ASCOBANS Common Dolphin Group

ICES WGMME 2020

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| Terms of reference |
|---|
| a) Review and report on any new information on seal and cetacean population abundance, population/stock structure, management frameworks (including indicators and targets for MSFD assessments), and anthropogenic threats to individual health and population status; |
| b) Review foraging areas and estimate consumption by relevant seal and cetacean species in case study areas |
| c) Review selected aspects of marine mammal-fishery interactions. Details of this ToR to be agreed with WGBYC; |
| d) Update the database for seals. |
| e) Address the special request from EU on emergency measures bycatch NE Atlantic by: |
| i) Evaluating current population status and pressures and threats to harbour 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. |
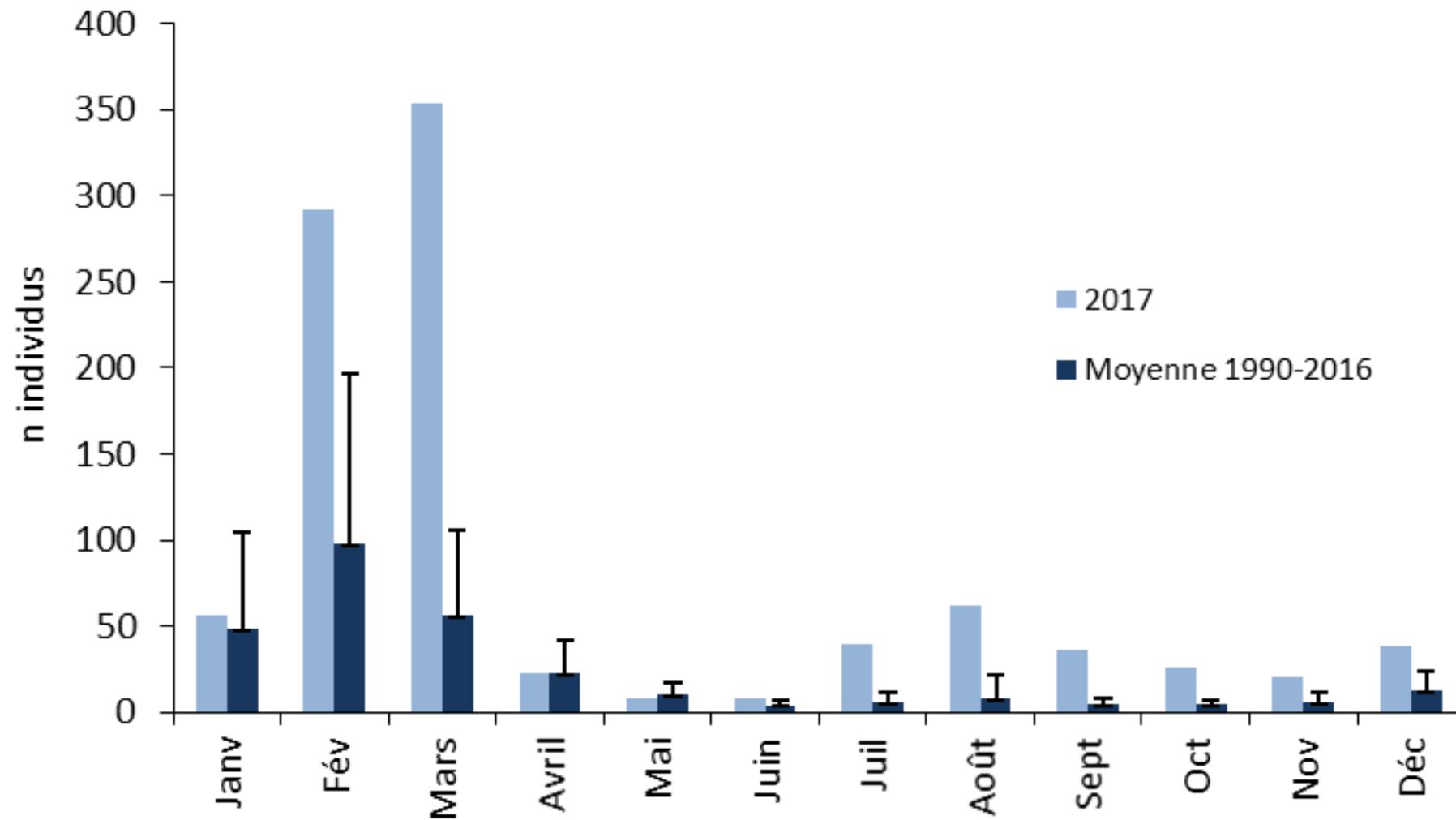
Figure 4. Number of stranded common dolphins by month in the French coast of the Bay of Biscay. Light blue, 2017 stranding; dark blue, median of 1990-2016 strandings (from Dars et al. 2018).

Figure 21. Month and year effects of the best Generalized Extreme Value (GEV) model estimating **extreme mortality events in common dolphin in the Bay of Biscay**. The blue curve corresponds a loess smoothing of the posterior means (black dots) and the grey area to the 95% Highest Probability Density intervals around posterior means. There is strong seasonal effect, and an increasing trend with year.
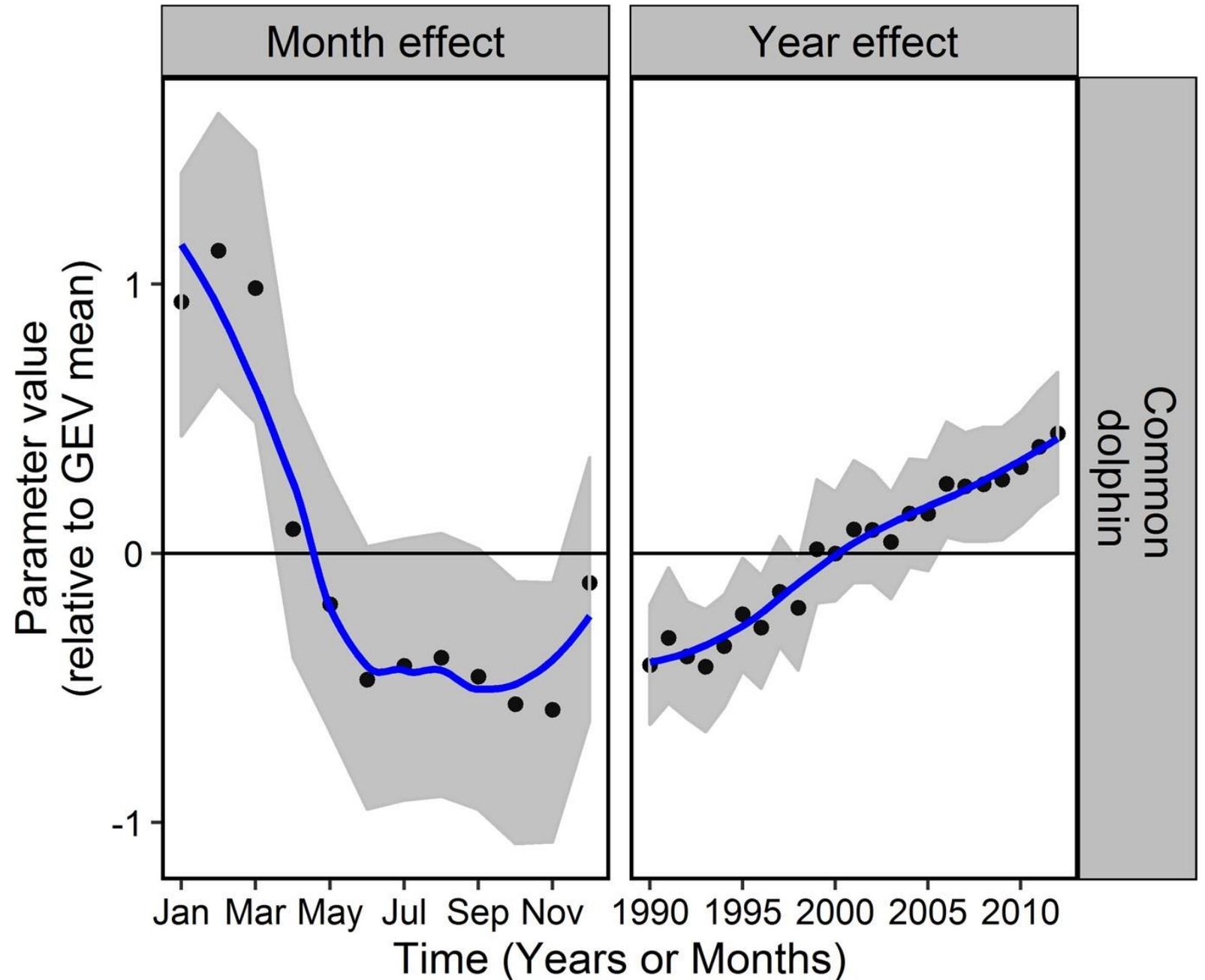
Figure 5. Likely mortality areas in February 2017 of stranded common dolphins (fresh carcasses) with bycatch evidence (see Peltier et al. 2019 for all details)
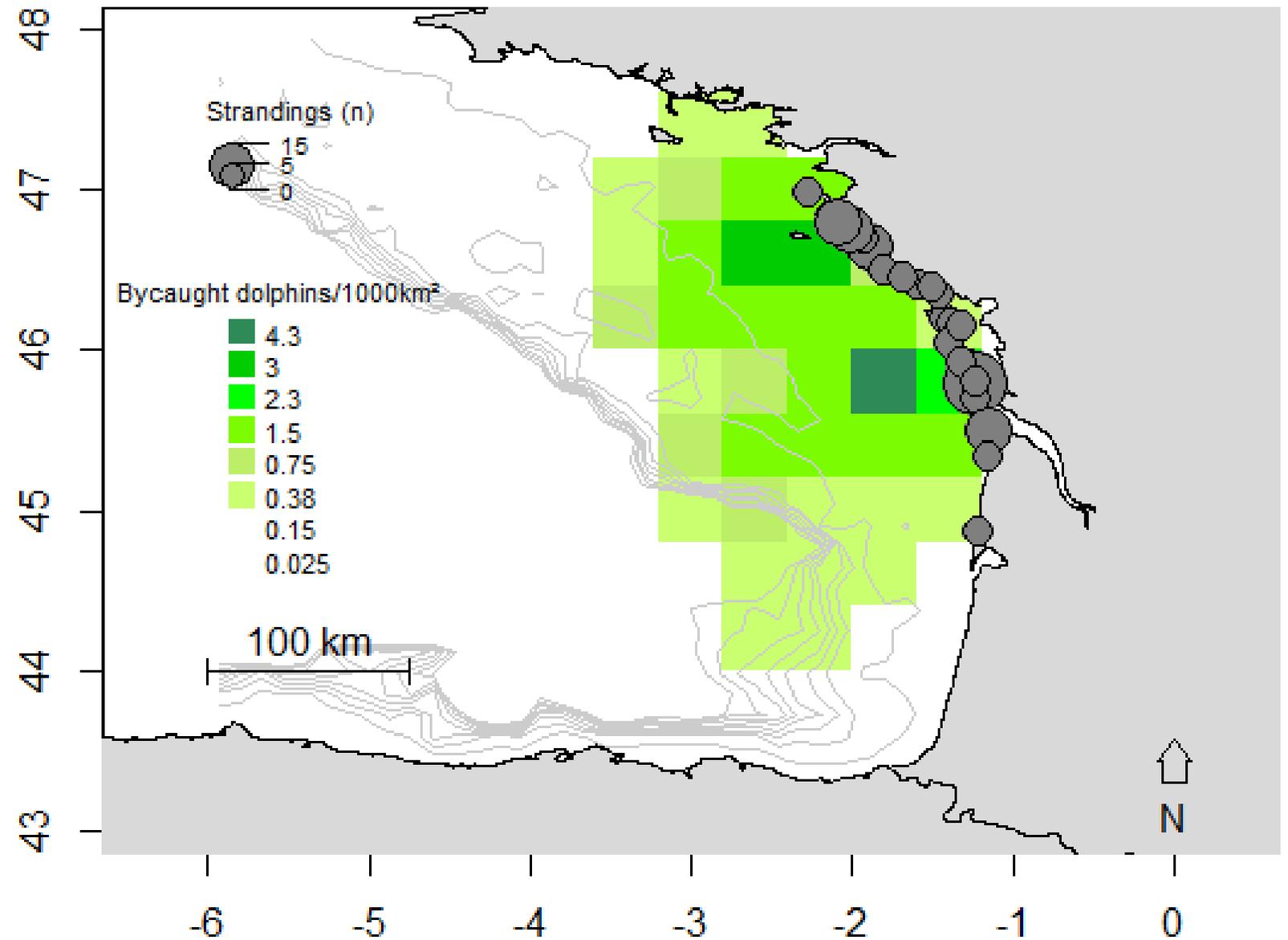
Figure 6. Cumulative Fishing effort (in hours) of Pair Trawlers (PTM) flying a French flag based on VMS data collected in February and March 2019 (see Peltier et al. 2019 for all details)
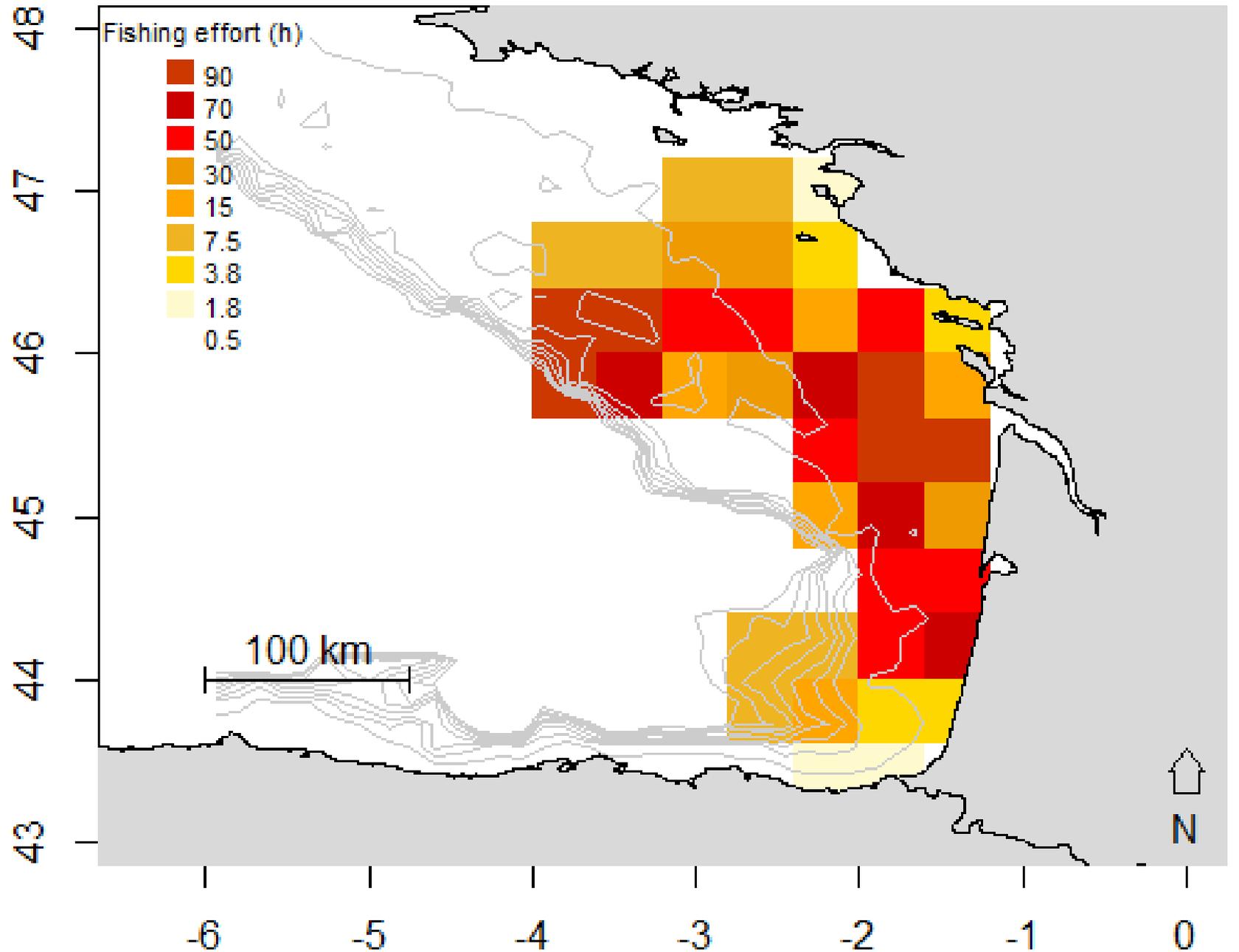
Table 1. Estimates of abundance of common and striped dolphins in the European Atlantic from SCANS, CODA and ObSERVE surveys.

Species	Year	Abundance (CV)	Survey	Source
Common dolphin	2005/07	174,485 (0.27)	SCANS-II + CODA	Hammond et al. (2013); CODA (2009)
Striped dolphin	2007	61,364 (0.93)	CODA	CODA (2009)
Common + striped	2005/07	306,045 (0.29)	SCANS-II + CODA	Hammond et al. (2013); CODA (2009)
Common dolphin	2016	467,673 (0.26)	SCANS-III	Hammond et al. (2017)
Striped dolphin	2016	372,340 (0.33)	SCANS-III	Hammond et al. (2017)
Common + striped	2016	998,180 (0.18)	SCANS-III	Hammond et al. (2017)
Common dolphin	2016	13,633 (0.85)	ObSERVE	Rogan et al. (2018)
Common + striped	2016	33,215 (0.415)	ObSERVE	Rogan et al. (2018)

Figure 9. Upper panel: Interval estimates of bycatch of common dolphins in the Bay of Biscay generated from strandings data using the methods of Peltier et al. (2016). The dashed line is the value of PBR calculated as explained in the text. Lower panel: scaled interval estimates of bycatch assuming no bycatch in the period mid-December to mid-April to illustrate the effect of a closure of all relevant fisheries during this period.

Observed data
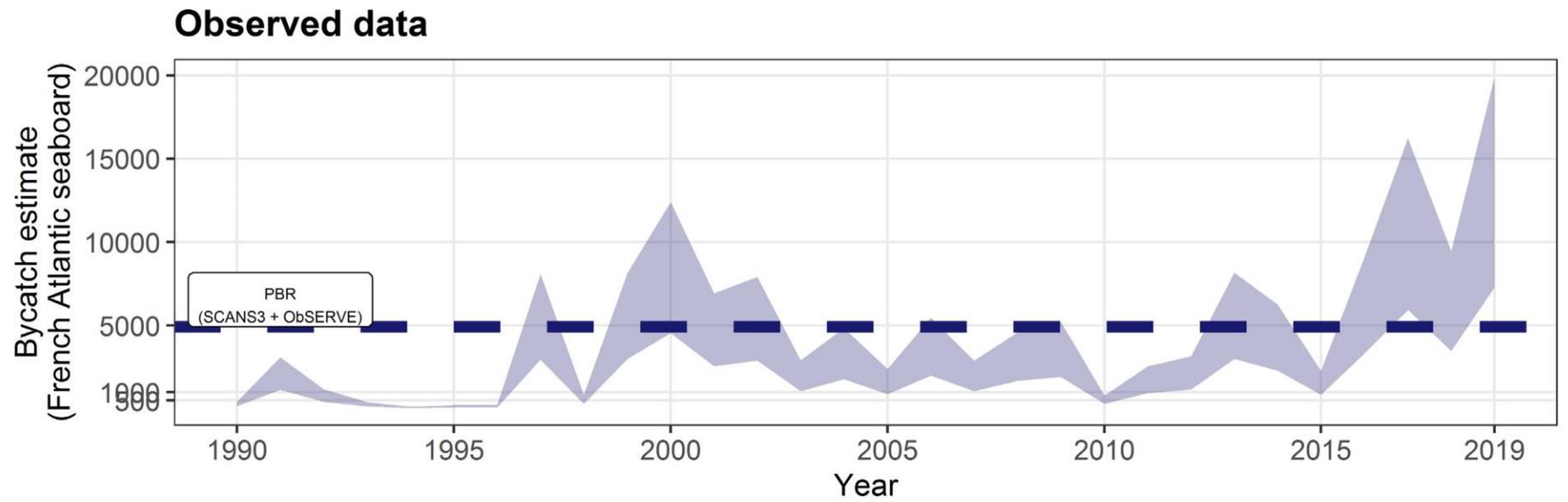
Source: WGMME 2020, Barcelona

Prediction under fisheries closure in winter
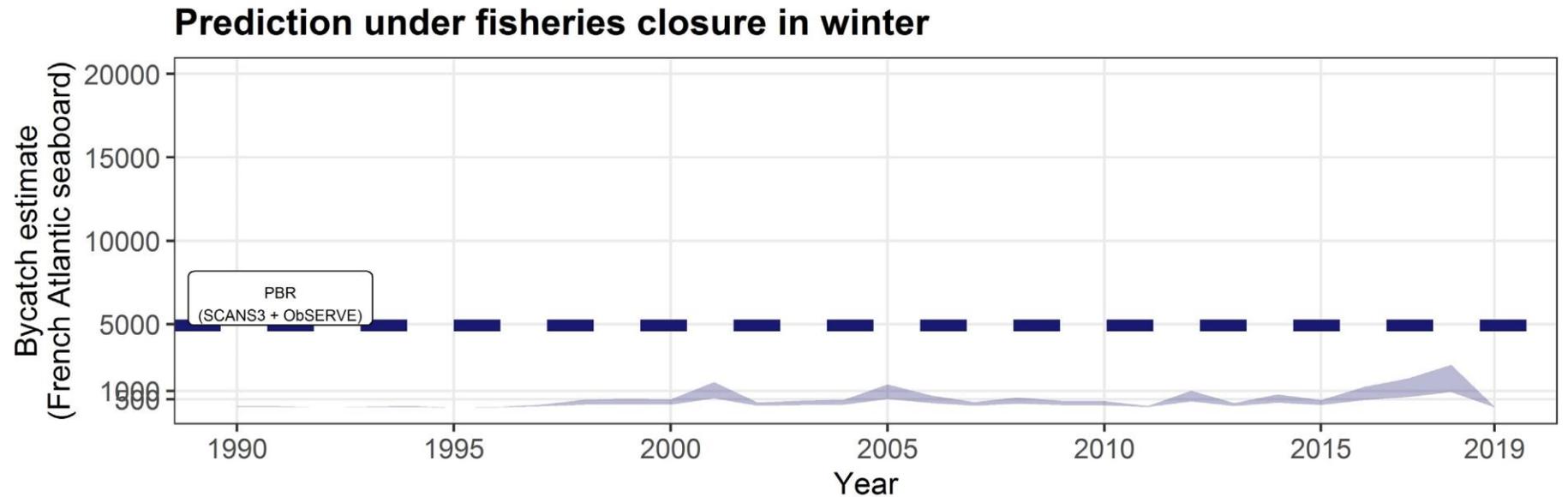
Counterfactual retrospective prediction under complete closure
in the Bay of Biscay from mid-decembre till mid-april

ASCOBANS Common Dolphin Group

More on CetAMBICion

Partnership

Organization	Acronym	Country	Leads
Instituto de Investigacións Mariñas, CSIC	CSIC	ES	WP6
AZTI	AZTI	ES	
Fundación Biodiversidad	FB	ES	WP5
Instituto Español de Oceanografía	IEO	ES	WP3, 4
Ministerio de Agricultura, Pesca y Alimentación	SGP	ES	
Secretaría de Estado de Medio Ambiente	SEMA	ES	WP2
La Rochelle Université	LRUniv	FR	
Ministère de la Transition Écologique	MTE	FR	
Office Français de la Biodiversité	OFB	FR	
Centro de Ciências do Mar (Universidade do Algarve)	CCMAR	PT	
Centro Interdisciplinar de Investigação Marinha e Ambiental (Universidade do Porto)	CIIMAR	PT	
Direção-Geral de Recursos Naturais, Segurança e Serviços Marítimos	DGRM	PT	WP1, 2
Instituto da Conservação da Natureza e das Florestas	ICNF	PT	
Instituto Português do Mar e da Atmosfera	IPMA	PT	

Other participants

COLLABORATORS (CONFIRMED)

- Confederación Española de Pesca (CEPESCA, ES)
- Federación Nacional de Cofradías de Pescadores (FNCP, ES)
- Sociedad Cooperativa Gallega del Mar Santa Eugenia OPP (ES)
- SUBMON (ES)
- Sociedad para el Estudio y la Conservación de la Fauna Marina (AMBAR ELKARTEA, ES)
- Coordinadora para o Estudo dos Mamíferos Mariños (CEMMA, ES)
- Asociación de Naturalistas del Sureste (ANSE, ES)
- Conservación, Información y Estudio sobre cetáceos (CIRCE, ES)

ADVISORY BOARD

- Marguerite Tarzia (Bycatch Coordinator, **International Whaling Commission**)
- Jenny Rennell (Coordinator, **ASCOBANS**)
- Pascal Savouret (Executive Director, **European Fisheries Control Agency**)
- Ruth Fernandez (Professional Officer in the Advisory Department of the **International Council for the Exploration of the Sea**)
- Sinead Murphy (Galway Mayo Institute of Technology and co-chair of the **ASCOBANS Common Dolphin Group**)
- Catarina Eira (Universidade de Aveiro and coordinator of the **MARPRO project**)
- Sarah Dolman (Senior Policy Manager, **Whale and Dolphin Conservation**)
- Peter Evans (Director, **Sea Watch Foundation**)
- James Waggitt (University of Wales, Bangor)
- Gregg Verutes (MarFish Eco Fisheries Consultants and University of Santiago de Compostela)

WP1 - <u>Review of MSFD second cycle reports and state-of the-art for cetaceans</u>
Leader: DGRM
Contributors: IPMA, ICNF, CIIMAR, UALG, SEMA, CSIC, IEO, AZTI, OFB

- Collect and **analyse information reported** by each MS in **2nd cycle assessment** for marine mammals, identifying species selected, indicators, scales of assessment, current environmental status (if determined), integration rules (if used) and established targets.

- **Collate information** regarding **monitoring programmes** already in place and **measures** identified in the PoM for related anthropogenic pressures, to facilitate identification of common approaches and gaps.

- Based on ongoing work through the MSFD Common Implementation Strategy, OSPAR Convention, ICES, ASCOBANS and ACCOBAMS , **review state-of-the-art** regarding **methodologies** relevant **for assessment and monitoring** of marine mammals and related pressures. Provide synthesis of existing approaches and solutions in other (sub)regions.

WP2 - <u>Proposal of coordinated subregional assessment, GES determination and monitoring strategy for cetaceans</u>
Leader: DGRM/SEMA
Contributors: IEO, IPMA, CSIC, OFB, LRUniv/ADERA, ICNF, CIIMAR, AZTI

- Set up **working platform** for MS in the subregion (PT, ES, FR), to compare data on relevant cetacean species and shared populations
- **Share information** on cetacean biology, habitat use, and natural / anthropogenic threats
- **Identify** current **knowledge gaps** in the area and to **propose** adequate **solutions**
- Ensure **regional consistency** for abundance estimates and population studies
- Agree on **common GES determination** principles and decide on a **coordinated monitoring** strategy for cetaceans in the sub-region.

WP3: <u>Proposal of coordinated subregional assessment, GES determination and monitoring strategy for cetacean bycatch</u>

Leader: IEO

Contributors: AZTI, IPMA, CSIC, SEMA, SGP, DGRM, LRUniv/ADERA, OFB, UALG, ICNF

- Analyse and compare national **bycatch sampling schemes** + related initiatives/projects.
- **Identify fishing gear, technical and behavioural characteristics of fleets and areas** which present greatest **risk** of producing bycatch of cetaceans.
- Agree on common approaches to **GES determination and threshold calculation for bycatch** (criterion D1C1).
- Carry out **critical analysis of bycatch monitoring programs** and pilot projects currently underway or under development, e.g. in relation to accuracy and precision of resulting bycatch estimates, and make proposals for improvement and/or implementation.
- **Foster cooperation** between scientific institutions, fisheries authorities and stakeholders.

**WP 4 – Effectiveness assessment of cetacean bycatch reduction strategies
and fishing technical measures proposal**
Leader: IEO
Contributors: CSIC, AZTI, SGP, SEMA, MTE, OFB, DGRM, UALG, IPMA, ICNF

- **Compile** all information of **bycatch projects** in the area and on studied **reduction measures**.

- Carry out **onboard trials** using **bycatch reduction** innovation technologies

- **Assess potential application of technical measures** to mitigate cetacean bycatch in the area and provide information on potential approaches in partnership with fisher associations, administrations, scientists and NGOs, **testing, adapting and demonstrating potential solutions** and their economic viability in pilot projects.

- **Review** current **technical advice** for bycatch reduction with the cooperation of all **stakeholders** interested in bycatch solutions.

Task 4.2. Pilot project: Trawling (CEDs and pingers)
Leader: IEO
Contributors: IEO, CSIC
Case study for development and application of cetacean excluder devices (CED) in trawling fisheries with high bycatch rates, focusing on pair trawling in Spanish waters.

Task 4.3. Pilot project: Fixed and seine nets (pingers)
Leader: UALG
Contributors: DGRM; IPMA; ICNF
Case study on development and application of marine mammal mitigation devices in fixed net types and purse seines in Portuguese waters

Task 4.4. Feasibility study to go to move-on rule measure applied to mitigate cetaceans bycatch
Leader: OFB
Contributors: IEO, CSIC, CIIMAR
Elaborate (and test) methods to implement spatial movement measures related to occurrence of potential bycatch species.

WP5: <u>Dissemination of results, sectoral participation and capacity building strategy</u>

WP leader: Fundación Biodiversidad
Contributing entities: All partners

WP6: <u>Coordination</u>

Leader: CSIC
Contributors: all partners

TIMETABLE FOR EACH STAGE OF THE ACTION SHOWING MAIN DATES AND EXPECTED RESULTS FOR EACH STAGE

Activity	Semester 1						Semester 2						Semester 3						Semester 4					
	M 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
WP1						D1																		
WP2																								
Task 2.1						D2.1												D2.2						
Task 2.2									WK 2.1			IR												
Task 2.3																								D2.3
Task 2.4																								D2.4
WP3																								
Task 3.1												D3.1												
Task 3.2																		D3.2						
Task 3.3																		D3.3						
Task 3.4																				WK3.1				D3.4
WP4																								
Task 4.1								D4.1																
Task 4.2																		D4.2						
Task 4.3																		D4.3						
Task 4.4																		D4.4						
Task 4.5																						D4.5		
Task 4.6																					WK4.1			D4.6
WP5																								
All tasks	D5.1		D5.10	D5.4								D5.9, 5.13												All other WP5 Del
WP6																								
All tasks	D6.1, 6.2a, 6.3a				D6.2b						D6.2c	D6.3b					D6.2d						D6.2e	D6.3c, 6.4