Irish Whale and Dolphin Group

DUBLIN ZOO

Marine Mammal Stranding Workshop

28 November 2025

Stakeholder Summary and Key Outputs

Bottlenose dolphins (*Tursiops truncatus*).
Photo © Steven Van Elk

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Pilot whale at Tullagh Bay, Nr. Clonmany, Inishowen, Co. Donegal. Photo © Darren Riedy

1. Purpose and Objectives of the Workshop

Marine mammal strandings provide valuable insight into ocean health, conservation pressures, and anthropogenic impacts. In Ireland, stranding response is supported by committed organisations and individuals, including the Irish Whale and Dolphin Group (IWDG), the National Parks and Wildlife Service (NPWS), and a wide network of volunteers and scientists. However, challenges remain in relation to coordination, funding, training, post-mortem capacity, and the systematic use of stranding data to inform marine ecosystem health.

This workshop was convened to bring together key national and international stakeholders involved in marine mammal stranding response, post-mortem examination, research, policy, and conservation. The purpose was to share perspectives, explore current strengths and gaps within the Irish system, and consider how stranding response and post-mortem data could be better coordinated and utilised to inform marine ecosystem health, conservation, and policy.

Objective 1: Establish a Sustainable and Coordinated Stranding Response Framework

Develop a long-term, financially sustainable stranding response framework, including post-mortem investigations, that ensures consistent procedures, trained personnel, and the integration of biological, chemical, and physical risk assessment.

Objective 2: Use Stranding and Post-Mortem Data to Inform Marine Ecosystem Health

Leverage stranding and post-mortem findings to generate high-quality data that provide insights into marine ecosystem health, identify emerging threats, and guide conservation priorities and management actions.

The workshop was also intended to foster collaboration across disciplines and organisations, and to identify shared priorities and potential next steps toward strengthening Ireland's marine mammal stranding response framework.

Pygmy sperm whale at Ballinacarrig, Co. Wicklow. Photo © Gemma O'Connor

2. Workshop Participants

The workshop was attended by 52 participants representing a broad cross-section of organisations and disciplines involved in marine science, animal health, conservation, policy, and public engagement.

Participants included representatives from the NPWS, IWDG, the Department of Agriculture, Food and the Marine (DAFM), Dublin Zoo, University College Dublin, Atlantic Technological University, Seal Rescue Ireland, the National Museum of Ireland, veterinary practice, local government, and international strandings programmes, including the UK Cetacean Strandings Investigation Programme (CSIP) and the International Whaling Commission (IWC).

3. Workshop Structure and Flow

The workshop was structured to combine shared learning, applied discussion, and collaborative reflection.

The morning session focused on establishing a shared understanding of the current marine mammal stranding landscape in Ireland and internationally, through a series of short presentations. These covered the scientific, conservation, welfare, and policy relevance of marine mammal strandings and post-mortem examination, as well as legislative obligations and international best practice.

The midday session involved small-group, scenario-based exercises, where participants worked in multidisciplinary teams to respond to realistic marine mammal stranding scenarios. These exercises were designed to explore practical decision-making, coordination, communication, and operational challenges.

The afternoon session broadened the discussion to international perspectives, including the role of the International Whaling Commission and long-standing strandings programmes in England, Wales and Scotland. This was followed by plenary discussion and synthesis, allowing common themes and priorities to be identified.

4. Overview of Presentations and Shared Evidence

Opening and Context

Christoph Schwitzer, Director of Dublin Zoo, opened the workshop by welcoming participants and outlining Dublin Zoo's commitment to conservation leadership, strong partnerships, and the application of scientific knowledge to real-world conservation challenges.

Frank O'Sullivan (Dublin Zoo Veterinary Team) framed marine mammal strandings as events that require not only technical expertise but also empathy, foresight, and long-term thinking. He highlighted the importance of considering the wider implications of decisions for marine species, ecosystems, and human communities.

National Perspectives

Simon Berrow (CEO, Irish Whale and Dolphin Group) traced the development of marine mammal stranding response and post-mortem work in Ireland, highlighting the scientific and policy value of learning from stranded animals. He outlined how post-mortem examinations provide evidence on causes of death, population health, and human impacts, supporting Ireland's obligations under national, EU, and international frameworks, including the EU Habitats Directive, Marine Strategy Framework Directive, and international conventions. He noted that, unlike many other coastal European countries, Ireland lacks a fully funded, year-round national post-mortem programme, resulting in persistent systemic gaps despite strong frontline response capacity.

Olive Heffernan, author and marine biologist, gave a reading from The High Seas, accompanied by music composed by Bill Shanley, inviting reflection on the vulnerability of marine ecosystems and the role of shared responsibility, science, and care in shaping their future.

Ana Vale (University College Dublin) discussed marine mammals as sentinels of ecosystem health, drawing on her work in veterinary public health and One Health. She highlighted research demonstrating links between pollution, antimicrobial resistance, disease, and marine food webs, and emphasised the value of integrating animal, human, and environmental health perspectives.

Sinéad Murphy (Atlantic Technological University) presented findings from the Irish Vertebrate Necropsy Programme (2017–2019), and an assessment of pollutant burdens and associated risks to small cetaceans in Irish waters, both funded by the EMFF and Marine Institute, supported by NPWS. In addition to projects that arose from investigations, funded by the Irish Research Council and others. Using stranded dolphins as indicators of ecosystem health, work examined a wide range of biological, chemical, and physical parameters. Findings included evidence of nutritional stress, such as declining body conditions in common dolphins, along with significant infectious disease issues, heavy parasite burdens, and concerning reproductive indicators. The presentation highlighted the value of standardised post-mortem data in understanding cumulative pressures on marine mammals and ecosystems.

A second necropsy and pollutant monitoring tender (2025–2028) has been awarded to ATU, IWDG, RVL Cork, and the Institute of Zoology, London. Its primary objective is to collect the samples and pollutant data required for OSPAR reporting under the Marine Mammal persistent chemicals indicator. An additional aim of the project is to assess stranded animals for evidence of bycatch. This work is also being extended beyond necropsied cases through the application of the UK Bycatch Evidence Evaluation Protocol (BEEP) to a broad range of stranded animals.

She also discussed the key intergovernmental organisations responsible for the assessment and conservation of marine mammals, focusing in particular on ASCOBANS and OSPAR. She outlined their respective mandates, the policy frameworks they provide, and the ways in which their work contributes to regional coordination, monitoring, and the development of conservation measures.

International Perspectives

Andrew Brownlow outlined his experience leading the Scottish Marine Animal Stranding Scheme and discussed the role of long-term, government-funded programmes in generating policy-relevant data. He introduced the IWC Strandings Initiative and the Global Strandings Network as complementary international frameworks supporting capacity building, rapid response, and shared learning.

Emma Neave-Webb (Stranding Coordinator, IWC) described the role of the International Whaling Commission and its Strandings Initiative, which provides expert guidance, training, and emergency support for live and mass strandings globally. She emphasised the importance of coordinated networks, shared standards, and international collaboration.

James Barnett (UK CSIP, Cornwall) outlined the structure and outputs of the UK Cetacean Strandings Investigation Programme, including post-mortem protocols, long-term datasets, and multidisciplinary research outputs. He demonstrated how integrated stranding and post-mortem programmes contribute to understanding causes of death, population health, and human impacts.

Rob Deaville (UK CSIP) presented the UK Cetacean Strandings Investigation Programme as a long-standing, UK government-funded strandings and post-mortem programme that demonstrates how sustained investment, standardised protocols, and multidisciplinary analysis can generate policy-relevant evidence at national and international scales. Drawing on over three decades of data, he showed how strandings data inform understanding of bycatch, pollution, disease, and climate-driven change, and support reporting under national legislation and international frameworks including ASCOBANS, OSPAR, and the IWC. The CSIP model was highlighted as an example of how coordinated strandings programmes can function as an effective sentinel system for marine ecosystem health.

Common dolphin at Achill Island, Co. Mayo.
Photo © Sorsha Kennedy

5. Scenario-Based Group Work: Key Themes

Participants were organised into multidisciplinary groups and assigned realistic marine mammal stranding scenarios. Each group developed a response plan, considering initial response, coordination, responder and public safety, animal welfare, post-mortem potential, communication, and media management.

Across all scenarios, common themes emerged:

- **Coordination and Command:** Participants consistently identified the need for clearer national coordination, defined leadership, and agreed command structures during stranding events.
- **Post-Mortem Capacity:** Access to timely, standardised post-mortem examination was seen as critical but inconsistently available, limiting data recovery and learning.
- **Funding and Sustainability:** Reliance on short-term or project-based funding was identified as a major barrier to long-term capacity, training, and data continuity.
- **Volunteer and Professional Roles:** The importance of volunteers was widely acknowledged, alongside the need for clear role definitions, training, and support.
- **Public Safety and Communication:** Managing public presence, media interest, and social media during strandings was recognised as an increasing challenge.
- **Data Capture and Feedback:** Participants highlighted gaps in data integration, feedback loops, and communication of findings back to responders and stakeholders.

Groups also reflected on what worked well within the current system, noting strong expertise, commitment, and goodwill across organisations, but emphasised that these strengths were not being fully leveraged due to fragmentation.

6. Post-Mortem Examination as a Policy-Relevant Evidence Base for Marine Ecosystem Health

The workshop generated strong consensus that marine mammal strandings and in particular post-mortem examination (PME) of stranded animals represent a critical, under-utilised national resource for understanding marine ecosystem health in Ireland.

Participants agreed that Ireland's current approach to strandings and PME, while underpinned by considerable expertise and commitment, is fragmented and inconsistently resourced. Funding is limited to short term projects, which restricts the scope and consistency of sampling. As a result, the State's capacity to track trends in key indicators and to meet EU reporting obligations is constrained. Without stable, long term funding, it is difficult to systematically interpret stranding and post-mortem findings in the context of pollution, habitat use, disease dynamics, population status, and emerging threats.

A central outcome of the workshop was recognition that a coordinated, long-term, government-supported PME programme is essential not only for marine mammal conservation, but also for broader marine environmental policy, biodiversity protection, and ecosystem-based management.

Marine mammals were repeatedly identified as sentinel species for marine ecosystems. As long-lived, wide-ranging, high-trophic-level animals, they integrate biological, chemical, and physical signals across large marine areas and timeframes. PME therefore provides an irreplaceable evidence base that cannot be generated through other monitoring approaches alone.

Participants highlighted that PME data can inform national policy across multiple domains, including:

- **Chemical pressures**, such as exposure to persistent organic pollutants, heavy metals, plastics, PFAS, and emerging contaminants.

- **Biological risks**, including infectious disease, parasite dynamics, nutritional stress, and reproductive failure.
- **Physical pressures, such as entanglement**, bycatch, ship strike, acoustic disturbance, and habitat degradation.
- **Population-level indicators,** including age structure, sex ratios, mortality patterns, and population connectivity.
- **Spatial and habitat-use insights**, identifying high-risk areas and interaction zones with human activity.
- **Long-term trends and cumulative impacts**, which cannot be detected without sustained, standardised datasets.

Ireland's strategic position in the eastern North Atlantic means that these data have relevance not only nationally, but also regionally and internationally. However, without a nationally coordinated and consistently resourced system, the full scientific and policy value of PME remains unrealised.

Fin whale at Baile Uí Chuill Strand near Ballinskelligs, Co Kerry.
Photo © Barry Keane/IWDG

7. System-Level Findings with Implications for National Policy and Investment

Discussions across presentations, group work, and plenary synthesis consistently highlighted a number of system-level issues that currently limit Ireland's ability to fully realise the scientific, conservation, and policy value of marine mammal stranding response and post-mortem examination (PME). These findings relate primarily to funding, system design, coordination, and the translation of evidence into decision-making.

7.1 Long-Term State Investment Is a Prerequisite for Meaningful Impact

A strong and recurring theme throughout the workshop was that long-term State investment is fundamental to any effective national marine mammal stranding and PME system. It was acknowledged that Ireland has substantial existing infrastructure through the DAFM Regional Veterinary Laboratories, local authorities, and third-level institutions, including UCD and the emerging veterinary schools in ATU and SETU.

However, participants noted that reliance on short-term or project-based funding, despite the strong expertise and volunteer commitment, constrains continuity, limits capacity, and undermines the ability to generate long-term datasets.

Key points raised included:

- Long-term funding is essential to build continuous datasets capable of detecting trends in pollution exposure, disease prevalence, nutritional stress, and population health.
- Stable resourcing enables meaningful integration of PME findings with wider marine environmental monitoring programmes, rather than isolated or opportunistic analyses.
- Sustained programmes are more likely to attract and retain specialist expertise, including veterinary pathologists and technical staff, and to support training pipelines.

- Long-term investment places Ireland in a stronger position to contribute to, and benefit from, EU research funding and international monitoring and assessment frameworks.

- Short-term funding cycles are fundamentally incompatible with the time horizons required to assess cumulative impacts, climate-related change, and ecosystem-level trends.

Participants agreed that without a stable funding foundation, improvements in coordination, data integration, and policy relevance cannot be fully realised.

7.2 Fragmentation Limits Ecosystem-Level Interpretation and Policy Relevance

The workshop highlighted that Ireland currently possesses many of the technical and human components required for a high-quality stranding and PME system. However, these components do not operate as an integrated national system. Participants consistently identified fragmentation as a key barrier to ecosystem-level interpretation and policy relevance.

Specific issues raised included:

- Further integration across disciplinary datasets remains essential. While some progress has been made in linking pathology, toxicology, spatial, and population-level information with ecological research, these connections are still developing. Strengthening these integrations will improve our ability to detect patterns, understand underlying mechanisms, and generate more comprehensive insights into ecosystem health and organismal responses.

- Inconsistent data capture, reporting standards, and data storage across organisations and programmes (outside of small-scale funded necropsy projects).

- Missed opportunities to synthesise findings into national-level assessments of marine ecosystem health.

- Continued development of structures to ensure that information generated through stranding response feeds into marine policy, biodiversity strategies, and environmental management processes.

Participants emphasised that these challenges do not reflect a lack of expertise or goodwill, but rather the absence of an overarching framework to connect existing efforts. Improved integration was seen as a means of significantly increasing policy value without requiring proportional increases in overall expenditure.

7.3 Communication and Knowledge Transfer Gaps

Communication and knowledge transfer were identified as critical weak points in the current system. Participants noted that even where high-quality data and insights are generated, they are not always translated into accessible, policy-relevant outputs or effectively shared across sectors.

Key issues identified included:

• Inconsistent sharing, updating, and implementation of standard operating procedures across organisations and responder networks.

- Limited mechanisms for translating PME findings into formats that are readily usable by policymakers, regulators, and managers.
- Under-utilisation of volunteer networks, despite their importance for spatial coverage, early reporting, and sample recovery.
- Variable communication pathways between agencies responsible for biodiversity, fisheries, pollution control, public health, and marine planning.

Participants agreed that addressing these communication gaps is essential to ensuring that the effort invested in stranding response and PME translates into meaningful learning and informed decision-making.

7.4 Absence of a Nationally Coordinated Framework

Taken together, the issues of funding instability, fragmentation, and communication gaps point to the absence of a unified national framework governing marine mammal stranding response and PME. There was broad consensus that such a framework is required to provide clarity, consistency, and strategic direction.

Essential elements identified included:

- Nationally standardised PME protocols to ensure scientific consistency and policy relevance.
- A centralised national database linking biological, pathological, toxicological, and spatial information.
- Clear carcass-handling and routing procedures to maximise data recovery and analysis.
- Defined roles and responsibilities across NPWS, IWDG, higher education institutions, State laboratories, museums, and volunteer networks.
- Governance structures capable of linking stranding and PME outputs directly to national marine, biodiversity, and environmental policy processes.

Participants emphasised that the absence of such a framework limits Ireland's ability to fully leverage existing expertise and infrastructure.

7.5 Post-Mortem Examination Is Not Embedded as a Core Marine Monitoring Tool

While participants strongly recognised the scientific and conservation value of marine mammal PME, the workshop identified that PME is not currently embedded as a core component of Ireland's marine environmental monitoring architecture. This was viewed as a significant policy gap.

Participants highlighted that:

- PME provides one of the few direct mechanisms for assessing bioaccumulation of pollutants and heavy metals at the top of the marine food web.
- Systematic PME data are critical for detecting emerging infectious diseases and understanding disease dynamics in a changing marine environment.
- PME findings contribute to understanding population health, structure, connectivity, and the cumulative effects of anthropogenic pressures.
- Stranding and PME data can inform marine spatial planning by identifying high-risk areas and interactions with offshore activities.
- Long-term PME datasets are required to distinguish background mortality from episodic events, pollution incidents, or climate-driven change.

The workshop concluded that failure to formally recognise and embed PME within national marine monitoring and policy frameworks represents a missed opportunity to strengthen evidence-based management of Ireland's marine environment.

Common dolphin at Tarmon Beach, Belmullet , Co. Mayo
Photo © Meghan Kilkher

8. Strategic Priorities Aligned to System-Level Findings

Following the completion of the workshop, it was evident that a structured, time-bound National Marine Mammal Strandings and PME Action Plan should be developed to translate the strategic priorities identified below into coordinated actions and delivery pathways. The Action Plan should:

- Set out short-, medium- and long-term actions associated with each strategic priority
- Define governance arrangements and clarify institutional roles and responsibilities
- Identify sequencing, interdependencies, and enabling actions
- Outline indicative resource requirements and potential funding mechanisms
- Establish arrangements for monitoring progress, review, and adaptive update

The Action Plan would provide the mechanism through which the strategic priorities are given practical effect, ensuring coherence, accountability, and alignment with national marine, biodiversity, and environmental policy frameworks.

Priority 1: Secure Long-Term State Investment

Participants identified sustained State funding as the foundational requirement for an effective marine mammal stranding and post-mortem system. Long-term investment is needed to support continuous post-mortem activity, specialist capacity, data continuity, coordination functions, and training, and to enable Ireland to generate ecosystem-level insights over appropriate time horizons.

Priority 2: Strengthen Alignment with International Conventions and Frameworks

Participants emphasised the importance of embedding Ireland's stranding and post-mortem activity within established international frameworks, particularly through ASCOBANS, the Bonn Convention (CMS), and the IWC Strandings Initiative. Although Ireland is not currently a Party to ASCOBANS, participants noted that accession would provide substantial practical advantages.

These include access to well established regional protocols, technical guidance, and expert working groups that support consistent stranding response and post mortem methodologies across the North East Atlantic. Becoming part of ASCOBANS would also enable Ireland to contribute to, and benefit from, coordinated monitoring programmes, shared data systems, joint research initiatives, and training opportunities that strengthen national capacity. Alignment with these frameworks was viewed not as an abstract policy aspiration, but as a pragmatic mechanism for improving standardisation, ensuring data comparability, and enhancing scientific credibility.

Priority 3: Embed Post-Mortem Examination within Marine Ecosystem Health Monitoring

Participants agreed that marine mammal post-mortem examination should be formally recognised and utilised as a core component of Ireland's marine ecosystem health monitoring. This includes its use in assessing pollution, disease, population health, and cumulative pressures, and in informing marine spatial planning and environmental risk assessment.

Priority 4: Reduce Fragmentation through Improved Coordination and Data Integration

Rather than creating entirely new structures, participants prioritised improved linkage between existing organisations, datasets, and expertise. This includes clearer interfaces between response, pathology, research, and policy, and better integration of biological, toxicological, spatial, and population-level data to support ecosystem-level interpretation.

Priority 5: Strengthen Communication, Feedback, and Knowledge Transfer

Participants highlighted the need for clearer communication pathways and feedback loops to ensure that information generated through stranding response and post-mortem examination is shared effectively, translated into policy-relevant outputs, and communicated back to responders, volunteers, and participating organisations.

Sperm whale at Doolin, Co. Clare
Photo © Eoin Hogan