



# WGBYC 2020

WORK ON SPECIAL REQUEST - BYCATCH EMERGENCY MEASURES

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## Common dolphins in the Bay of Biscay

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## WGBYC ToR G:

Address the special request from EU on emergency measures bycatch NE Atlantic by;

- i) Evaluating pressures and threats due to commercial fisheries by-catches to harbor porpoises in the Baltic Sea and common dolphins in the Bay of Biscay.
- ii) Evaluating whether the described conservation measures within the request are appropriate.

# Approach

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- Explore bycatch data collated in WGBYC database (DCF, dedicated programs, REM)
- Fishing effort collated using ICES Regional Database (mostly data from official fishing vessel >10m logbooks)
- Calculate bycatch rates (2005-2018) and bycatch estimates in Bay of Biscay and Celtic Sea (2016-2018) for comparison with PBR from WGMME (4,926)
- VMS data to help in fishery descriptions
- Bycatch estimates and identification of relevant fisheries from strandings

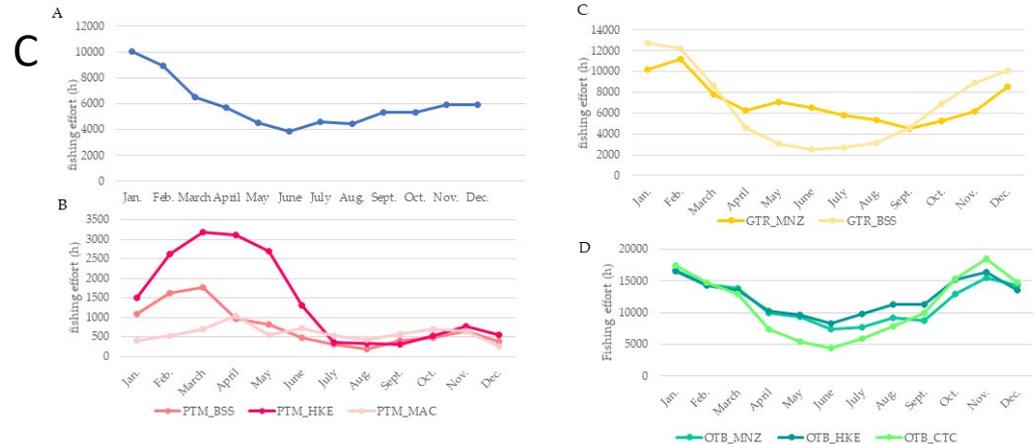
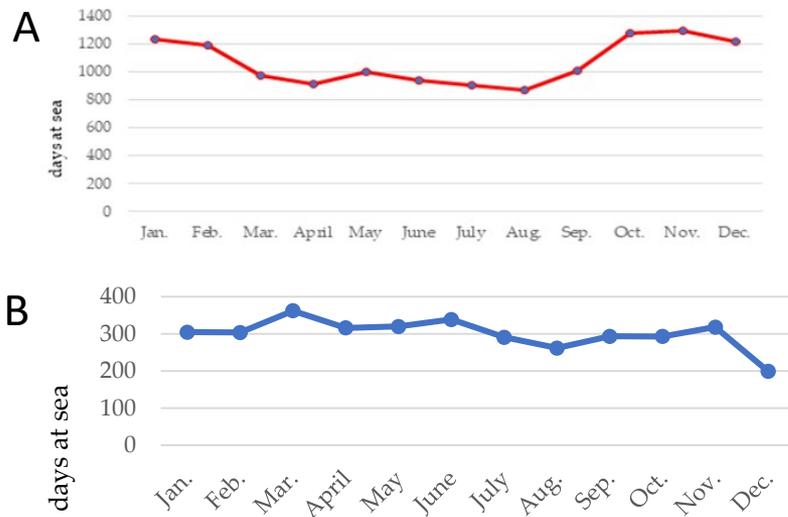
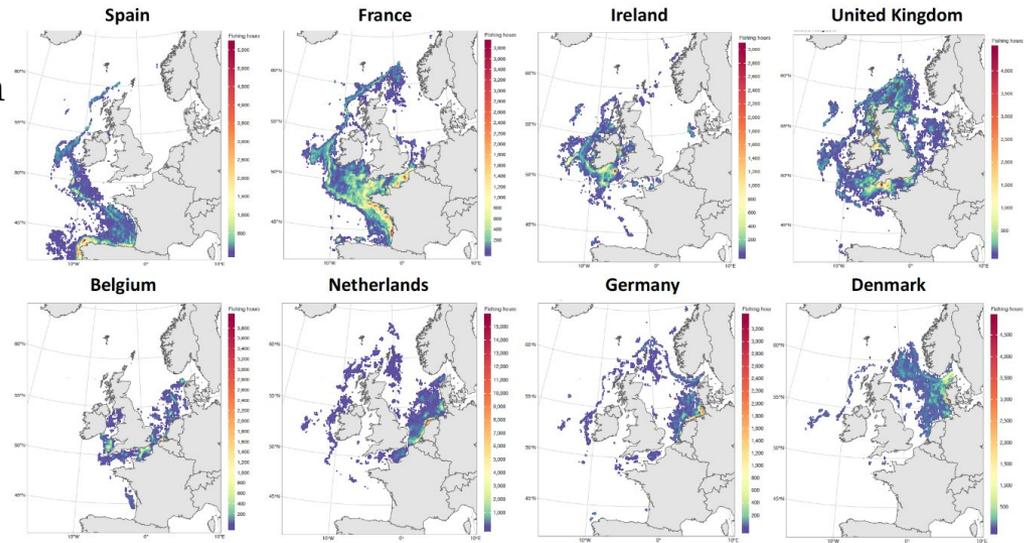
WGBYC also summarised:  
Abundance, distribution, pop  
structure, historical/recent  
bycatch etc



# Fishing effort

- Spain and France : main fishing effort in ICES 6, 7 and mostly 8 (Marine Ecosystems Research Programme, unpublished)
- Trawlers and static gears are used and common target species include hake, sea bass, anglerfish, sole and megrim
- For most of fisheries targeting demersal fishes : highest activity in Autumn and Winter

FISHING EFFORT BY COUNTRY - 2016



Monthly fishing effort (2015-2018) for: Spanish GNS (large mesh) in ICES 8c (A) Spanish PTB in 8c (B), and French GNS (hakes), PTM (sea bass, hakes, mackerels), GTR (sea bass, monkfish), OTB (monkfish, hakes, cuttlefish) in 8ab (C)

# Bycatch estimates – at sea monitoring

Ecoregion	Metier4	Metier5	Effort Obs (Das)	Dolphins	Rate	Mean Effort Fished (Das)	Bycatch	Lower	Upper
Celtic Seas	OTB	DEF	2727.64	11	0.004	44691.33	180	98	279
	GNS	DEF	909.9	9	0.01	18207	180	80	280
	OTB	CRU	282.09	1	0.004	26597	94	0	283
	GTR	DEF	429.79	4	0.009	7117	66	17	132
	OTM	SPF	482.88	16	0.033	943.33	31	20	45
	OTT	CRU	393	1	0.003	7025.67	17	0	54
	GNS	CRU	370.17	1	0.003	4621	12	0	37
	OTB	DWS	638.28	1	0.002	1040.33	2	0	5
Bay of Biscay	PTM	DEF	187.17	118	0.63	682	430	364	496
	PTB	MPD	67	10	0.149	5195	775	388	1163
	GTR	DEF	507.74	12	0.024	58364.	1379	805	2069
	OTM	DEF	0.82	1	1.222	242	297	0	890
	PS	SPF	343.5	2	0.006	35563	207	0	518
	GNS	DEF	694.84	2	0.003	36838	106	0	265
	PTM	LPF	127.16	1	0.008	510	4	0	12

Mean: 3780 (95% CI: 1771-6528) per annum for 2016-2018

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## Bycatch estimates – strandings

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- Mortality estimates and origin estimated by drift model (MOTHY) proportion buoyant

2016	2017	2018
5 200 [3 500; 8 500]	9 300 [5 800; 17 900]	5 400 [3 400; 10 500]

Annual mean: 6 600 (95% CI 4 411 – 10 800) bycaught / year for 2016-2018

**CI ranges (monitoring & strandings) contain estimates above PBR**

# Measure I: Spatial and temporal closures

## Identification of relevant fisheries

NGO's request: all relevant fisheries including **PTM** & **GNS**

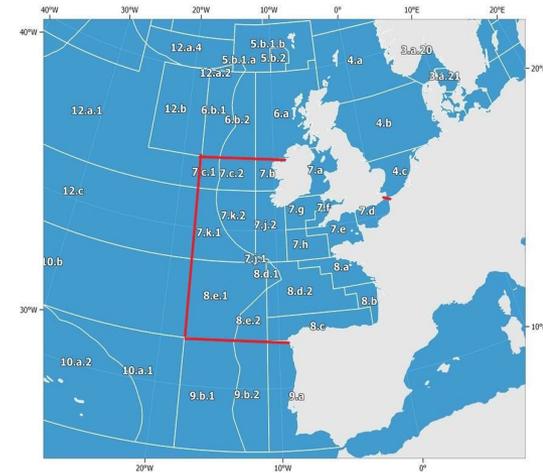
- **PTM** DEF: high bycatch rate in BoB (2016-2018) (Mort- 430)  
**GNS** DEF : comparatively low bycatch rates in BoB and CS (Mort≈300)  
Positive correlation between fishing effort and mortality areas (strandings)
- **GTR** higher rates, Mort ≈ 1379)
- **PTB** MPD: high bycatch rate calculated in BoB(2016-2018) (Mort ≈ 775)
- **OTB** DEF: highest rate in CS (Mort ≈ 180)  
Positive correlation between fishing effort (GTR and Spanish OTB/PTB) mortality areas (strandings)
- **OTM** DEF: High observed rates but v. low observer coverage (Mort ≈ 296)
- **PS** SPF: low rates, (Mort ≈ 207)

Several Metiers likely contribute bycatch mortality.

# Measure I: Spatial and temporal closures

## NGO's spatial

- Spatial scale of request was not very clear:
- various reference to “Bay of Biscay” or 6,7,8 or just 7,8 (as highlighted in map)
- Bycatch rates calculated for the BoB (8abde), IC (8c,9a) CS (6, 7)
- Highest strandings in French coast of Biscay (8ab), but also strandings in IC, and CS (7)



The spatial scale of closures needs to be carefully considered. Large vessels can move to adjacent areas which could still result in high bycatch.

## Temporal: NGO's closure Dec-Mar inc

- **PTM** (mostly hakes and seabass): peak activity Jan-May
- **GNS/GTR** >12m, hakes: peak of activity from November to March
- For **GTR**<12m, main target sole. All year. Few events recorded but large scale fishery : provide high estimates and challenging to monitor
- For **PTB** fishery, the rate is based on one event recorded in Autumn.

Proposal appropriate for **PTM**, possibly for larger **GNS** and **GTR**

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## Measure II: Technical measures

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NGO's request: "Move-on procedure", "daylight setting"

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### "MOVE-ON" PROCEDURE

- Almost no literature available
- Based on willingness of fishermen to comply and a willingness to accept at-sea monitoring
- No certainties that the bycatch risk in the new fishing area would be lower (the wide-scale distribution and highly mobile nature of common dolphins)

### DAYLIGHT SETTING

- Wasn't entirely clear what this meant or referred to.
- No existing literature in net fisheries
- Higher bycatch rate during night in trawler fisheries
- Effect on catch?

Very limited literature / mitigation strategies to support the measures

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# Measure III: Monitoring

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## NGO – improved monitoring

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- Observation effort differs greatly between countries, areas, and métiers
- Most monitoring on vessels >15 m (more than 80% of EU vessels <15m)
- Acceptance of observer previously at masters discretion: can hinder implementation of statistically sound sampling
- Repeal of EU 812/2004, superseded by (EU) 2019/1241: comparable monitoring requirements for cetacean bycatch monitoring for >15m vessels, but no pilot study requirements for smaller vessels.

Monitoring can be improved

