Iascach Intíre Éireann
Inland Fisheries Ireland

Citizen Science and Fisheries

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Head of Research and Development

A little background

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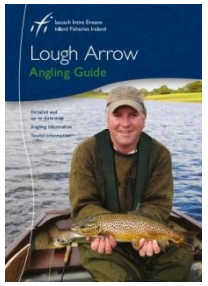
The conservation, protection, management, development and improvement of inland fisheries

National Angling Development Plan



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Pink salmon
Non-native Fish Species Alert!

National Strategy for Angling Development

Salmon Science and Management

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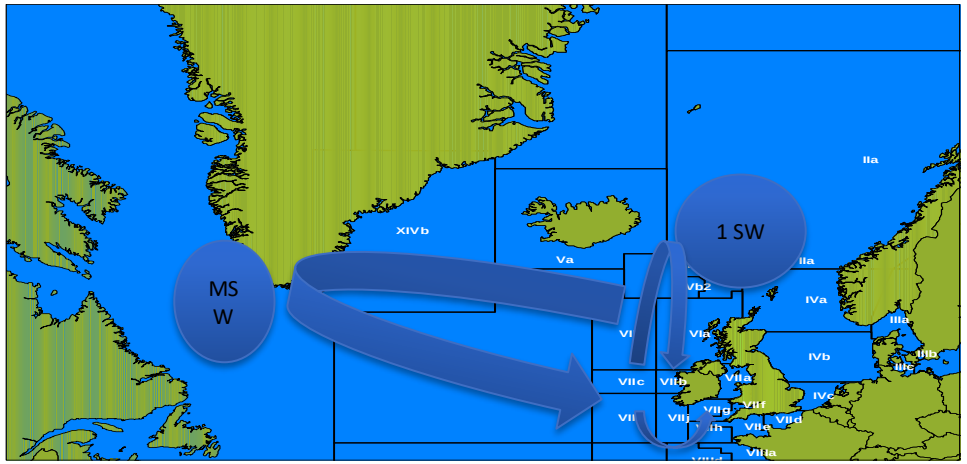
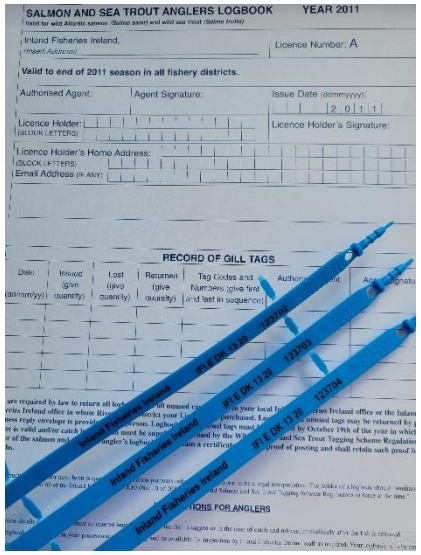




Scientific Science Advice

Anglers engaged with their individual catchment and on conservation

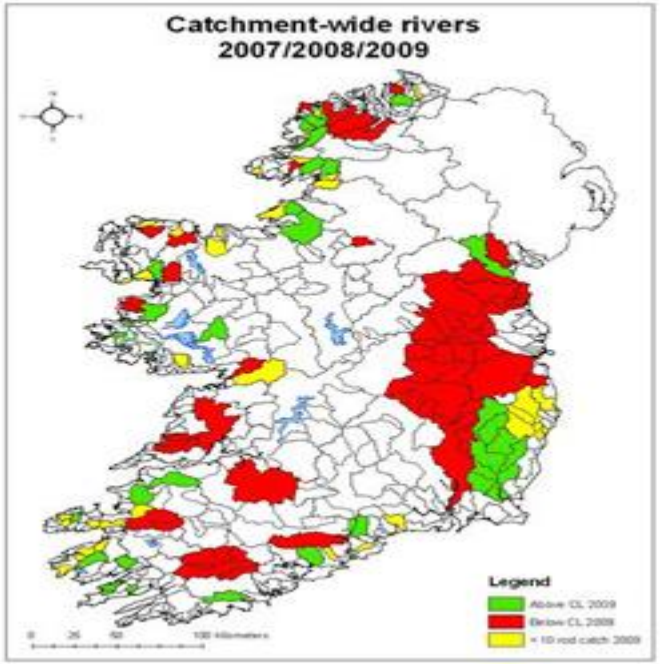
- **Rod Catch**
- **Counter Data**
- Juvenile Index

TEGOS/NSSSCIF

5 Year Historic Data

Dundalk all ages	River name		Flurry	Castletown	Fane	Glyde	Dee	Dee Counter
	Common estuary		Dun-A	Dun-A	Dun-B	Dun-C	Dun-C	
	Fisheries Board Code		2	3	4	5	6	6
	OS River Number		91	92	94	95	96	96
	Type of monitoring		Catch	Catch	Catch	Catch	Catch	Counter
Harvests / counts by year						02 to 06	02 to 06	
2003		2002	0	12	30	43	92	118
2004		2003	0	41	126	63	40	84
2005		2004	0	18	73	36	55	161
2006		2005	2	12	14	70	57	211
2007		2006	0	0	100	33	23	376
*C&R								
2003	C&R 2002		0	0	3	0	0	
2004	C&R 2003		0	0	2	7	0	
2005	C&R 2004		0	1	3	0	0	
2006	C&R 2005		0	1	11	1	0	
2007	C&R 2006		0	42	40	1	0	
Catches, corrected for released fish								
2003		2003	0	12	33	43	92	40
2004		2004	0	41	128	70	40	55
2005		2005	0	19	76	36	55	57
2006		2006	2	13	25	71	57	23
2007		2007	0	42	140	34	23	53
			0	25	80	51	53	46
Exploitation rates in the rod fisheries (Crystal Ball assumptions)								
Triangular Distribution	Likely		0.05	0.15	0.15	0.15	0.26	
	Minimum		0.01	0.02	0.02	0.02	0.06	
	Maximum		0.12	0.35	0.35	0.35	0.44	
			Crystal Ball ER draws based on assumptions above					
2003		2002	0.055	0.144	0.129	0.160	0.291	
2004		2003	0.061	0.257	0.130	0.163	0.091	
2005		2004	0.037	0.149	0.171	0.068	0.217	
2006		2005	0.076	0.181	0.126	0.155	0.253	
2007		2006	0.049	0.073	0.325	0.093	0.095	
Estimated spawners			Assume 33% of CL					
2003		2002	41	71	225	226	224	118
2004		2003	41	118	857	366	401	84
2005		2004	41	110	372	492	198	161
2006		2005	41	60	184	388	169	211
2007		2006	41	575	330	332	218	376
Conservation limits								
	Total CL		123	197	543	2172	2410	2410
	1SW CL		114	182	502	2009	2229	2229
	2SW CL		9	15	41	163	181	181
	within district		0.023	0.036	0.100	0.399	0.443	0.443
Draft / snap / other catches (by river)								
	Draft prop by river		0.00000	0.00000	0.41280	0.30615	0.14053	0.14053
	Snap prop by river		0	0	0	0	0	0
	Other prop by river		0	0	0	0	0	0
2003		2002	0	0	205	159	73	70
2004		2003	0	0	305	152	70	103
2005		2004	0	0	219	226	103	74
2006		2005	0	0	128	162	74	44
2007		2006	0	0	0	95	44	0
Driftnet catches (using river specific proportions of national catch based on CWT analysis in 148 rivers database)								
	Prop by river		0.0358	0.1543	0.3344	0.2478	0.1139	0.1139
2003		2002	16	67	145	108	49	49
2004		2003	16	67	145	108	49	49
2005		2004	16	67	145	108	49	49
2006		2005	16	67	145	108	49	49
2007		2006	16	0	0	108	49	0

Independent Scientific Advice



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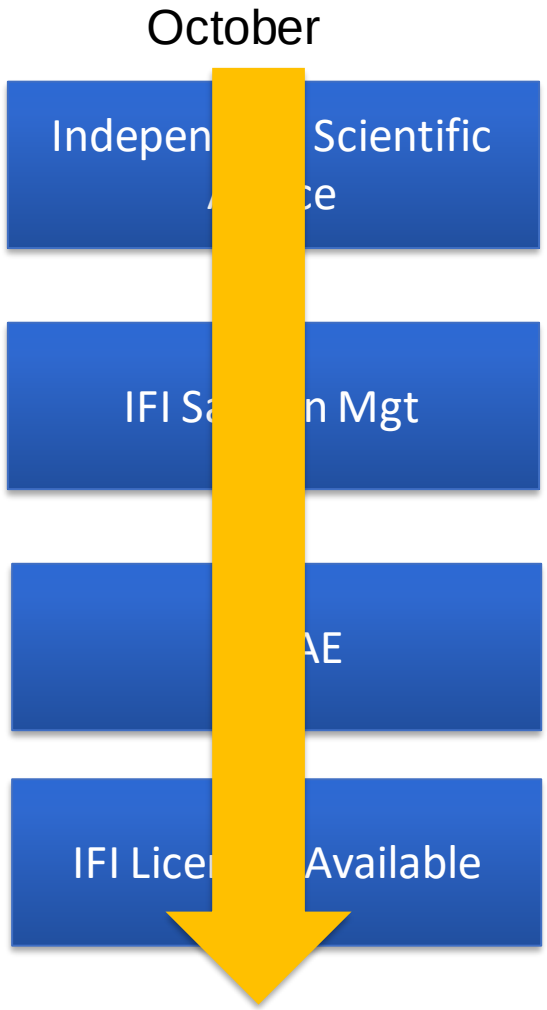
Salmon Management



- MSW and 1 SW surplus per catchment
- Juvenile index
- Recommendations on status Open/Closed/CR

- Open Rivers MSW and 1 SW surplus per catchment
- C&R Rivers/Brown Tag Rivers
- Licence pricing recommendations

- Draft Primary Legislation
- Start 30 public consultation

- On-line & Paper licences, tags available
- Season and River information available

TunaChart – BFT ICCAT Tagging Programme

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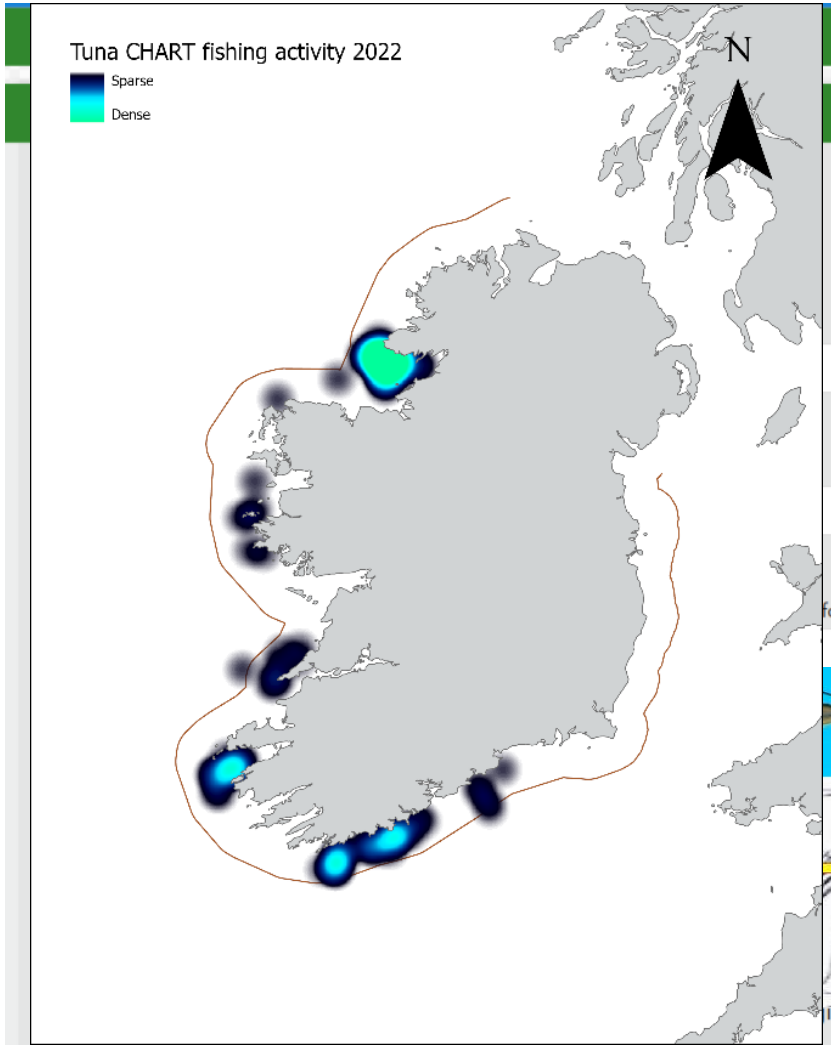
Roinn Cumarsáide, Gníomhaithe ar son na hAeráide & Comhshaoil
Department of Communications, Climate Action & Environment
Foras na Mara
Marine Institute
SEA-FISHERIES PROTECTION AUTHORITY
An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine



TunaChart ICCAT Tagging

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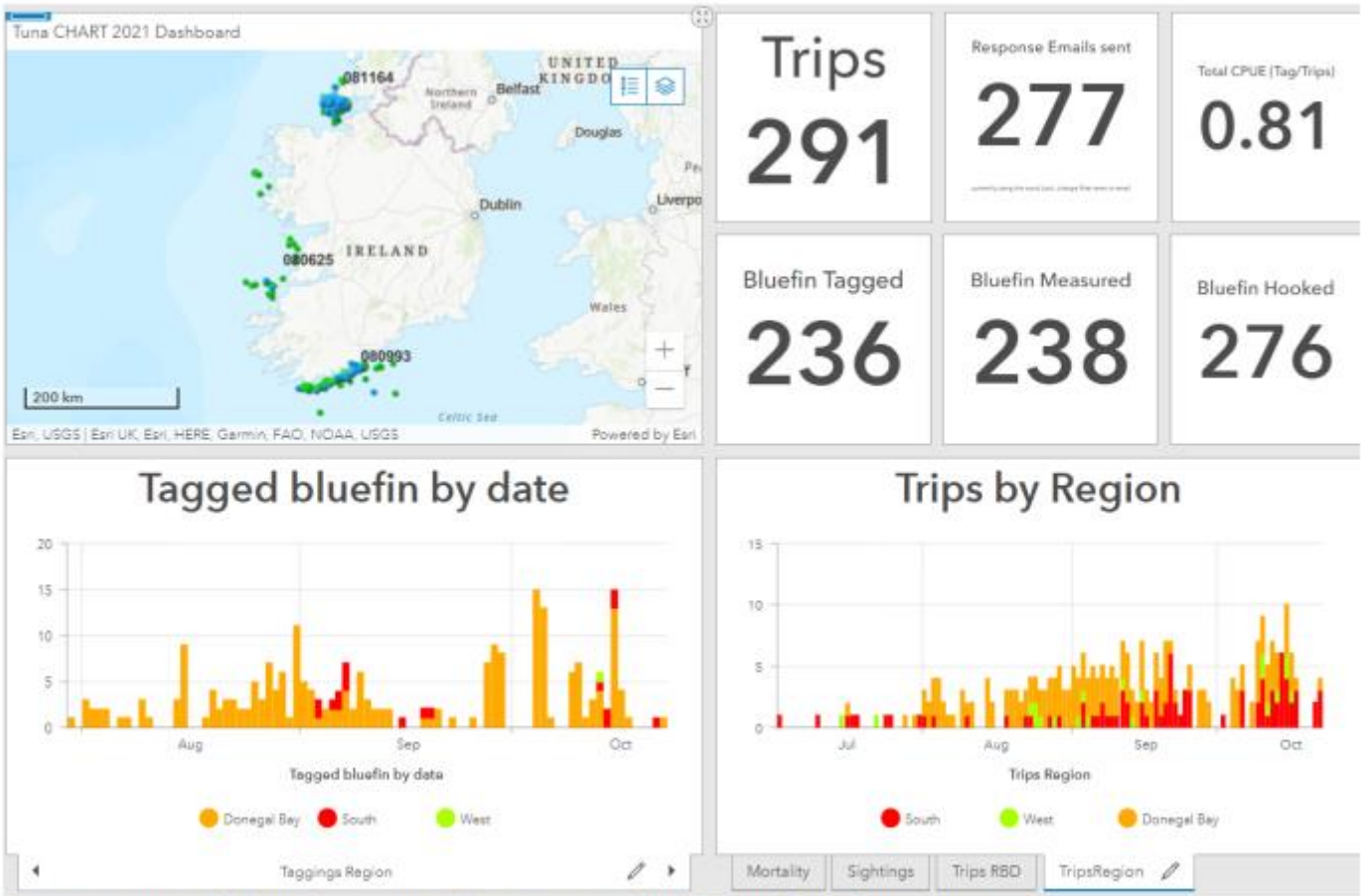
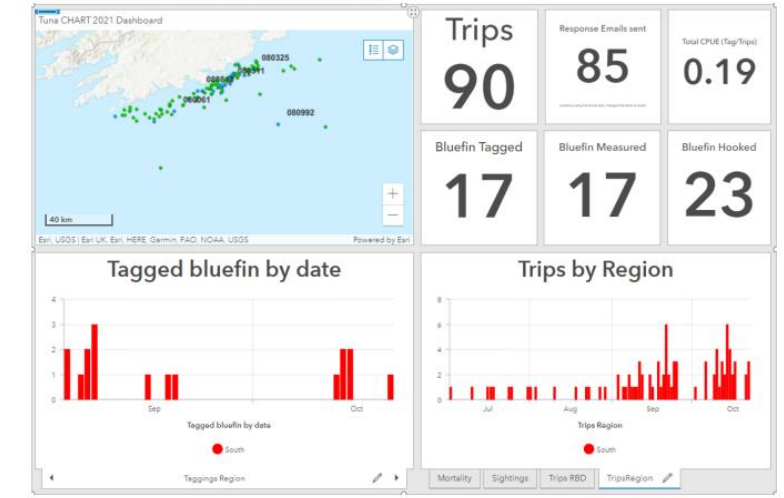
Tuna CHART 2021 Overview



Green points = fishing locations, Blue points = bluefin hook-up locations

Tuna CHART South Coast Summary



Producing data to support conservation

Tuna CHART Catch per Unit Effort (CPUE) and Fishing effort to date 28/10/21 compared to 2020

CPUE = no. bluefin tagged per angling trip

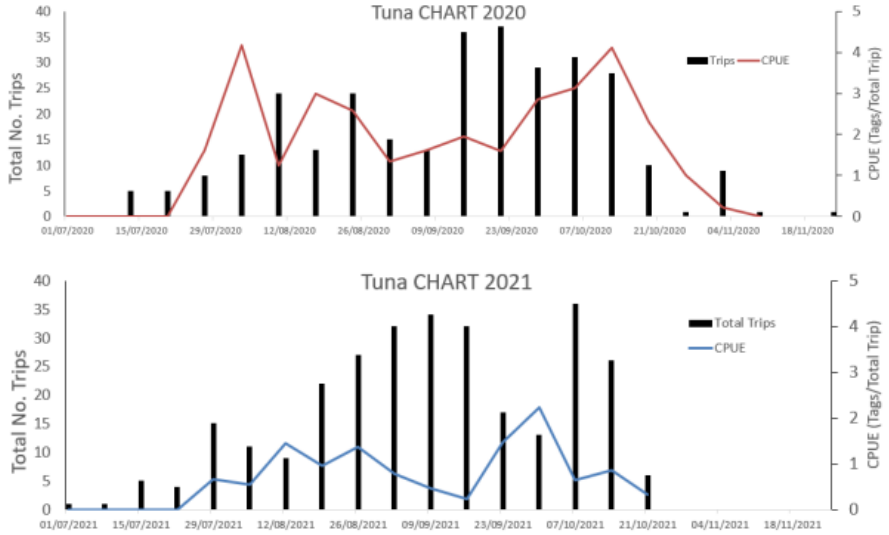
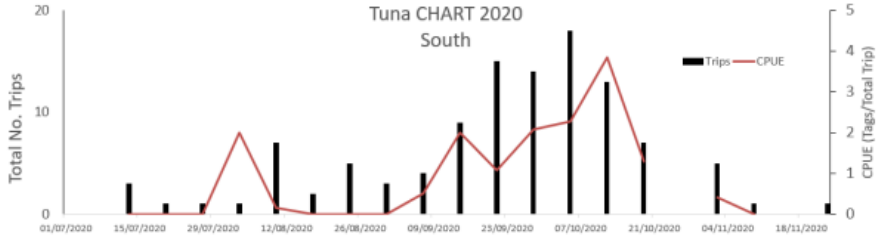


Fig. 1 Weekly comparison in fishing effort and CPUE 2020-2021 all Ireland



Year	No. Authorised Skippers	No. Tagged	CPUE Tags/Trips	% Successful Trips
2019	15	209	1.02	48.5
2020	22	685	2.27	72.5
2021	22	242	0.72	38.4

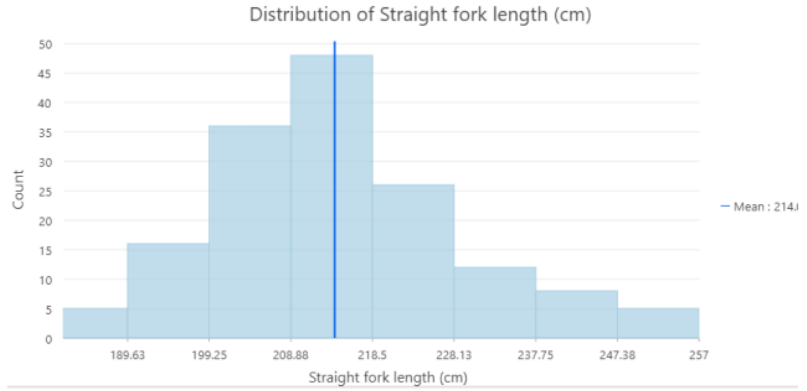


Fig. 3 Length frequency distribution of all bluefin measured 2022 (as of 8th September 2022)

Socio-economic data is also collected to put a value on a potential future C&R BFT angling

Marine Sports Fish Elasmobranch Tagging Programme

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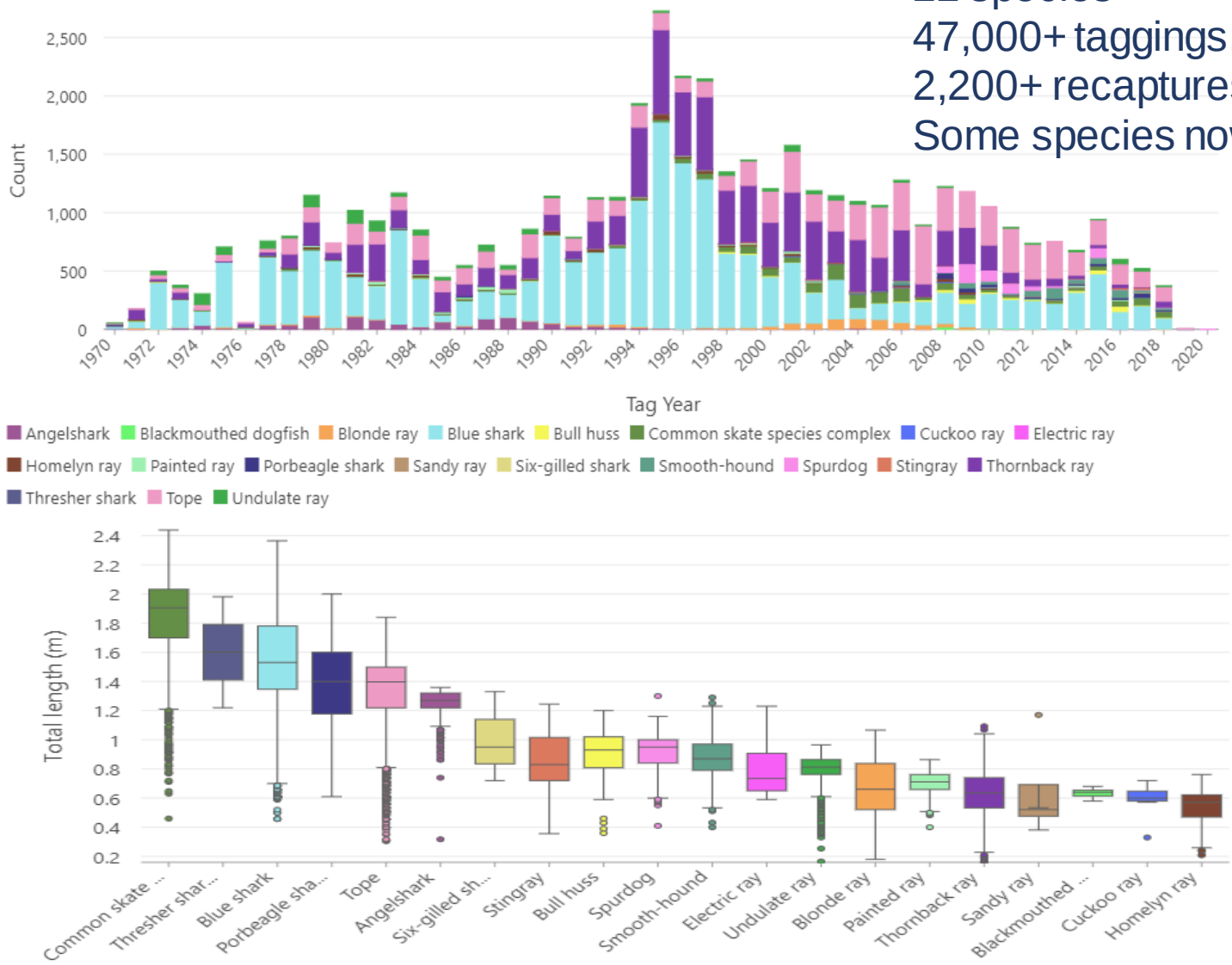
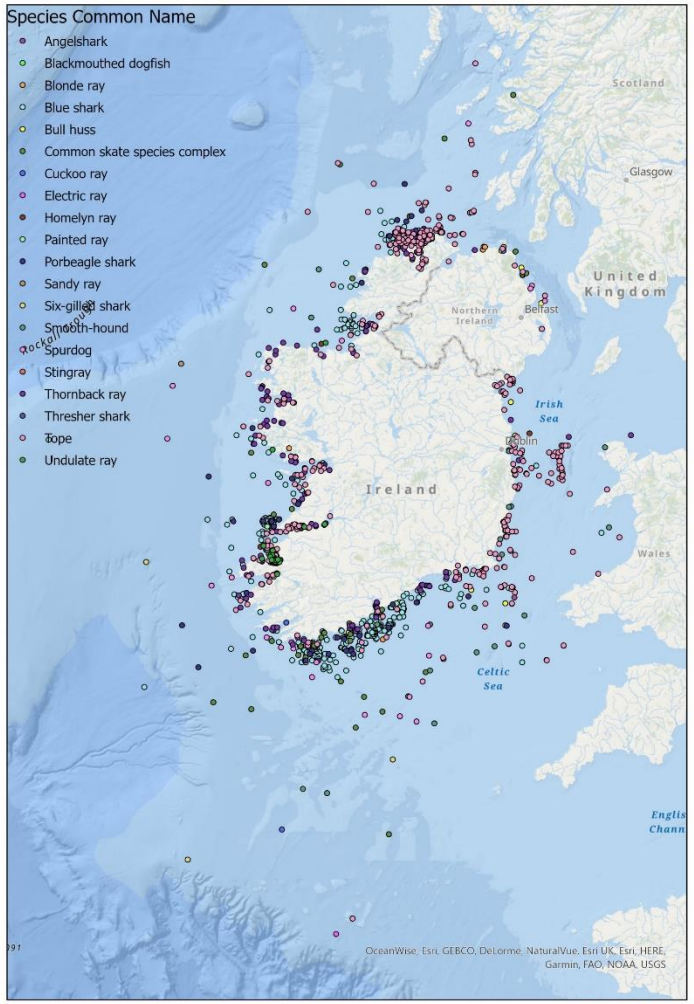


22 species
47,000+ taggings,
2,200+ recaptures
Some species now rare (50 yrs)



Marine Recreational Angling

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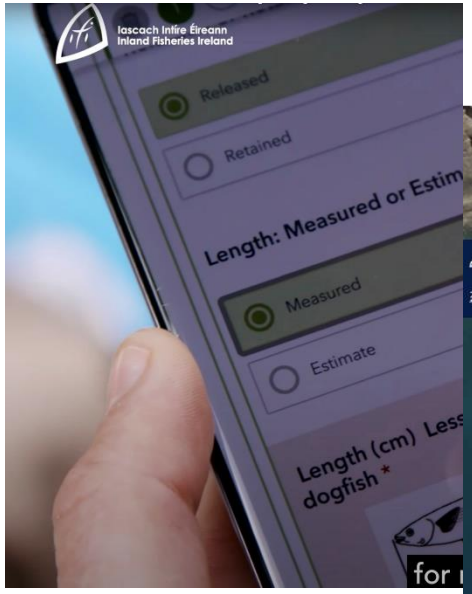

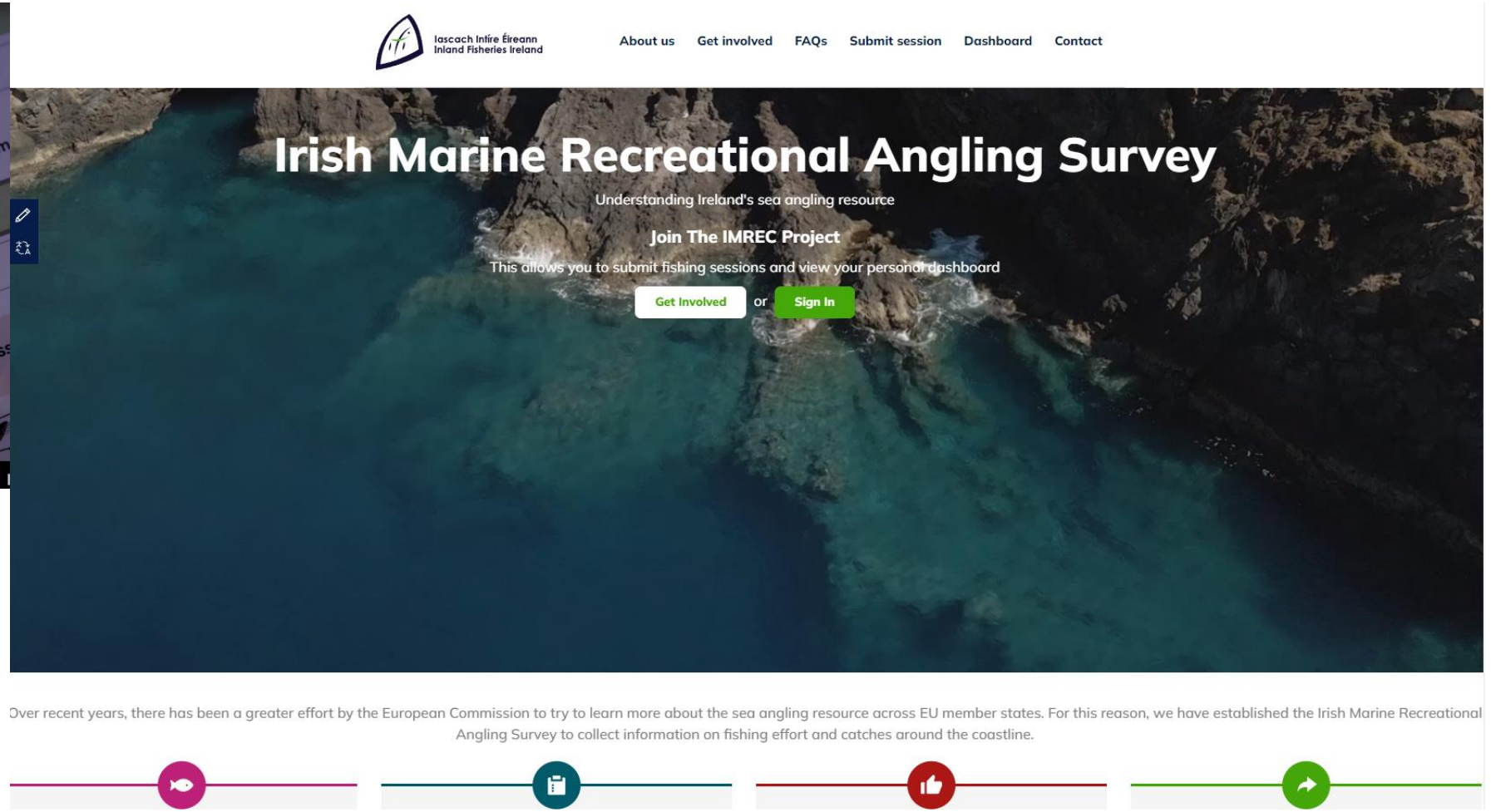

Marine Recreational Angling

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Diary Data Apr 21 – Dec 22

Charter Shore Small Boat

Released	Retained	Avg. length (cm)	Sessions
3287	873	33.43	642

Diary vs Survey

Survey Data – 2021 & 2022

Shore Small Boat

Retained	Released	Avg. length (cm)	Sessions
867	797	30.07	154

Angler Diary - Fish Species Caught (& Released) shore and boat combined

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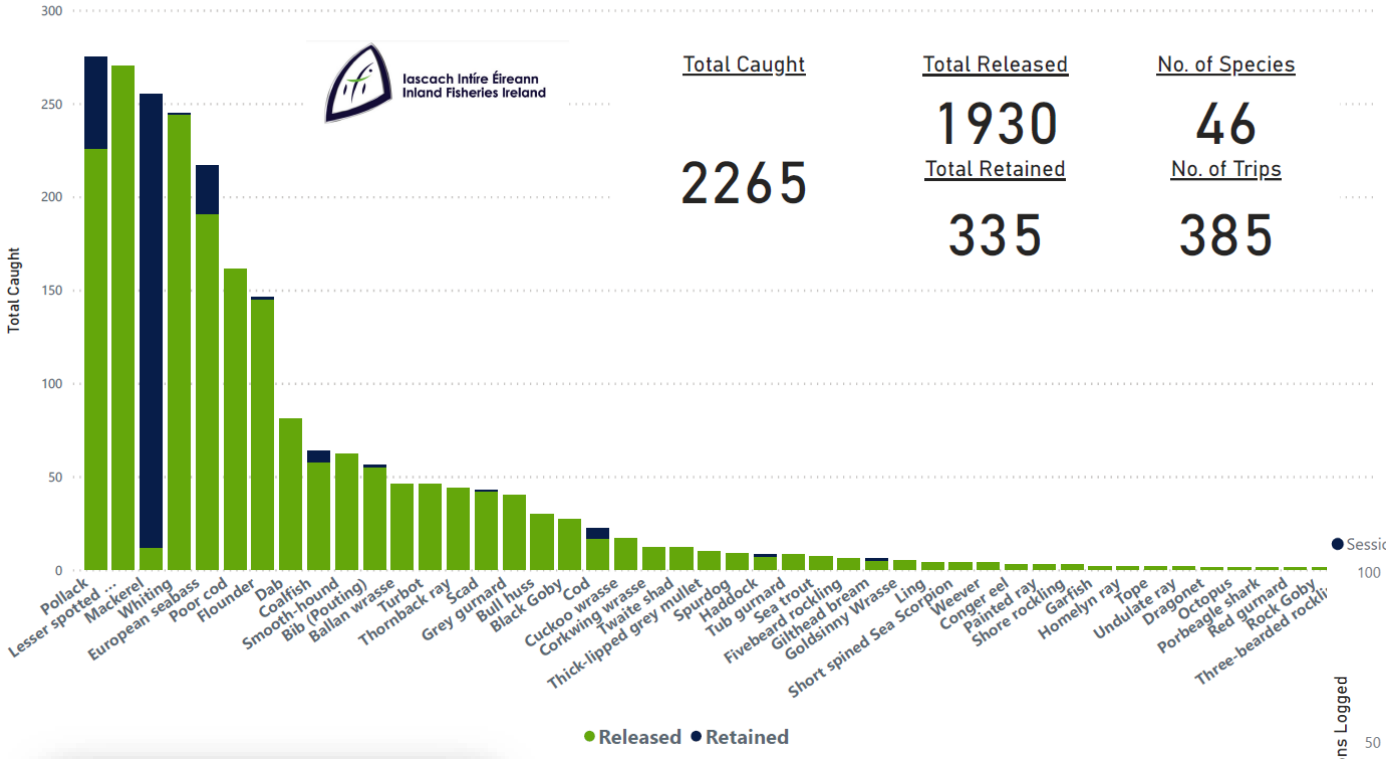

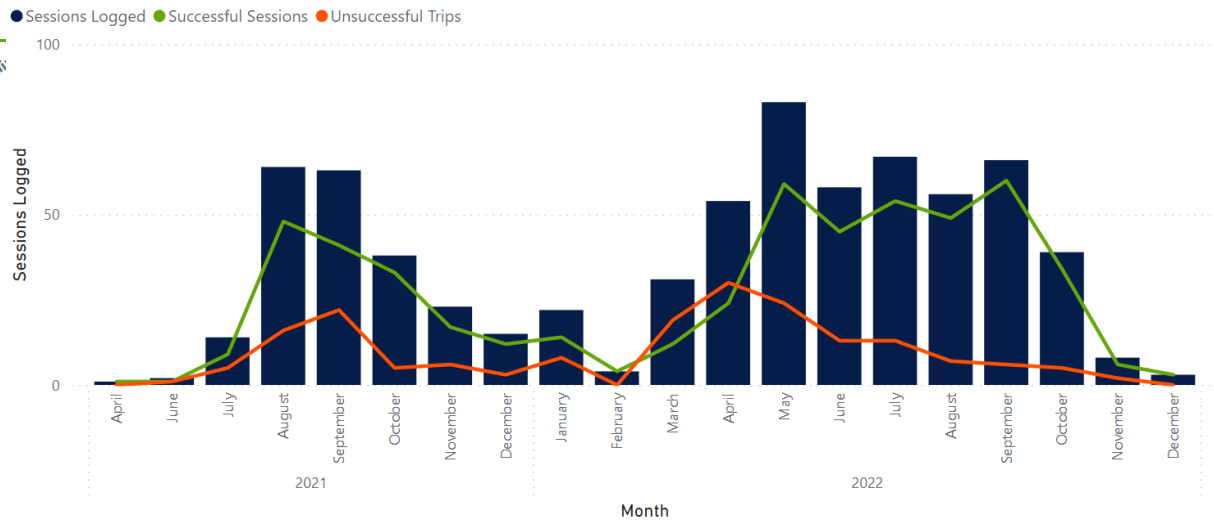

Citizen Science in fisheries

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- Education and empowerment of the citizens
- Contributing to filling key gaps in data poor areas (abundance, distribution, habitat usage etc..)
- Citizens can drive/own the management decisions (e.g. salmon)
- Enhanced conservation efforts with data (species protection, MPAS and monitoring etc..)
- Support sustainable development (e.g ORE) and citizen understanding
- Contributing to fulfilling Data Collection requirements (under Reg (EC) No 199/2008)
- Low cost when compared to traditional sampling methods & complimenting same

Thank You

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