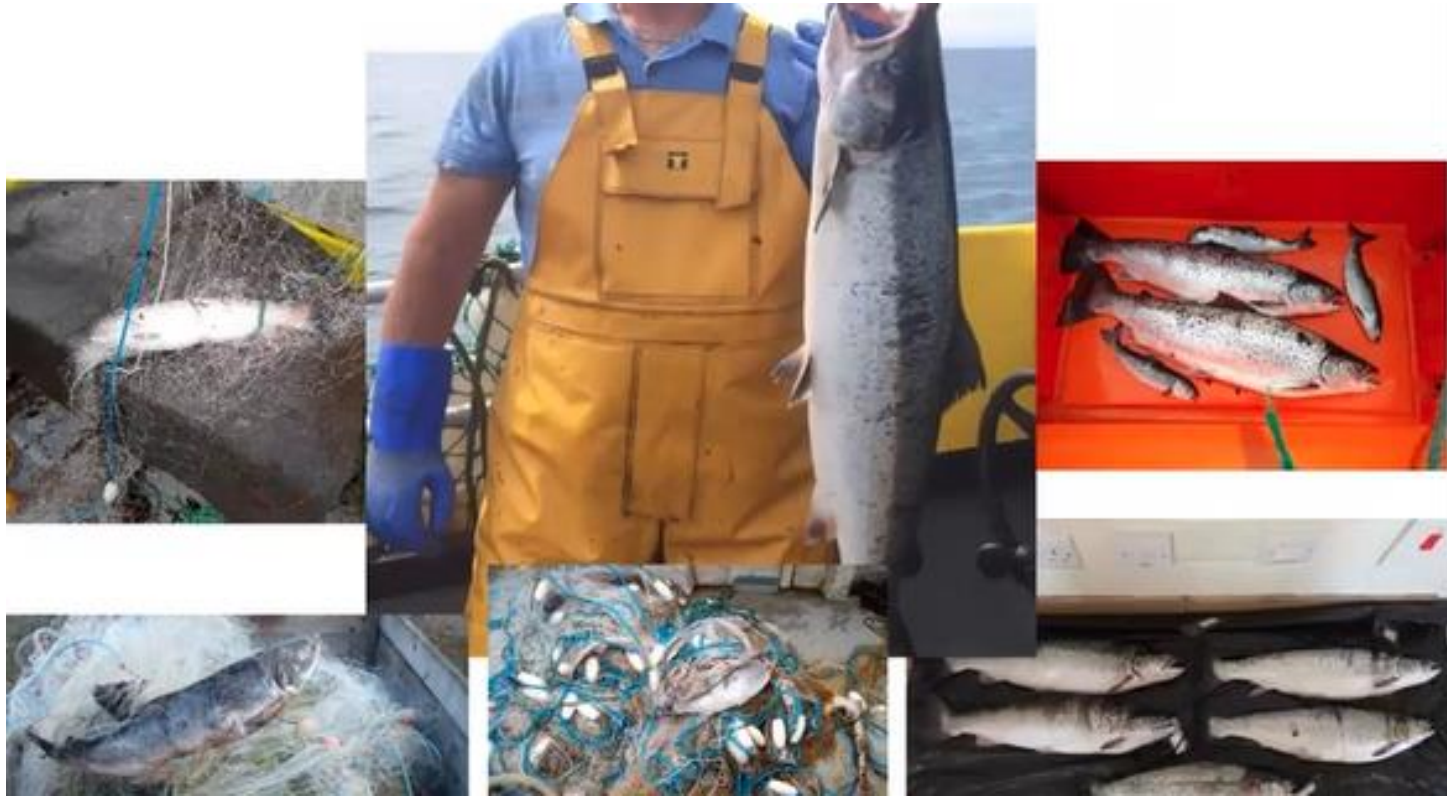


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 - Scale up the onboard observations for bycatch (inshore & offshore).
 - Need for diadromous fish bycatch risk analysis.
 - Need to include inshore fishing in MMO annual fisheries statistics.



Thank you!



Sophie Elliott and Dylan Roberts