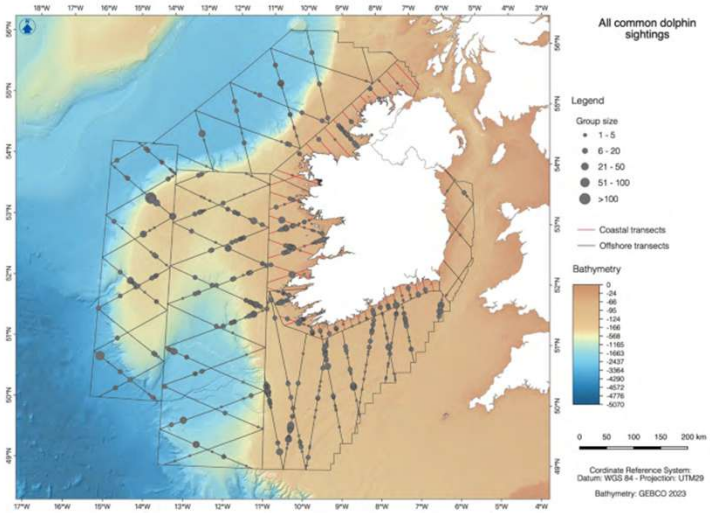
IRELAND

Sinéad Murphy

CDG6 Meeting, 13-15th January 2026

Abundance in Irish waters



Contents lists available at ScienceDirect

Ecological Indicators

journal homepage: www.elsevier.com/locate/ecolind

Original Articles

The times they are a changin': Temporal patterns in small cetacean abundance in the northeast Atlantic

Oriol Giralt Paradell [a,b,*], Ashley Bennison [a,c], Meike Scheidat [d], Mick Mackey [a], Helder Araújo [e], Steve C.V. Geelhoed [d], Dimitar Popov [f], Patricia Breen [a,b], Mark Jessopp [a,b], Ana Cañadas [g], Emer Rogan [a]

[a] School of Biological, Earth & Environmental Sciences, University College Cork, Enterprise Centre, Distillery Fields, Cork, Ireland
[b] MaREI Centre, Environmental Research Institute, University College Cork, Ireland
[c] British Antarctic Survey, Madingley Road, Cambridge, England, UK
[d] Wageningen Marine Research, Den Helder, Netherlands (the)
[e] Department of Biology, Universidade de Aveiro 3810-193 Aveiro, Portugal
[f] Green Balkans NGO, 1 Skopie Street, 4000 Plovdiv, Bulgaria

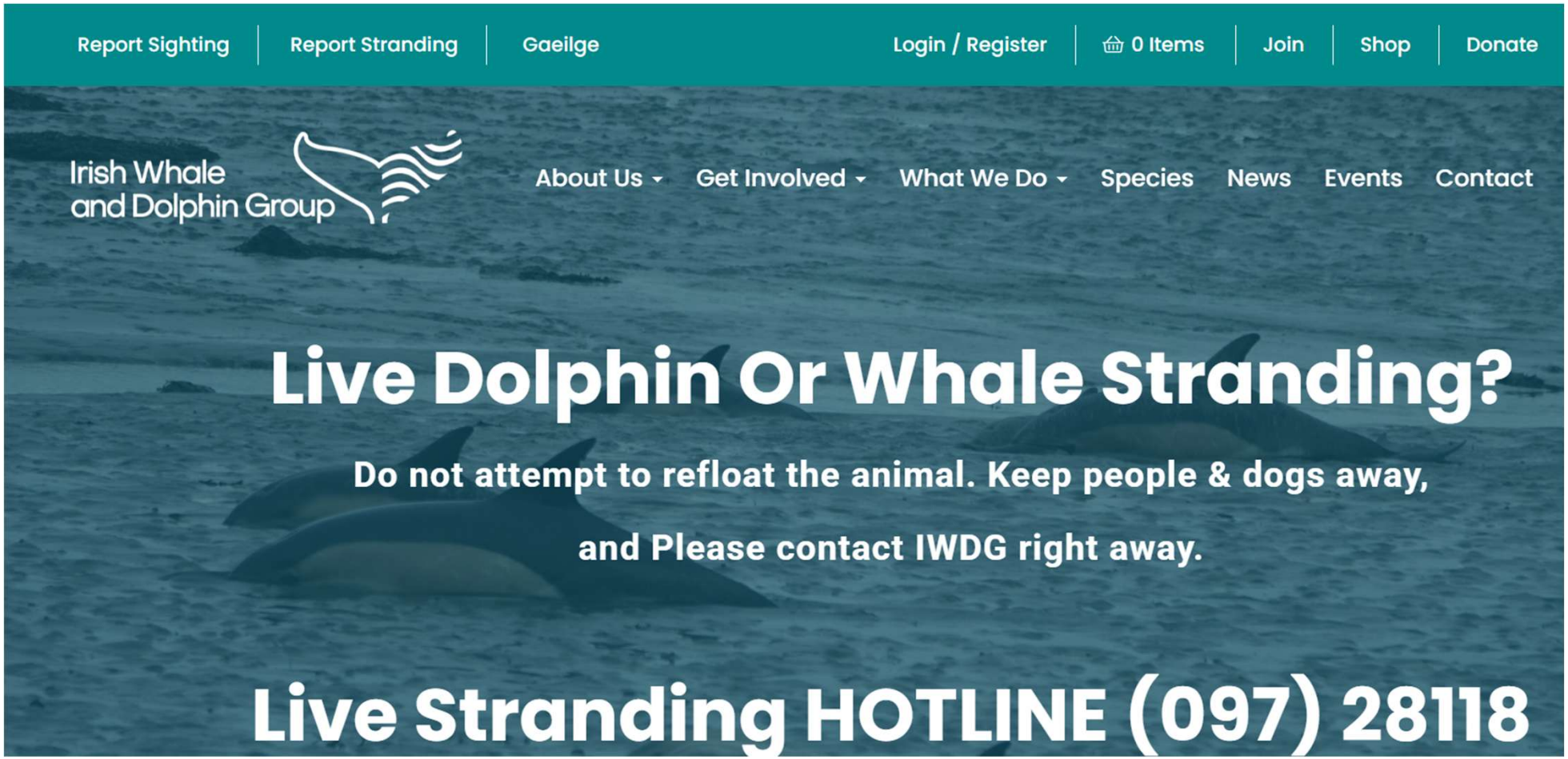
Harbour porpoise showed a steady decrease in abundance, with estimates ranging from 38,260 (CV: 23.7) individuals in summer 2016 to 6,604 (CV: 40.8) in winter 2022–2023. Similarly, bottlenose dolphin numbers ranged from an unprecedented 212,646 (CV: 15.5) individuals in the winter of 2016–2017 to 11,328 (CV: 42.4) in summer 2021. In contrast, common dolphins increased from 13,192 (CV: 75.2) individuals in winter 2016–2017 to 594,293 (CV: 28.2) in summer 2021. Other species, such as Risso's, Atlantic white-sided, white-beaked and striped dolphins were seen more sporadically and in lower numbers. The recent decline in harbour

Phocoena phocoena
Tursiops truncatus
Delphinus delphis

interannual variations. Five surveys were carried out over the Irish EEZ in summer 2016, 2021 and 2022 and winter 2016–2017 and 2022–2023. Seasonal and annual variations in abundance were seen across species. Harbour porpoise showed a steady decrease in abundance, with estimates ranging from 38,260 (CV: 23.7) individuals in summer 2016 to 6,604 (CV: 40.8) in winter 2022–2023. Similarly, bottlenose dolphin numbers ranged from an unprecedented 212,646 (CV: 15.5) individuals in the winter of 2016–2017 to 11,328 (CV: 42.4) in summer 2021. In contrast, common dolphins increased from 13,192 (CV: 75.2) individuals in winter

Strandings -

see Agenda Item 2 - Stephanie & Gemma's talks during the strandings session



Arna chomhchistiú ag an Aontas Eorpach

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Irish Whale and Dolphin Group

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ATU
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Atlantic Technological University

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EMFF Operational Programme 2014-2020

Marine Biodiversity

Assessment of species catch composition in fisheries posing a risk to biodiversity

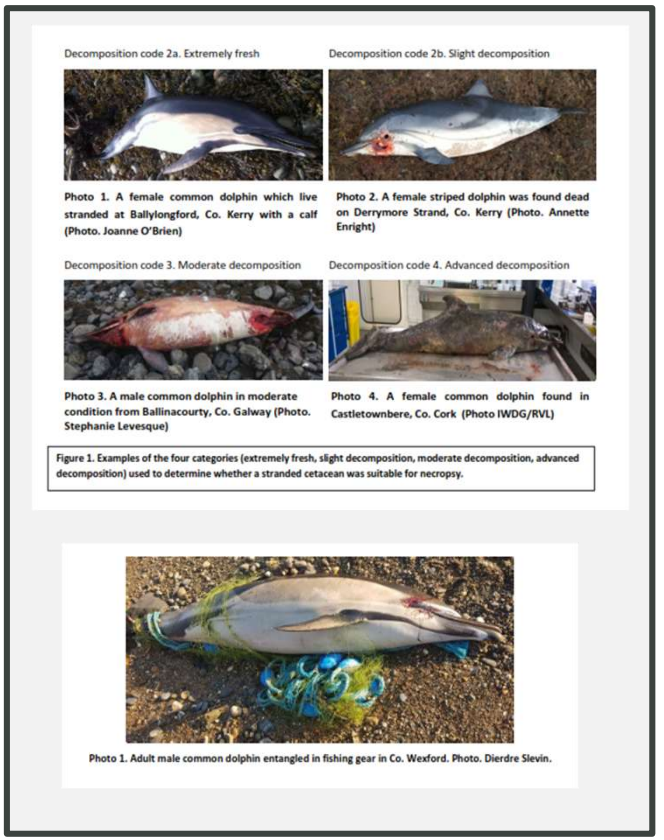
Supply of Vertebrate Necropsy and Sample Recovery Services

Merged Final Reports

EMFF 2014-2020

Marine Institute Report Series

Citation/Authors: Stephanie Levesque, Jim O'Donovan, Mags Daly, Sinéad Murphy, Mick O'Connell, Paul Jepson, Rob Deaville, James Barnett, and Simon Berrow.



Decomposition code 2a. Extremely fresh

Decomposition code 2b. Slight decomposition

Photo 1. A female common dolphin which live stranded at Ballylongford, Co. Kerry with a calf (Photo. Joanne O'Brien)

Photo 2. A female striped dolphin was found dead on Derrymore Strand, Co. Kerry (Photo. Annette Enright)

Decomposition code 3. Moderate decomposition

Decomposition code 4. Advanced decomposition

Photo 3. A male common dolphin in moderate condition from Ballinacourty, Co. Galway (Photo. Stephanie Levesque)

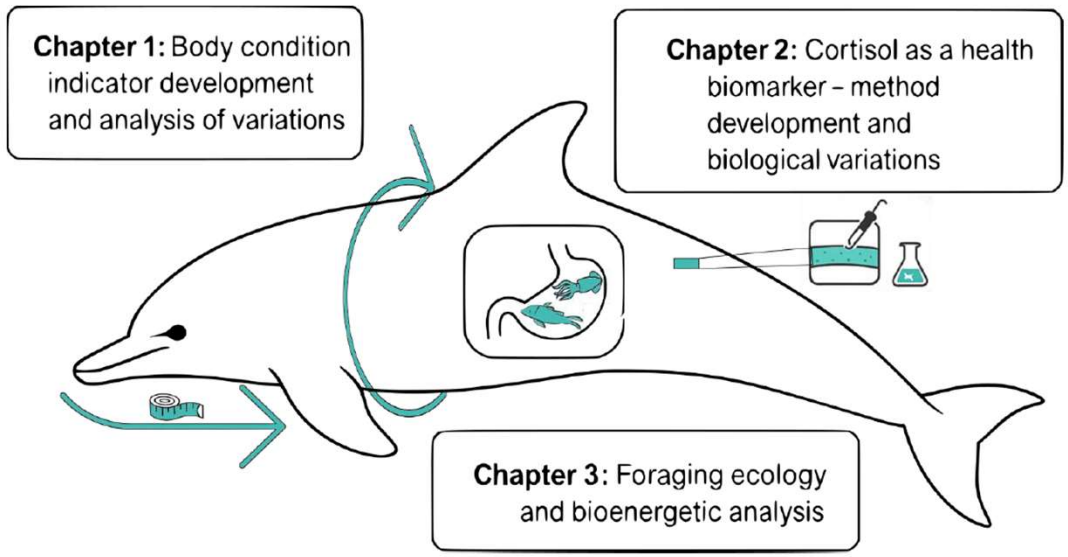
Photo 4. A female common dolphin found in Castletownbere, Co. Cork (Photo IWDG/RVL)

Figure 1. Examples of the four categories (extremely fresh, slight decomposition, moderate decomposition, advanced decomposition) used to determine whether a stranded cetacean was suitable for necropsy.

Photo 1. Adult male common dolphin entangled in fishing gear in Co. Wexford. Photo. Dierdre Slevin.

PhD study – Sofia Albrecht, 2025
Foraging ecology and nutritional health of common dolphins in the Celtic Seas ecoregion

IRISH RESEARCH COUNCIL
An Chomhairle um Thaighde in Éirinn



frontiers

Paper in review

Facultative generalist foraging strategies of common dolphins in the Celtic Seas ecoregion

Sofia Albrecht[1*], Georgia Novak[1], Karl Bentley[2], Cóilín Minto[1], Emer Rogan[3], Jim O'Donovan[4], Stephanie Levesque[5], Mags Daly[5], Simon Berrow[1,5], Alberto Hernandez-Gonzalez[6], Orla Slattery[1], Luca Mirimin[1], Sinéad Murphy[1]

Talk tomorrow agenda item 8

animals

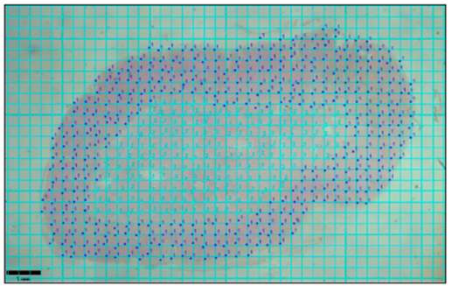
Animals 2025, 15, 2924

Article

Histological and Proteomic Approaches to Assessing the Adrenal Stress Response in Common Dolphins (*Delphinus delphis*)

Claudia Medina Santana [1,*], Orla Slattery [1,2], Jim O'Donovan [3] and Sinéad Murphy [1,*]

[1] Marine and Freshwater Research Centre, Department of Natural Resources and the Environment, School of Veterinary, Agriculture and Environmental Sciences, Atlantic Technological University, Dublin Road, H91 T8NW Galway, Ireland; orla.slattery@atu.ie
[2] Department of Analytical, Biopharmaceutical and Medical Science, School of Life Sciences, Atlantic Technological University, Dublin Road, H91 T8NW Galway, Ireland
[3] Department of Agriculture, Food and the Marine, Regional Veterinary Laboratory, Model Farm Road, T12 XD51 Cork, Ireland
* Correspondence: clamedinasantana@gmail.com (C.M.S.); sinead.murphy@atu.ie (S.M.)



- Adrenal gland mass was strongly correlated to TBL & sexual maturity
- Dolphins that experienced chronic stress had significantly larger adrenal cortices and higher cortex-to-medulla ratios, consistent with prolonged hormone production
- Despite thicker cortices, cell density was lower than 'acutely' stressed animals, suggesting hyptertrophy

Thicker cortex in chronically stressed

Ratio closer to 1:1 = normal ratio of healthy gland (Clark et al., 2005)

Cross-sections of adrenal glands from a chronically stressed common dolphin (A) and an acutely stressed common dolphin (B). Staining with haematoxylin and eosin. M, medulla; C, Cortex. Bar 1mm.

Marine Biology (2025) 172:66
https://doi.org/10.1007/s00227-025-04620-9

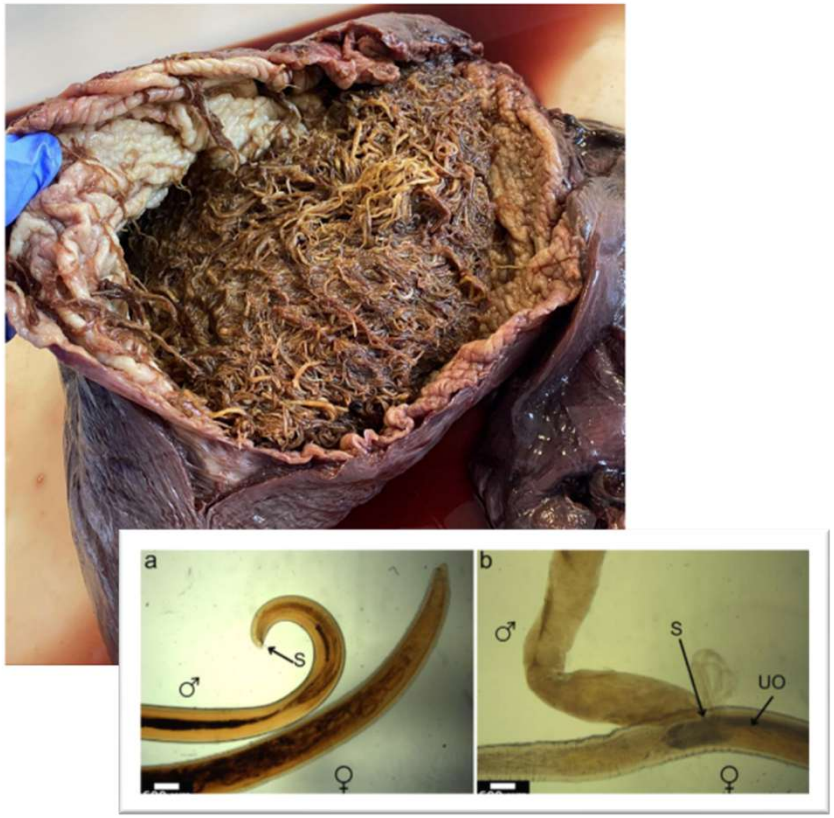
ORIGINAL PAPER

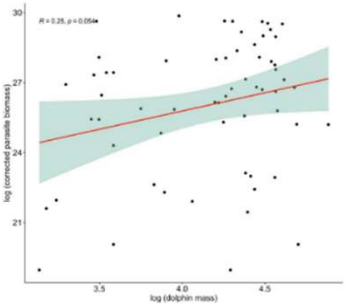
Stomach parasites and health status of short-beaked common dolphins, *Delphinus delphis*, stranded along the Irish coastline

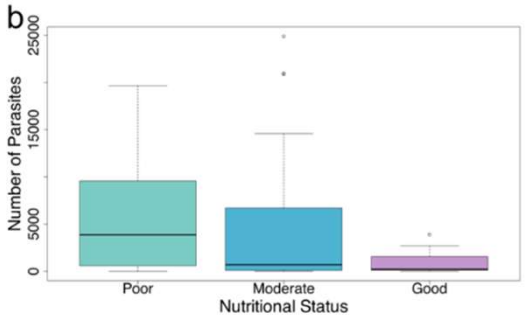
H. A. S. S. Alwis[1] · Sofia Albrecht[1] · Sinéad Murphy[1] · Jim O'Donovan[3] · Simon Berrow[1,2] · Mags Daly[2] · Stephanie Levesque[2] · Katie O'Dwyer[1]

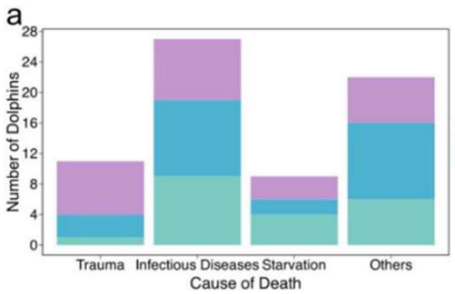
Received: 13 August 2024 / Accepted: 27 February 2025

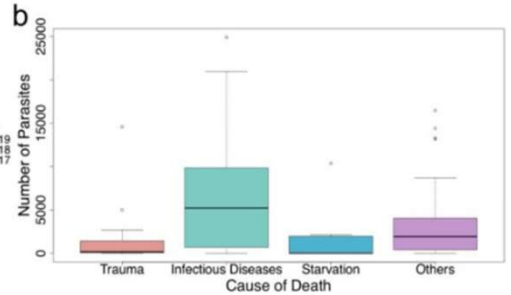
GLM - nutritional status & TBL significantly associated with Anisakis burden











Talk tomorrow, agenda item 8

Differential accumulation of per- and polyfluoroalkyl substances (PFAS) and legacy organochlorines in common dolphins (*Delphinus delphis*) from the Celtic Seas ecoregion

Shannon Finnegan, Brendan McHugh, Cóilín Minto, Evin McGovern, Emer Rogan, Graham J. Pierce, Ophelie Holleville, Simon Berrow, Jim O'Donovan, and Sinéad Murphy

ATU Ollscoil Teicneolaíochta an Atlantaigh / Atlantic Technological University

Foras na Mara Marine Institute

MARINE AND FRESHWATER RESEARCH CENTRE
LÁRIONAD TAIGHDE MARA AGUS FÍORUISCE

Erasmus+

MARINE BEACON

Monitoring and elimination of bycatch of endangered and conserved species in the NE and high seas Atlantic region (MarineBeacon)

#@APP-FORM-HERIAIA@#

Jan 2024 – June 2028

ATU - Partner

ATU proposal team - Sinéad Murphy, Cóilín Minto, Joanne O'Brien, Allan McDevitt

Funding for 2 four-year PhDs, 1 three-year Post-doc

WP 3 - Identifying and overcoming bycatch related knowledge gaps

- Cetacean life history PhD 1 (ATU) – Georgia Novak
- Best practice guide for bycatch monitoring of PETS – Postdoc (ATU) – Yasmin Viana Pinto

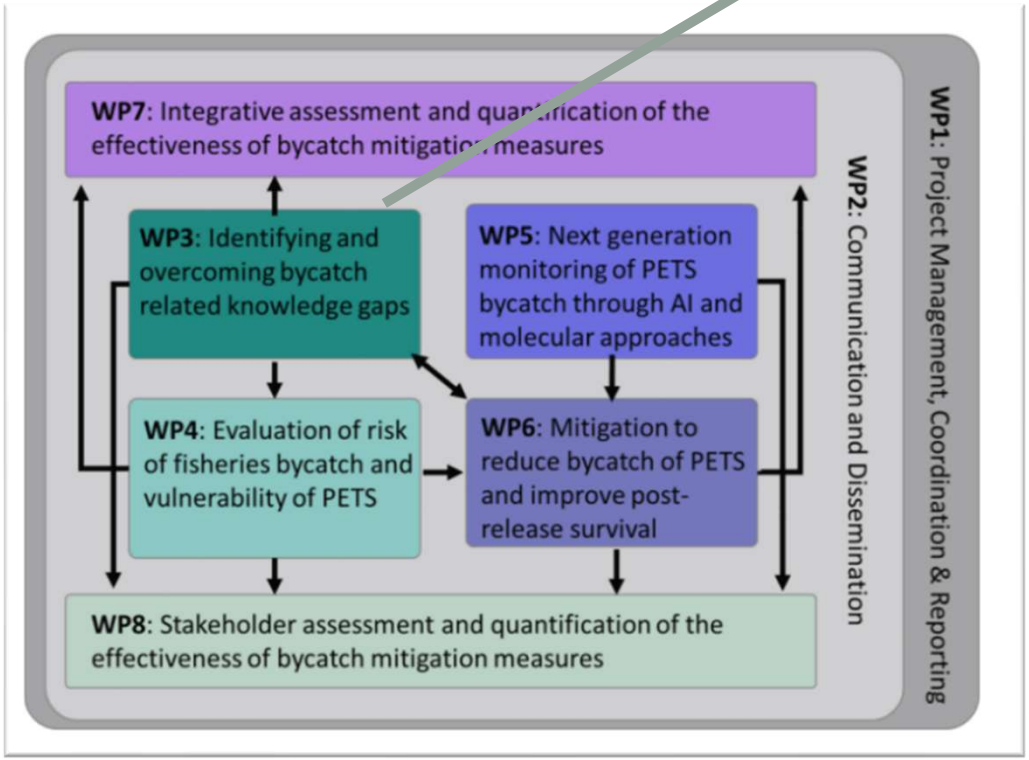
WP 5 - Next generation monitoring of PETS bycatch through AI and molecular approaches

- PETs eDNA PhD 2 (ATU) – Charlotte Nuyt

WP 7 - Integrative assessment and quantification of the effectiveness of bycatch mitigation measures (Sinéad Murphy WP lead)

- Subtask 7.1.2: Evaluation of the deployment of ADDs for mitigation of PETS bycatch (ATU lead) - Postdoc (ATU) – Yasmin Viana Pinto (talk later today, see agenda item 6.5)
- Task 7.2: Feasibility of management reform for mitigating PETS bycatch (ATU/USC leads) 3-year PhD 3 (USC/ATU) – Ignacio Nahuel
- Task 7.3: Ecosystem Services evaluation of bycatch mitigation measures (AZTI lead)
- Task 7.4: Bycatch management decision support tools (Cefas/IEO Lead)

Marine Beacon
MONITORING & ELIMINATION OF BYCATCH OF ENDANGERED & CONSERVED SPECIES IN THE NE & HIGH SEAS ATLANTIC REGION



WP 3 - Subtask 3.1 - Synthesis of data and identification of data gaps

4-year PhD study, **Georgia Novak, ATU**

'*Improving knowledge on the conservation status of small cetaceans*'

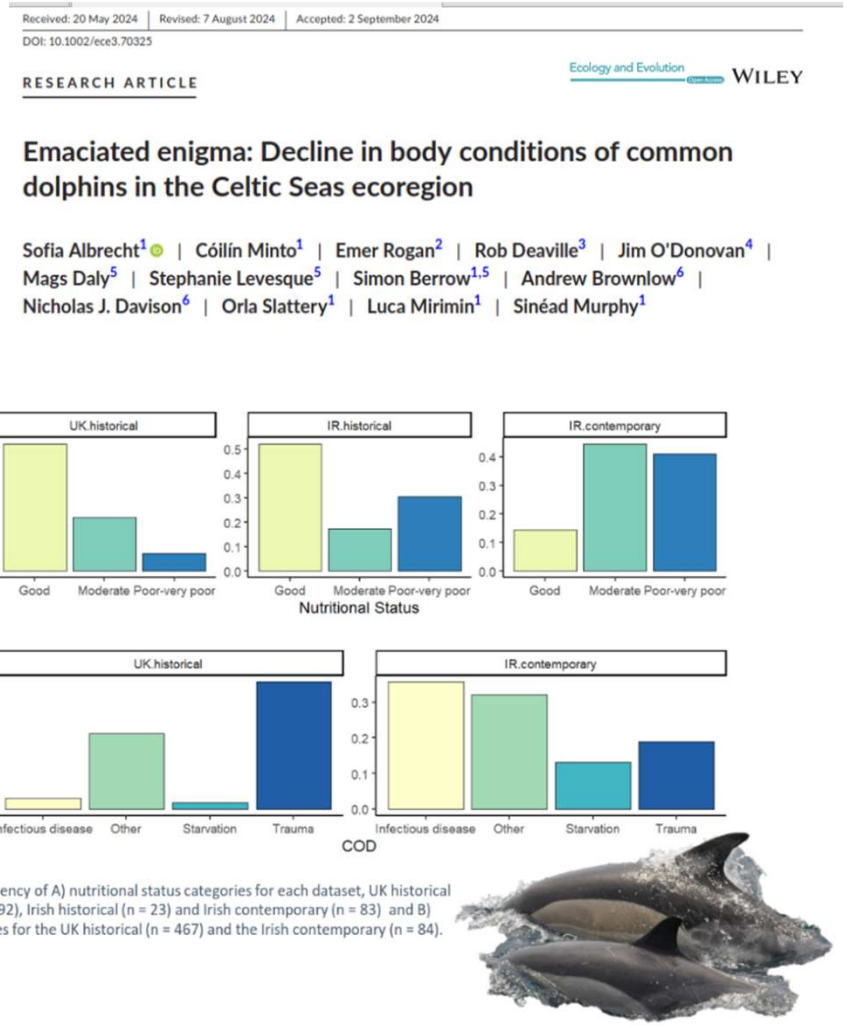
PhD co-supervisors – Sinéad Murphy, Cóilín Minto, Rob Deaville & Rosie Wiliams

Evaluating a demographics indicator for common dolphins & harbour porpoises

Modelling temporal trends in survival, total and cause specific mortality, and population projections

Developing a body condition indicator for harbour porpoise assessment units

ATU & IoZ working on a Body condition indicator, that will follow the framework developed by Albrecht et al. (2024)



Received: 20 May 2024 | Revised: 7 August 2024 | Accepted: 2 September 2024

DOI: 10.1002/ece3.70325

RESEARCH ARTICLE

Ecology and Evolution WILEY

Emaciated enigma: Decline in body conditions of common dolphins in the Celtic Seas ecoregion

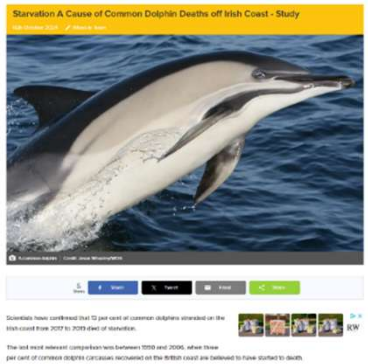
Sofia Albrecht[1] | Cóilín Minto[1] | Emer Rogan[2] | Rob Deaville[3] | Jim O'Donovan[4] | Mags Daly[5] | Stephanie Levesque[5] | Simon Berrow[1,5] | Andrew Brownlow[6] | Nicholas J. Davison[6] | Orla Slattery[1] | Luca Mirimin[1] | Sinéad Murphy[1]

Relative frequency of A) nutritional status categories for each dataset, UK historical dataset (n = 392), Irish historical (n = 23) and Irish contemporary (n = 83) and B) COD categories for the UK historical (n = 467) and the Irish contemporary (n = 84).

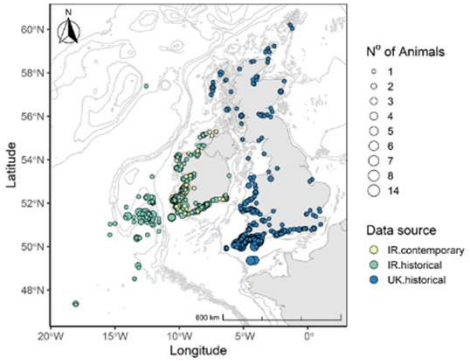
Irish Independent News Opinion Business Sport Life Style

Home / Irish News

Why are so many dolphins dying of starvation off Ireland's coast?



Starvation A Cause of Common Dolphin Deaths off Irish Coast - Study



- Significant and temporal patterns in ventral blubber thickness (VBT)
- At a given total body length, contemporary sampled dolphins had on average a thinner VBT than the historic time-period

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Marine Institute

Vertebrate Necropsy, Sample Recovery, and Contaminant Analysis Services

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Irish Whale and Dolphin Group

An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

ZSL

eurofins

November 2025 – April 2028

ATU – Prime Contractor
Dr Sineád Murphy - Project Manager and Lead Scientist
Dr Cóilín Minto - Biostatistician
MSc student
Part-time Research Assistant

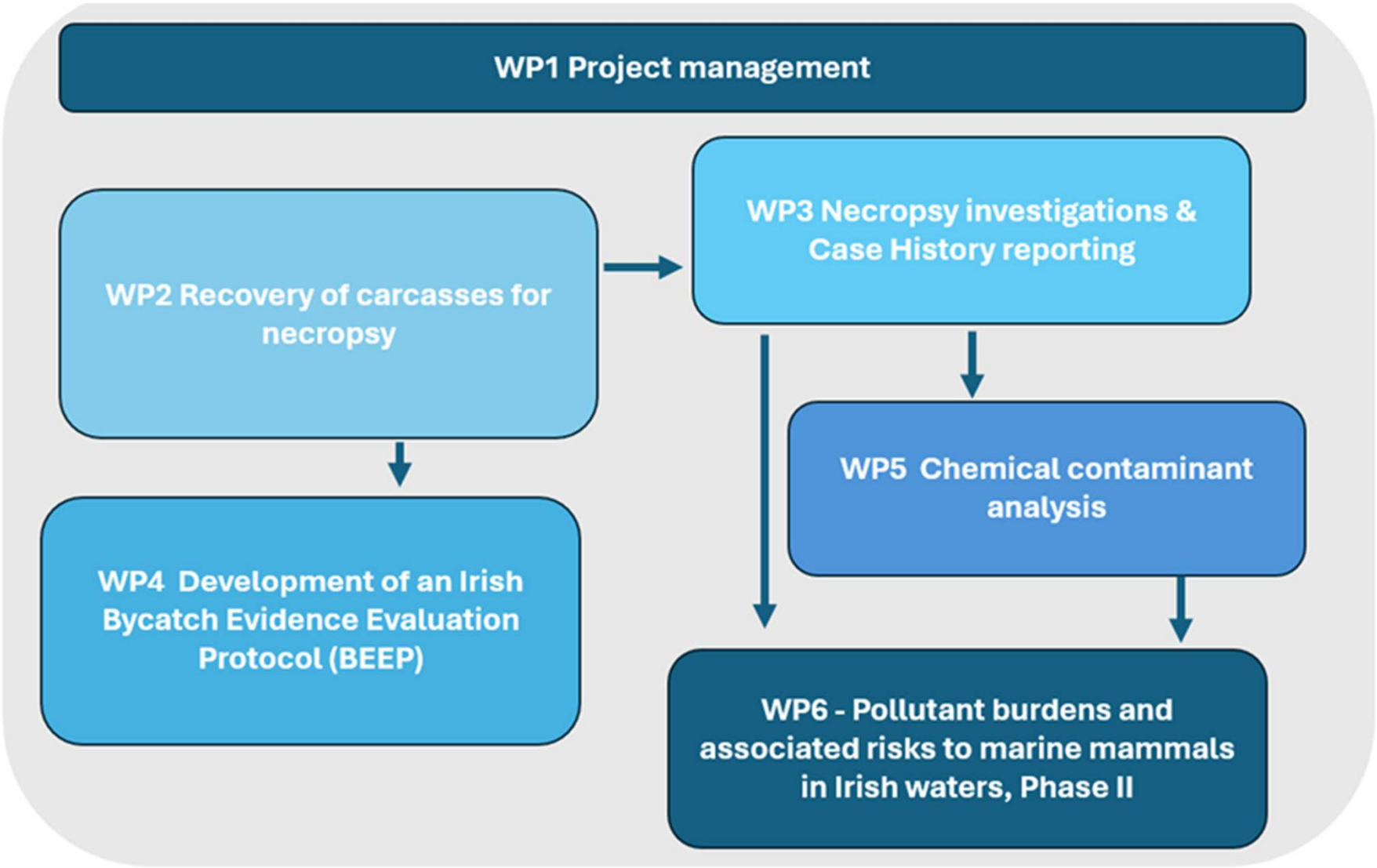
Cork RVL - Partner
Dr Jim O'Donovan – Lead Veterinary Scientist Necropsy
Dr Mercedes Gómez Parada – Veterinary Research Scientist

IWDG - Partner
Dr Simon Berrow – Lead Scientist
Stephanie Levesque – Strandings Officer
Mags Daly – Research Scientist

Eurofins, Germany – Partner
Dr Nina Lonhmann – Lead Chemical Analyst

IoZ, UK - Partner
Dr Rosie Williams – Lead Scientist, Biostatistician

UK CSIP: James Barnett – Veterinary Research Scientist
Rob Deaville - CSIP Project Manager
UK CWT: Anthea Hawtrey-Collier – CWT Strandings Officer
Rebecca Allen – Marine Conservation Officer


WP1 Project management
WP2 Recovery of carcasses for necropsy
WP3 Necropsy investigations & Case History reporting
WP4 Development of an Irish Bycatch Evidence Evaluation Protocol (BEEP)
WP5 Chemical contaminant analysis
WP6 - Pollutant burdens and associated risks to marine mammals in Irish waters, Phase II

Dublin Zoo-IWDG workshop ‘Enhancing Marine Mammal Stranding Response in Ireland: Informing Marine Ecosystem Health Through a Collaborative and Standardised Framework’ November 2025

Sinéad Murphy’s talk ‘Stranding scheme insights: Past discoveries and future directions, with intergovernmental perspectives’