MASTS Annual Science Meeting 2026

"Tides of Change, Waves of Possibility"

Tuesday 10th – Thursday 12th November 2026
Technology & Innovation Centre, University of Strathclyde, Glasgow

Day 1: Tuesday 10th November 2026

09.00-09.30 Coffee and Registration

09.30-11.00 **Opening of MASTS ASM and talks** in the Main Auditorium (Auditoria B/C)**.**

09.30-09.40 **MASTS ASM Opening** (Professor Nick Fyfe thanks outgoing MASTS Executive Director, Professor David Paterson, who hands over to incoming Executive Director, Professor Bhavani Narayanaswamy).

09.40-10.05 **Professor Bill Sanderson** (Heriot Watt University). **"Six decades of scientific diving excellence"**

Since the mid-1960s, Heriot-Watt University has trained generations of scientific divers, with close to 1,000 undergraduate and postgraduate students from around the world passing through its doors. To mark the 60th anniversary, this presentation reflects on the milestones and achievements of this heritage. From underwater surveys in Scapa Flow and across Scotland, to the tropics and from pole to pole; the dive team have undertaken ground-breaking research and training.

10.05-10.15 **Professor Mark Inall** (Chief Scientific Advisor Marine, Scottish Government). "**Updating the Marine & Freshwater ARIs**"

Earlier this year, the MASTS Community contributed to the development of the Scottish Government's Marine and Freshwater Areas of Research Interest. These are now published, and Prof Inall will provide an update and detail how to get involved.

10.15-11.00 **Natural Capital Approaches for Marine and Coastal Conservation.** Chair Dr Chris Leakey (NatureScot). Talks are 12 minutes (with 3 minutes for questions).

- Paul Causon (NIRAS) - Developing a Principle-Led Natural Capital and Pluralistic Values Framework for Marine Artificial Structures
- Sofie Illemann Jaeger (HWU) - From indicators to lived experience: revising socio-cultural natural capital assessment through qualitative research
- Katherine Simpson (University of Glasgow) - Principles for Responsible Investment in Coastal and Marine Natural Capital

11.00-11.45 **Coffee break,** networking and Poster Session 1

	On Level 2			On Level 3		
Time	Screen 1	Screen 2	Screen 3	Screen 4	Screen 5	Screen 6
11.05-11.20	Georgina Chow	Cristina Gutiérrez-Zárate	Otto Hague	Lottie Holland	Doyinsola Mustapha	Jackson Robinson
11.25-11.40	Charlotte Wilson	Dominique Anderson	Raúl Hilder Nine	Adam Hocking	Monika Kosecka	Alex Winter

- Georgina Chow (HWU) - Investigating Sex-Specific Immune Responses in *Parhyale hawaiensis* Under Multiple Stressors
- Cristina Gutiérrez-Zárate (University of Edinburgh) - Coralporosis of Cold-Water Coral Ecosystems: An Innovative Approach Using Mini-Reefs and In Silico Models
- Otto Hague (ENU) - Veterinary medicines in multiple stressors systems
- Lottie Holland (SAMS) - Winging it? Exploring the multi-stressor impacts of high temperature and low salinity on commercially cultivated winged kelp *Alaria esculenta*
- Doyinsola Mustapha (HWU) - Effects of chemical mixtures and short-term heatwave stress on survival and sublethal responses in *Lymnaea stagnalis*
- Jackson Robinson (University of St Andrews) - Impacts of a simulated green ammonia leak on the physiology and activity of a common tubeworm
- Charlotte Wilson (SAMS) - *In vitro* embryo culture of the vampire crab *Geosesarma dennerle*, a new model species for ecotoxicology
- Dominique Anderson (HWU) - Prescription ponds: Illicit drugs, veterinary pharmaceuticals and banned pesticides are ubiquitous in small freshwaters
- Raúl M. Hilder Nine (UWS) - Patterns and Thresholds of Metal(loid) Toxicity Across Aquatic Protists: A Systematic Review
- Adam Hocking (UWS) - Potentially toxic elements (PTEs) as drivers of antimicrobial resistance in freshwater biofilms: Evidence from a systematic review
- Monika Kosecka (Marine Directorate) - Scottish Passive Acoustic Network SPAN – first insight into underwater soundscapes in Scottish Waters
- Alex Winter (University of Strathclyde) - Predicting the effects of climate change on marine food webs

11.30-13.30 **Special Session on Multiple Stressors** in Conference Room 4/5

11.45-13.15 **Special Session on Technological Innovation in Environmental Monitoring & Assessment** in Auditorium A; and
Emerging Research and Conservation of Sharks, Skates and Rays in the Main Auditorium (Auditoria B/C)

11.30-13.30 **Special Session on Multiple Stressors** in Conference Room 4/5. Chairs: Dr Frances Orton (HWU) and Professor Karen Diele (ENU).

Long talks (12 minutes plus 3 minutes for questions)

- Simone Baldanzi (Atlantic Technological University) - Non-additive responses of marine invertebrates to global change multi-driver experiments: an extensive meta-analysis
- Toms Ekmanis (University of St Andrews) - Multiple stressor effects on intertidal microphytobenthos
- Abbie Affleck (University of Stirling) - Contrasting resilience to ocean acidification, warming, and heatwaves in mussels and oysters: Shell responses and implications for survival
- Rebecca Rogers (QUB) - Just a drop in the ocean: Do emerging pollutants influence boldness and exploration behaviour in hermit crabs?
- Jude Wilson (HWU) - Caged tadpoles inhabiting polluted ponds exhibit reduced locomotor activity

Speed talks (5 minutes plus a 5 minute question time at the end of all speed talks)

- Michael Vail (University of St Andrews) - Nutrient pollution and microplastics independently and interactively alter macrofaunal communities in benthic estuarine mesocosms
- Isabel Quinn (University of Oxford) - Testing for interactive effects of chemical pollution and drought on leaf litter decomposition in an integrated constructed wetland.
- Stefania-Denisa Luca (University of Oxford) - Multiple Stressors Across Ecosystem Boundaries: A Systematic Review of Freshwater Trophic Subsidies
- Toby Popple (University of York) - Chemical Contaminants in a Changing Climate: Uncovering How Multiple Stressors Shape Exposure and Toxicity Pathways
- Lavanya Vythalingam (HWU) - Low-dose, Real Effects: Real-world pollutant mixtures impact mortality, growth, and gene expression in tadpoles (*Rana temporaria*)
- Kevan McBean (SAMS) - Structural differences in the metal concentrations found in egg cases of flapper skate (*Dipturus intermedius*)

11.45-13.15 **Technological Innovation in Environmental Monitoring & Assessment** in Auditorium A. Chairs: Professor Tom Wilding (SAMS) and Dr Ciprian Zavoianu (RGU). Talks are 11 minutes each (plus 3 mins for questions).

- Peter Teye Busumprah (Ocean Rock Base) - Indigenous, community-led and digital mapping of fisheries and ocean biodiversity across Africa
- Vicki Balfour and Anastasia Ellis (University of St Andrews) - Merra: Industry-Led Data Collection for Evidence-Based Co-management of Small-Scale Fisheries
- Alejandra Mejia-Saenz (SAMS) - Not built for AI: Adapting a decade of legacy GoPro video for deep learning
- Annie Murphy (INSPIRE Environmental) - Next-Generation Sediment Profile Imagery: An Automated Pipeline for High-Resolution Grain Size Analysis
- Amy Tyndall (EOLAS Insight Ltd) - From Burrows to Big Picture: Scaling Seabird Monitoring with Digital Technology

11.45-13.15 **Emerging Research and Conservation of Sharks, Skates and Rays** in Auditorium B/C. Chair: Professor James Thorburn (ENU).

This session will bring together a series of talks highlighting emerging research and conservation work on sharks, skates and rays across Scotland, Northern Ireland and the wider Northeast Atlantic. Topics will include the movements of highly mobile species, working with the offshore industry to improve the collection and use of data, identifying current evidence gaps and research priorities, and ongoing elasmobranch research in Northern Ireland. The session will also consider how the management of sharks, skates and rays has developed in Scottish waters and how new research is helping to inform future approaches. Together, the talks will provide a broad overview of current work across the region and some of the key questions shaping future research and conservation.

- Jane Dodd (NatureScot) – Scottish elasmobranch conservation: policy and progress
- Sophy Phillips (CEFAS) - The migrations and behaviour of porbeagle shark (*Lamna nasus*) in the Northeast Atlantic
- Karl Roberts (Tritonia Scientific Ltd) - The unlikely connection between seabed geology, flapper skate nurseries and underwater robots
- Mia McAllister (ENU) - Occurrence and distribution of elasmobranchs with offshore energy infrastructure in Scotland's North Sea and west of Shetland
- James Thorburn (ENU) - Guiding Elasmobranch conservation through evidence-based research prioritisation
- Rosie Ashworth (HWU) – Skating back from the brink? Fisher's ecological knowledge offers clues to flapper skate recovery

13.15-14.00 **Lunch**, networking and **Poster Session 2**. 🍽

Lunchtime Finger Buffet - Chefs selection of sandwiches & wraps; Homemade brie and tomato chutney quiche (v); Vegan sausage roll with a selection of traditional dips (vg); Black rice, avocado and azuki bean salad with a chimichurri dressing (vg) (gf); Chefs cake of the day and fruit bowl selection (v) (50/50 split)

	On Level 2			On Level 3		
Time	Screen 1	Screen 2	Screen 3	Screen 4	Screen 5	Screen 6
13.40-13.55	Zeynep Narli	Charis Hanna	Samana Tiwari	Carla Ewart	Chiara Gambardella	Melanie Chocholek

- Zeynep Narli (Akdeniz University) - The Relationship Between Split-Beam Hydroacoustic Backscatter and the Biometric Characteristics of Posidonia oceanica Leaves in the Aegean Sea
- Charis Hanna (University of St Andrews) - Towards Automated Cliff-Nesting Bird Monitoring using Machine Learning
- Samana Tiwari (University of Aberdeen) - Putting People into Marine Net Gain: Integrating Stakeholder Perspectives to Support Nature Market Policy
- Carla Ewart (SAMS) - Revealing Hidden Layers: High-resolution analysis of elasmobranch eggcase structure and composition.
- Chiara Gambardella (QUB) - From hauls to hotspots: joint species models for OSPAR-listed elasmobranchs in a trawled seascape
- Melanie Chocholek (University of St Andrews) - Responses to aspects of a changing climate by canopy understory turfs

1400-1700 Workshop - **Sharkscape** in Conference Room 1 (for invited attendees only)

1400-1700 Workshop - **Frond or Foe? New kelp habitats on offshore structures in a changing ocean** in Conference Room 2 (for registered attendees only)

14.00-16.00 **Marine Mammal Special Session** in Main Auditorium (Auditoria B/C);
General Science Session 1 in Auditorium A; and
General Science Session 2 in Conference Room 4/5.

14.00-16.00 **Marine Mammal Special Session** in the Main Auditorium (Auditoria B/C). Chairs: Dr Monica Arso Civil (Marine Directorate) and Dr Gill Braulik (University of St Andrews)

Long talks (8 minutes plus 3 minutes for questions)

- Faye Moyes (University of St Andrews) - Improving bycatch estimation to support sustainable fisheries and endangered, threatened and protected species conservation
- Aude Benhemma-Le Gall (University of Aberdeen) - Short-term changes in bottlenose dolphin occurrence and foraging activity during a dredging campaign in a protected area
- Davina Derous (University of Aberdeen) - Blubber proteomics reveals distinct physiological signatures associated with starvation, disease and development in short-beaked common dolphins
- Rebecca von Hellfeld (University of Aberdeen) - Mercury in long-finned pilot whales from three UK mass stranding events
- Ciaran Dolan - Age class partitioning in minke whale foraging ecology: insights from stable isotope analysis
- Duncan MacDougall (University of St Andrews) - Persistence of Minke Whale Hotspots and Implications for the Management of a Scottish Marine Protected Area
- Claire Stainfield (SRUC) - Between Tides and Tourists: Human–Seal Coexistence in a Shared Aberdeenshire Coastal Landscape

Speed talks (4.5 minutes plus an 8 minute question time at the end of all speed talks)

- Ophelie Humphrey-Walsh (Xodus) - Compensation for unfavourable harbour seal populations: an industry perspective
- Sophie Kendall (ERM) - A Global Review of Underwater Noise Guidelines and Regulatory Approaches
- Chloe Malinka (SMRU Consulting) - Project COSIMMAS: Synthesizing knowledge of Continuous Sound Impacts on Marine Mammals and Mitigation at Source
- Rosie Day-Reader (University of St Andrews) - Changes in whistle use by long-beaked common dolphins (*Delphinus delphis bairdii*) in controlled exposure experiments
- Susanna Quer (Marine Directorate) - A Spring Decline in Delphinid Acoustic Detections Revealed by Passive Acoustic Monitoring
- Muhammad Asif (University of St Andrews) - Seeing with sound: Description of the biosonar of the blind Indus River dolphin (*Platanista minor*) in the highly managed Indus River of Pakistan

- Charlie Hargrave (University of St Andrews) - Controlling for Individual Signatures Improves Inter-Group Homogeneity of Vocalisations in a Scottish Bottlenose Dolphin (*Tursiops truncatus*) Population

14.00-16.00 **General Science Session 1** in Auditorium A. Chair: Prof David Paterson (University of St Andrews). Talks are 13 minutes (with 3 minutes for questions).

- Alexander Gilliland & Fiona Munro (Marine Directorate) - ScotMER: Delivering the Evidence for Scotland's Offshore Renewable Energy Future
- Natasha Yates (ENU) - From presence to drivers: building the evidence base of a tope shark aggregation in the Inner Hebrides.
- Made Abiyoga Udaya (ENU) - Uncovering the spatial distribution of prospective flapper skate egg nurseries in Scottish waters
- Antonia Klocker (ENU) - Wide-ranging, year-round breaching behaviour of basking sharks revealed by long-term biologging
- Stephen Watson (PML) - Connecting the Evidence: Biodiversity, Ecosystem Services and Marine Artificial Structures
- Megan Squire (University of Aberdeen) - 3D Visualisations of Reef-Like Communities at Offshore Energy Structures and Their Utilisation for Stakeholder Engagement
- Paula Duffy (University of Aberdeen) - Understanding public attitudes to decommissioning marine artificial structures: preliminary findings from the UK North Sea

14.00-16.00 **General Science Session 2** in Conference Room 4/5. Chair: Prof Teresa Fernandes (HWU). Talks are 12 minutes (with 3 minutes for questions).

- Adhip Aditya (University of Glasgow) - Investigating Climate Change Impacts in the Irish Sea using Ecosystem Modelling
- Thomas Baxter (University of St Andrews) - Going up? Change in vertical distributions of rocky intertidal taxa in response to sea level rise and climate change
- Marc Bonnot (University of St Andrews) - Marine warming impacts on copepod abundance, community composition in the Fair Isle Demonstration and Research MPA
- Aditya Kapuriya (HWU) - Factors influencing calcium carbonate dissolution in the ocean: The Role of Zooplankton
- Elizabeth Lacey (HWU) - Community-Led Coastal Resilience in a Changing Climate
- Megan McNichol (University of Strathclyde) - Sensitivity of a North Sea ecosystem model to shipping derived nitrogen deposition

- Heloise Gilbert (SAMS) - From source to shore: Ageing plastics on Scotland's west coast
- Guillaume Hermann (Marine Directorate) - Reassessing OSPAR Background Concentrations for Polycyclic Aromatic Hydrocarbons Using Deep Sediment Cores from the Northern North Sea

16.00-16.45 **Coffee break,** networking and **Poster Session 3**

	On Level 2			On Level 3		
Time	Screen 1	Screen 2	Screen 3	Screen 4	Screen 5	Screen 6
16.05-16.20	Yvonne Anderson	Cathy Gibson	Stephanie Barnicoat	Shreya Vinodh	Jaz Harker	Bee Berx & Working Group
16.25-16.40	Jane Warley	Rebecca von Hellfeld	John McWhirter	Graham Russell	Texa Sim	Jennifer Graham

- Yvonne Anderson (University of Leeds) - A prioritised action plan to fill cetacean evidence gaps: cumulative population level impacts of marine industries
- Cathy Gibson (QUB) - From Sound to Science: Building Confidence in Automated Detection for Humpback Whale Research
- Stephanie Barnicoat (Haskoning) - Passive Acoustic Monitoring (PAM) as a mitigation tool for harbour porpoise (*Phocoena phocoena*) during offshore industrial activities in UK waters
- Shreya Vinodh (University of St Andrews) - Seasonal vertical and spatial distribution of Calanus finmarchicus: Implications for North Atlantic right whale (*Eubalaena glacialis*) foraging behaviour in Cape Cod Bay
- Jaz Harker (SAMS) - Estimating absolute harbour porpoise (*Phocoena phocoena*) density and abundance
- Bee Berx and Marine Climate Change Adaptation Working Group (MASTS) - Supporting evidence-based climate change adaptation in Scotland's marine environment: A roadmap for accelerating adaptation action
- Jane Warley (ERM) - Establishing accurate baselines for marine mammal assessments: Challenges and opportunities
- Rebecca von Hellfeld (University of Aberdeen) - Timelines of exposure - diet composition and mercury burden of Lulu the last female west coast killer whale
- John McWhirter (University of Strathclyde) - Investigating Future Extreme Wind and Wave Conditions for UK Offshore Renewable Energy Using CMIP6 Projections
- Graham Russell (RYAS) - Yachting and climate change
- Texa Sim (NatureScot) - Harbour porpoise presence in the North-east Lewis Marine Protected Area
- Jennifer Graham (SAMS) - A prototype portal to support marine monitoring and forecasting for decision making in UK Shelf Seas

16.45-18.00 **MASTS Energy Transition Forum Careers Session** in Auditorium A;
Climate Adaptation Session in the Main Auditorium (Auditoria B/C);

16.45-18.00 **MASTS Energy Transition Forum Careers Session** in Auditorium A. Chairs: Dr Karen Alexander (HWU) and Ellie Macleod (RGU).

Wondering what to do next and where your postgraduate degree could take you? The MASTS Energy Transition Forum is hosting an informal careers session for postgraduates and Early Career Researchers interested in careers across the marine and energy transition sectors. The aim is to give participants an opportunity to hear directly from professionals working in different sectors, learn about career pathways, and ask informal questions about roles, skills and career progression.

16.45-18.00 **Climate Adaptation Session** in the Main Auditorium (Auditoria B/C). Chairs: Dr Bee Berx (Marine Directorate), Dr Joanne Porter (HWU) and Dr Tanya Riley (UHI). Talks are 12 minutes each (plus 3 minutes for questions).

- Tanya Riley (UHI) - Supporting evidence-based climate change adaptation in Scotland's marine environment
- Bernadette Snow (SAMS) - Developing Whole of Society Climate Action through Ecosystem Based Adaptation
- Nicola Horsburgh (University of Stirling) - Potential hotspots for nature-based adaptation in Scotland's sedimentary coasts
- Ellen McHarg (UEA) - Building resilient seafood systems in a changing ocean: Integrating ecosystem dynamics, fisheries, and consumer behaviour
- Bill Sanderson (HWU) - Shellfish restoration: a window on the past and a view to the future

18.00-19.00 **Drinks and networking reception** 🥂

Please join us for our drinks and networking reception. An ideal opportunity to catch up with colleagues, chat and get to know each other, foster new connections and discuss opportunities for collaboration. You will also be able to enjoy access to all our eposter screens.

Day 2: Wednesday 11th November 2026

08.30-09.00 Registration and tea/coffee

09.00-18.00 **ECOWind Special Session** in Auditorium A. See pages 21-23 of this programme for speaker and talk titles of this session.

As the ECOWind programme (NERC, DEFRA, TCE) comes to it end this event will cover the very latest research breakthroughs from the four projects – ECOWind ACCELERATE, BOWIE, ECOWINGS and PELAgIO – covering 5 themes on the effects of Offshore Wind:

Theme 1: Climate Change and Future Seas
Theme 2: Seabed and Water Column Processes, Habitats and Resilience
Theme 3: Species Responses and Marine Food Webs
Theme 4: Managing Cumulative Effects
Theme 5: Now and the future: Planning, consenting, mitigation, compensation, monitoring and nature recovery

09.00-11.00 **General Science Session 3** in Conference Room 6/7; and
The Future of Estuaries & Coastal Science Special Session in the Main Auditorium (Auditoria B/C)

09.00-11.00 **General Science Session 3** in Conference Room 6/7. Chair: Prof John Baxter (Honorary Professor at HWU and University of St Andrews). Talks are 12 minutes (and 3 minutes for questions).

- Reece Mills (QUB) - From pattern to mechanism: integrating prey and benthic ecology into seabird foraging habitat studies
- Kate Fraser (SAMS) - Have deep-sea benthic communities in the Rockall Trough, Northeast Atlantic, changed over the past four decades?
- Fern Fairgrieve (ENU) - The abundance, diversity, and sources of antibiotic resistance in a Scottish river catchment
- Davide Vettori (University of Glasgow) - On the wave attenuation by seagrass canopies in presence of a current
- Theodora White (UWS) - Aggressive interactions in a global invader: intraspecific behavioural responses of the Japanese skeleton shrimp *Caprella mutica*
- Marcelina Lekawska (MCS) - Mind the Gap: Optimising Habitat Creation in Native Oyster Restoration
- James Fennell (University of Stirling) - Monitoring and mapping intertidal blue mussels (Mytilus sp.) within Dornoch Firth Marine Protected Area
- Naomi Kennon (HWU & Balanced Horizon) - Oyster growth and survival across subtidal and intertidal restoration sites in the Firth of Forth

09.00-11.00 **The Future of Estuaries & Coastal Science Special Session** in the Main Auditorium (Auditoria B/C). Chair: Dr Hon Chim Chiu (University of St Andrews). 10-minute talks (with 3 minutes for questions).

- Janet Khan (SEPA) - Estuaries and nature conservation: the problems of blurred definitions and inadvertent omissions.
- Ryan Pereira (HWU) - Reducing uncertainties of organic matter transport in the land-ocean continuum of tropical systems
- Lucy Robinson (University of St Andrews) - Estuary-Scale Assessment of Intertidal Organic Carbon: A Multi-Method Approach
- Terrie Sawyer (MFCP) - Addressing knowledge gaps in Future Estuarine Management: Perspectives from the Tay, Forth, Solway and Moray Firths.
- Jon Dickson (Marine Trees) - Who lives in a pear tree under the sea?: The lost ecosystem of sunken driftwood
- Isabella Jackson (HWU) - Industrial Footprints in a Changing Estuary: Tracing Legacy and Emerging Contaminants in Firth of Forth Mussels
- Anna McGregor (University of Glasgow) - An education-based approach to nature conservation and action: nature connectedness to the coast in island schools
- Stewart Angus (NatureScot) - Saltmarsh and climate change in the UK – a new approach

This session will conclude with a discussion about the definition of "coast"

11.00-11.45 **Coffee break,** networking and **Poster Session 4**

	On Level 2			On Level 3		
Time	Screen 1	Screen 2	Screen 3	Screen 4	Screen 5	Screen 6
11.05-11.20	Benjamin Gustafson	Steven Benjamins	Jenni Kakkonen	James Jesty	Robyn Tuerena	Sarah Cryer
11.25-11.40	Henry Lawrence	Rosie Young	Vicktor Wu	Rebecca Giesler	Geena Baird	Moritz Eichert

- Benjamin Gustafson (HWU) - A climate change risk assessment for the carbonate counter pump
- Steven Benjamins (SAMS) - Wind farms, lost fishing gear and marine megafauna: Considering potential entanglement risk
- Jenni Kakkonen (Orkney Islands Council) - Examining potential changes in sandy shore communities over 50-year period with investigations into seasonal differences on a dissipative beach in Scapa Flow, Orkney
- James Jesty (University of Stirling) -The consequences of heatwaves for the microbial communities of intertidal mudflats

- Robyn Tuerena (SAMS) - Gulf Stream nutrient supply governs biological productivity across the North Atlantic
- Sarah Cryer (HWU) - Do coccolithophores boost the impact of ocean acidification?
- Henry Lawrence (SAMS) - Using colour to assess maerl bed health
- Rosie Young (University of Oxford) - Citizen science for coral reef monitoring: establishing an ecological baseline in Bocas del Toro, Panama
- Viktor Wu (University of Glasgow) - Detecting Seagrass Effects on Water Clarity from Space
- Rebecca Giesler (UHI) - Restoring Shetland's Marlie Meadows
- Geena Baird (University of Strathclyde) - Approximating MSY and F/MSY in StrathE2E: A Reduction in Computational Expense
- Moritz Eichert (HWU) - Alternative Baits to reduce or replace Brown Crab (*Cancer Pagurus*) as bait in the fishery targeting Common Whelk (*Buccinum undatum*).

11.45-13.15 **General Science Session 4** in the Main Auditorium (Auditoria B/C); and **Particle Tracking Session** in Conference Room 6/7.

11.45-13.15 **MASTS General Science Session 4** in the Main Auditorium (Auditoria B/C). Chair: Dr Vicki Balfour (University of St Andrews). Talks are 12 minutes each (and 3 mins for questions).

- Benedict Viney (MRAG) - Collecting scientific data in the Antarctic krill fishery
- Georgina Cole (ENU) - Physical condition and physiological responses to capture by rod and reel and trawl fishing in the Critically Endangered flapper skate (*Dipturus intermedius*)
- Zoe Scott-Green (Fishing for Litter) - Developing Circular Economy Approaches for Abandoned, Lost and Discarded Fishing Gear
- Katherine Wright (HWU) - Fuel use and cost intensity analysis of UK fishing vessels
- Kirsty Woodcock (HWU) - Quantifying the environmental impacts of bottom trawling for *Nephrops norvegicus*

11.45-13.20 **Particle Tracking Session** in Conference Room 6/7. Chairs: Dr Rory O'Hara Murray (Marine Directorate) & Dr Soizic Garnier (University of Bangor). 13 minute talks, plus 3 minutes for questions.

- Andrew Dale (SAMS) - Particle tracking to assess the risk of drifting fishing gear snagging at floating offshore wind sites and creating an entanglement risk
- Soizic Garnier (University of Bangor) - Scallop Larval Dispersal and Connectivity in the Northern Irish Sea
- Mark James (University of St Andrews) - Particle tracking for the masses – Merra-drift: operational particle-tracking for non-specialists
- Tom Scanlon (MTS-CFD Ltd) - From oyster larvae to sea lice and marine plastics: CLAWS, a flexible particle-tracking framework for coastal environmental assessment
- Tim Szewczyk (SAMS) - Biological variability and uncertainty in larval dispersal modelling
- Danny Dunbar (University of Aberdeen) - Modelling the bedload transport of 'alien' particles by waves and currents

13.15-14.00 **Lunch**, networking opportunities and **Poster Session 5** 🍽

Lunchtime Fork Buffet - Chicken in a tarragon & mustard cream sauce; Lincolnshire sausages with onion gravy (vg) (gf); Sautéed green beans (vg) (gf); Mashed potatoes (vg) (gf); Chef's seasonal salad (vg) (gf); Apple slice with butter crumble (v) and Lemon berry delice (vg) (gf)

	On Level 2			On Level 3		
Time	Screen 1	Screen 2	Screen 3	Screen 4	Screen 5	Screen 6
13.40-13.55		Alanna Connor	Anna Hughes	Isabella Cruz	Jasmijn Hofman	

- Alanna Connor (University of Edinburgh) - A classification of Nature Inclusive Design interventions based on their ecological and environmental requirements
- Anna Hughes (HWU) - Embedding Community in Oyster Habitat Restoration: A Socio-Ecological Approach
- Isabella Cruz (SAMS) - Are microplastics changing biogeochemical cycles as we know them?
- Jasmijn Hofman (QUB) - Blue Carbon Community: How biotic interactions affect shellfish carbon budgets.

14.00-16.00 **Sustainable Aquaculture Special Session** in the Main Auditorium (Auditoria B/C); **Marine Biogeochemistry Special Session and Townhall event** in Conference Room 6/7.

14.00-16.00 **Sustainable Aquaculture Special Session** in the Main Auditorium (Auditoria B/C). Chair: Dr Mark Powell (University of St Andrews). Talks are 7 minutes each (with a short Q&A session at the end of the session).

- Mark Powell (University of St Andrews) - Jellyfish - fish interactions: known and possible consequences for finfish aquaculture
- Marcela Delgado (Sudvet) - Phytogenic Sea Lice Management in Atlantic Salmon: Ectoparasitic Control and Neuroendocrine-Immune-Oxidative Homeostasis Restoration as a Sustainable Welfare Strategy
- Martin Jaffa (Callender McDowell) - Where are all the sea lice?
- Helena Reinardy (SAMS) - Seasonality, life stage, and species distributions of sea lice larvae in a key sea loch for aquaculture and wild salmonids
- Heather McConnell (SAMS) - From Pest to Prey: Identifying planktonic predators of early-stage salmon lice
- Danielle MacRae (Xelect Ltd) - Future proofing aquaculture breeding programmes using cost effective, flexible medium-density genotyping solutions
- Heather Moore (AFBI) - From Seed Supply to Biosecurity: Building a Sustainable Aquaculture Industry in Northern Ireland
- Naomi Wilson (AFBI) - Mapping site suitability for Integrated Aquaculture practise – a NI first
- Suzannah-Lynn Billing (SAMS) - Community voices in the Blue Economy: A case study on seaweed farming
- Camila Toledo-Jaime (University of Exeter) - Marine heatwave exposure is intensifying unevenly across Scottish aquaculture sites
- Joanne Murphy (Marine Directorate) - Measuring species diversity in Scotland's aquaculture: how does it compare to its neighbours?

14.00-16.00 **Marine Biogeochemistry Special Session and Townhall event** in Conference Room 6/7**.** Chairs: Dr Sarah Cryer (HWU) and Dr Phillippa Rickard (HWU). Talks are 10 minutes each (with 3 minutes for questions).

- Nicola Allison (University of St Andrews) - The enigma of amorphous calcium carbonate formation in marine calcifiers

- Nishant Chauhan (University of Cambridge) - Resolving the Physiological and Molecular Responses of Coccolithophore *G. huxleyi* Through Multivariate Experiments
- Ben Cala (HWU) - Calcium carbonate dissolution above the saturation horizon
- David Trossman (NOC) - Calcium carbonate dissolution rate changes under future climate scenarios
- Gwyn Owens (University of Edinburgh) - Physical controls on Southern Ocean nitrate export via Subantarctic Mode Water: inferences from nitrate stable isotopes
- Lisa Friberg (SAMS) - Will Floating Wind Turbines Reshape Ocean Productivity?
- Millie Brown (HWU) - Understanding carbon flow in the seascape for quantification of carbon stocks: an Orkney Islands case study

At 1540, we will transition to a Townhall event that will over run into the coffee break. "**Marine Biogeochemistry Forum Townhall Meeting: Mapping Scotland's [salty] carbon**"

Several recent initiatives have examined the fluxes, pools, and fates of carbon in Scottish marine sediments, with sediments and blue carbon habitats becoming increasingly well characterised. Missing from these initiatives so far is inclusion of water-column carbon inventories, processes, and oceanographic exchanges, which are rarely considered or compared with sediment stores or blue C considerations. We propose a new MASTS working group with the aim to connect these different carbon pools and fluxes across the water column and seabed to better constrain Scotland's marine carbon inventory/cycle, its sequestration dynamics, its vulnerability to environmental change and identify key knowledge gaps for future research and policy considerations. This working group aims to synthesise connected evidence into a white paper, setting out the current state of knowledge and identifying priorities for future research on Scotland's marine carbon system. If your research/expertise aligns with these ambitions, please come along to the meeting where we will set out the timeframe, aims and objectives of the proposed working group.

16.00-16.45 **Coffee break,** networking and **Poster Session 6**

	On Level 2			On Level 3		
Time	Screen 1	Screen 2	Screen 3	Screen 4	Screen 5	Screen 6
16.05-16.20	Louise Gao	Anastasia Niemann	Katie Berry	Heather Moore	Julie Cooke	Grace Klepacz
16.25-16.40	Gillian Sutherland	Stephen Watson	Amalia Krupandan		Mark Powell	Marcela Delgado

- Louise Gao (SAMS) - From Laboratory Validation to Field Application: Fluorescence-Based Detection of Sea Lice Larvae
- Anastasia Niemann (University of Stirling) - Seasonal and density-dependent food-web dynamics of macroinvertebrate prey for wild juvenile Atlantic salmon (*Salmo salar L*.) growth and survival
- Katie Berry (SEPA) - Standardised Lice Infestation Pressure Determination (SLIPD): Developing a new generation of sentinel cage method for sea lice monitoring
- Heather Moore on behalf of Heidy Dias (AFBI) - Natural Capital Assessment as a tool for marine policy and conservation
- Julie Cooke (University of St Andrews) - The Future of Seaweed in Scotland: Opportunities and Challenges
- Grace Klepacz (University of Edinburgh) - Re-powering the people: Exploring stakeholder perspectives, engagement, and decision-making in Offshore Wind
- Gillian Sutherland (Crown Estate) - The Offshore Wind Evidence and Knowledge Hub
- Stephen Watson (PML) - VALMAS: Decision Support Tools for Marine Artificial Structures
- Amalia Krupandan (University of Glasgow) - Tracing nutrient flow from marine growth at four Scottish offshore wind farms: early evidence from the ECOCHANGE project
- Mark Powell (University of St Andrews) - Nanofiltration of seawater: applications for treatments of Amoebic Gill Disease and Sealice
- Marcela Delgado (Sudvet) - A plant-based alternative to conventional chemotherapeutants improves health and welfare of Atlantic salmon (*Salmo salar*) in freshwater: toward sustainable aquaculture health management

16.45-17.30 **MASTS General Science Session 5** in the Main Auditorium (Auditoria B/C). Chair: Prof Bhavani Narayanaswamy. Talks are 12 minutes each (and 3 mins for questions).

- Ben Wilson (SAMS) - Marine researchers, don't stray from the Medawar Zone: When can be as important as what
- Stephen Hall (Nippon Foundation) - Seabed 2030
- Beth Langley (HWU) - Scotland's Marine Monitoring Landscape: Assessing existing marine monitoring for a national coastal change monitoring programme

17.30-17.45 **Conference Closing Remarks & Prize Giving** (Prof Bhavani Narayanaswamy, Bethan Anetts and Richard Wakefield) 🏆ASM prizes are kindly sponsored by IMarEST.

Posters

All e-posters will be available to view from any screen at any time during the ASM. Simply navigate to the menu and choose which e-poster you would like to view. Most e-poster authors will be present at their posters during a designated coffee break.

Poster screens will be spread across Level 2 and 3. Look out for relevant signage at the event.

Marine & Freshwater Areas of Research Interests- Drop-in

The Scottish Government's Marine Directorate published its Marine & Freshwater Areas of Research Interest (ARIs) in August 2025. ARIs are formal statements of the evidence gaps and research questions most important to Scottish Government for policy development. They are owned by the Chief Scientific Adviser for Marine and were developed with close involvement from the MASTS community including universities and public bodies, Fisheries Management Scotland, the Scottish Freshwater Group.

The seven ARI themes cover Scotland's marine and freshwater priorities:

- Climate Change & Biodiversity
- Clean Seas & Restoration
- Renewable Energy
- Sustainable Fisheries
- Aquaculture
- Marine Governance & Community
- Intelligent Observation

Climate Change & Biodiversity Crises, Marine Governance & Community, and Intelligent Observation cut across all four sectoral themes, providing an integrating framework rather than sitting as standalone domains.

ARI's require to periodic review as policy priorities shift, new evidence emerges, and the research community provides feedback. The MASTS Annual Science Meeting 2026 provides an opportunity for the MASTS community to converse with Prof Mark Inall (CSA Marine) after the first year of the published ARI's. There is no agenda and no expectation of preparation. The conversation can go wherever is most useful.

Please feel free to approach the CSA Marine during the drop-in to raise any throughs, reflections, or suggestions regarding the ARIs. The three kinds of contribution are especially valuable for the ARI reflection process are:

- Emerging evidence. Research that is published, in press, or underway and that addresses questions in any of the seven themes. Government does not always have sight of work in progress and knowing where evidence is accumulating shapes how priorities are considered.
- Refinements. Questions in the ARI document that feel imprecise, outdated, or framed in a way that doesn't reflect how the research community approaches the problem. The ARIs were written to be useful to researchers, and where they miss the mark, that is worth knowing.
- Gaps. Research questions not currently in the framework that government should be asking especially those at the interfaces between themes, on methodological challenges that cut across sectors, or on social and economic dimensions of marine management that may be underrepresented.

All contributions feed into the considerations for reviewing the ARI's

The drop-in is open to all conference attendees. Researchers at any career stage are welcome. PGRs and ECRs may find it particularly useful to understand how their work connects to long-term government evidence needs. The ARI themes are intended in part to signal where sustained new research directions are most needed to address Government priorities.

Exhibitors

- **Clyde Consultation** - The Clyde Marine Planning Partnership are now consulting on the draft Clyde Regional Marine Plan and its associated assessments! This represents an important opportunity for the Clyde's individuals, communities, businesses and other stakeholders to review the Plan and provide feedback.
- **KIMO Fishing for Litter UK**, implemented by KIMO International, has operated in the UK since 2005. It is widely recognised as the primary mechanism enabling fishermen to remove litter, including abandoned, lost and discarded fishing gear, from UK seas at no additional expense to themselves. The scheme operates across 80 harbours, with 750 fishing vessels registered and more than 3300 tonnes of marine litter recovered. https://fishingforlitter.org/scotland/ Instagram @fishing_for_litter
- **Merra** is a research-derived digital fisheries system. Come and hear about Merra-scan, Merra-catch, Merra-log, Merra-hub and Merra-portal.
- **NatureScot**: We provide advice to Scottish Government on marine protected areas (MPAs) and advice to support the effective management of our wider seas. Our recent advice to support management measures for fishing activity can be found on our webpage. This advice is focussed on a variety of fishing activities in MPAs and features sensitive to bottom contacting towed fishing gear. Ministers launched a public consultation on management measures for fishing activity on the 14th of September. The consultation will run for 18 weeks. Please come and see us to learn more and get involved. https://www.nature.scot/ and for Marine and Coastal work: https://www.nature.scot/professional-advice/land-and-sea-management/marine-and-coastal-work Twitter: @NatureScot
- **NEIF Stable Isotope Ecology Lab, SUERC**: The National Environmental Isotope Facility (NEIF) provides state-of-the-art isotope and organic geochemistry analysis. With expertise in stable isotopes, NEIF enables ecological and geochemical research providing supported analysis and guidance to help develop research projects, ensuring high-quality, impactful science. Successful applications are awarded analyses as a "grant-in-kind" from NERC. https://www.isotopesuk.org/index.html https://www.stableisotopelab.com/ https://www.gla.ac.uk/research/az/suerc/
- **NIRAS Group (UK) Ltd - Marine Environment**: NIRAS Marine Environment team contributes to research and development that improves understanding of the marine environment and its response to human activities. The team includes marine ecosystem, mammal, ornithology and GIS specialists. NIRAS has developed innovative seabird monitoring methodologies and contributed to the VALMAS natural capital framework supporting evidence-based decision-making. https://www.niras.com/offices/united-kingdom/
- **Scottish Government's Areas of Research Interest (ARI) for marine and freshwater environments** – Come and talk to Prof Mark Inall (CSA Marine) at his drop-in desk to raise any throughs, reflections, or suggestions regarding the Marine & Freshwater Areas of Research Interests (ARIs). All welcome.
- **Shetland Oil Terminal Environmental Advisory Group** (SOTEAG): For five decades SOTEAG has continued to look after the interests of the environment around Shetland's Sullom Voe Terminal and Port. It is recognised globally as a pioneering, world-class model of integrated coastal management based on its independent scientific monitoring and expert advice. www.soteag.org.uk and X: @SOTEAG!
- **Subsea Commercial Services Ltd** - Founded in 2011, SCS has a proven track record of helping clients achieve their operational objectives. Supplying and supporting Ocean Sciences, Offshore Energy and Aquaculture, we offer a range of harsh environment underwater technology solutions deployed in inspection, survey, biodiversity and environmental monitoring, and marine asset location tracking, command and recovery. SCS has the technology to meet the challenges and opportunities you face. www.subcomservices.com
- **Tecprime Technology** Tecprime Technology Ltd is a subsidiary of Aquatec and provides sales, marketing and support for our famous subsea particle monitoring instrumentation which includes the AQUAscat Suspended Sediment Profiler, AQUAscat ABS & AOBS single frequency suspended sediment sensors, very wide range turbidity loggers and sediment/ water sample collection equipment. https://tecprime.world/ and https://x.com/tecprime_world
- **Xelect** is a world-leading aquaculture genetics and breeding services company, helping producers improve performance, sustainability, and profitability through data-driven genetic improvement. Combining expertise in quantitative genetics, genomics, and breeding programme management, Xelect supports aquaculture species worldwide with tailored solutions that accelerate genetic gain and long-term business success. https://xelect-genetics.com/

Day 3: Thursday 12th November 2026

This third day of the MASTS ASM is for associated meetings, seminars, training sessions and workshops.

Some workshops are open to all, whilst others are by invitation only.

Thursday breaks are: 10.30-11.30 for morning coffee, lunch is at 12.00-13.30 and afternoon coffee break is 14.45-15.45.

Lunchtime Finger Buffet - Chefs selection of sandwiches & wraps; Homemade brie and tomato chutney quiche (v); Vegan sausage roll with a selection of traditional dips (vg); Black rice, avocado and azuki bean salad with a chimichurri dressing (vg) (gf); Chefs cake of the day and fruit bowl selection (v) (50/50 split)

<u>One-day workshops</u>

- 0900-1630 in Exec Room B – **Shared marine challenges and connected evidence across Northern Ireland and Scotland**. Organised by James Thorburn and Jonathan Houghton. Open to All.
- 0930-1600 in Conference Room 6/7 - **Getting Started with Modelling: A Practical Workshop for Biogeochemists**. Organised by Marta Santos Garcia. Open to All.
- 0900-1600 in Auditorium A – **ECOWind: Future-proofing offshore wind expansion for sustainable seas**. Organised by ECOWind consortium. Invite only.

<u>Morning workshops</u>

- 0930-1230 in Conference Room 3 – **Marine Data Transformation in Industry**. Organised by Elizabeth Brown. Open to All.
- 1000-1200 in Conference Room 4/5 – **Redesigning Scottish aquaculture through a gender and justice lens**. Organised by WiSA. Open to All.
- 0930-1230 in Exec Room A – **INSITE Research Alignment Workshop**. Organised by Henk van Rein. Invite only.
- 1000-1300 in Conference Room 1 – **Finalising a framework of indicators for MPA effectiveness**. Organised by Tamara Darbar. Invite only.

<u>Afternoon workshops</u>

- 1330-1630 in Conference Room 4/5 – **Towards sea lice monitoring in Scotland**. Organised by Helena Reinardy. Open to All.

MASTS, Glasgow, Wednesday 11th November 2026 – ECOWind Session

Theme 1 — Climate Change and Future Seas

Order	Time	Presenter	Title
1	9:00-9:12	Lucy Bricheno	Climate-driven environmental change and seabed mobility in 2050 and 2100
2	9:12-9:24	Michela De Dominicis / Jenny Jardine	Combined effects of offshore wind farms and climate change in the North Sea
3	9:24-9:36	Tom Williams / Martin Solan / Krysia Mazik / Jasmin Godbold	Combined effects of bottom-contact fishing and offshore wind pressure in present and future climates
4	9:36-9:48	Vladimir Krivtsov / Emma Tyldesley	Projecting regional variability in sandeel growth and condition under climate change
5	9:48-10:00	Kate Searle	Forecasting the shifting baseline – understanding bottom-up effects of climate change on seabird demography

Theme 2 — Seabed and Water Column Processes, Habitats and Resilience

Order	TIme	Presenter	Talk focus
1	10:00-10:12	Rory O'Hara Murray	Stratification changes over short timescales – is this important for EIA?
2	10:12-10:24	Connor McCarron	Turbulence and seabed mobility in the wake of monopiles
3	10:24-10:36	Martin Solan / Krysia Mazik / Amber Jones / Jasmin Godbold	Corrosion-derived trace metal emissions from offshore wind infrastructure
4	10:36-10:48	Bridget Sparrow-Scinocca	Benthic infauna in monopile wakes and fouling communities on the monopiles
5	10:48-11:00 **COFFEE**	Charlotte Williams	Marine Heatwaves as Windows of Opportunity for Adaptive Glider Monitoring of Offshore Wind Farm Impacts
6	**AFTER coffee** 11:45-11:57	Arianna Zampollo	Seasonal timing and fine-scale variation in phytoplankton production

Theme 3 — Species Responses and Marine Food Webs

Order	Time	Presenter	Talk focus
1	11:57-12:09	Joanna Rzempoluch / Justin Dix / George Callender	Electromagnetic Fields from HV Submarine Cables: Magnetic Armour, Electric Fields and Experimental Approaches
2	12:09-12:21	Amber Jones / Jasmin Goldbold	Electromagnetic field effects on invertebrates
3	12:21-12:33	Jordan Burgess/Krysia Mazik	Vibration effects on invertebrates
4	12:33-12:45	Bex Greatorex	Behavioural responses of embryonic rays to a 50 Hz electromagnetic field
5	12:45-12:57	Ross Rutherford	The fish that ships miss: AUV observations in and around an offshore wind farm
6	12:57-13:09 **LUNCH**	Dannielle Eager / James Waggitt	From novel observation methods to predictions of fish behaviour near windfarms: Fish availability to predators hourly, biweekly and seasonally
7	**AFTER LUNCH** 14:00-14:12	Phil Bouchet	From prey fields to predator distributions: Understanding seabird–fish interactions in Offshore Wind regions
8	14:12-14:24	James Waggitt / Morgane Declerck	Seabird responses to dynamic pelagic habitats, OWF habitat change and barriers
9	14:24-14:36	Olivia Hicks / James Waggitt	Seabird habitat-use identifies impact pathways at an Irish Sea scale
10	14:36-14:48	James Waggitt	Seabird sensitivities to seabed disturbance at a UK Continental Shelf scale

Theme 4 — Managing Cumulative Effects

Order	Time	Presenter	Talk focus
1	14:48 - 15:00	Connor McCarron	Seabed mobility changes from windfarms versus climate change
2	15:00-15:12	Veerle Huvenne	Seabed habitat changes from windfarms versus climate change

Order	Time	Presenter	Talk focus
3	15:12-15:24	Anastasia Frantsuzova / Adam Butler	Development of a tool for rapid assessment of regional impacts on seabird demography
4	15:24-15:36	Victoria Zhang	Assessing the Impact of Offshore Wind Farms on Fisheries: A Causal Inference Approach.
5	15:36-15:48	Neda Trifonova	Linking physics, fisheries, climate change and net gain using Dynamic Bayesian Networks
6	15:48-16:00	Mike Heath	Modelling the whole ecosystem response to offshore wind energy development, and the scope for compensatory measures

Theme 5 — Planning, Consenting, Mitigation, Compensation, Monitoring and Nature Recovery

Order	Time	Presenter	Talk focus
1	16:45-16:57	Katrien Van Landeghem	ECOWind-ACCELERATE research to underpin a more strategic, ecologically realistic and climate-resilient approach to managing our marine environments.
2	16:57-17:09	Beth Scott	Integrating PELAgIO's new understandings and methodologies to suggest future planning approaches to monitoring, consenting, mitigation and compensation.
3	17:09-17:21	Oliver Leedham	*spmapper*: An R package spatial planning tool to indicate the foraging value of marine areas to breeding seabirds
4	17:21-17:33	Diego Castro	The Environmental Levelised Cost of Electricity: A Decision Support Tool and extended cost benefit analysis for Offshore Wind Farms.
5	17:33-17:45	Francis Daunt	Delivering strategic compensation for seabirds: ECOWINGS research on meeting this challenge
	17:45-18:00	PANEL of PIs plus	Open to audience