



**Programme as at 21 May**

## Oceans 2025 Annual Science Meeting: Provisional schedule

Timetabling is based on 15 minute oral slots, followed by 5 minutes discussion time

### Monday 1 June

- 11.00 – 12.15**      **Meeting of the Oceans 2025 Programme Advisory Board and Oceans 2025 Executive Board** (New York room)
- 12.15 – 13.15**      Buffet lunch
- 13.15**              **Welcome by Andrew Willmott, POL** (Liverpool suite)
- 13.25 – 15.05**      **Session 1: Plenary** 5 x 20 min highlight achievements/overviews  
*Chair: Andrew Willmott* (Liverpool suite)

	<b>Centre/ HEI</b>	<b>O2025 theme(s)</b>	<b>NERC theme(s)</b>
Recent variability in the North Atlantic: from the ocean surface to the overturning circulation (SA Josey)	NOCS	T1, T9, T10	CS, ESS
Potential climate change impacts on the North West European continental shelf (J Holt)	POL	T9, T6	CS, ESS, NH SUNR, Bio
A new map of UK vertical land movements based on continuous GPS and absolute gravity (D Hansen, N Teferle, R Bingley, S Williams)	Notting'ham POL	SOFI (T1)	NH, ESS
Synthesis of EO data, observations and modelling (J Blackford)	PML	T6	ESS, SUNR Bio, Tech
Large-scale ocean modelling with adapting unstructured mesh methods (M Piggott)	Imperial NOCS	SOFI (T9)	CS, ESS

- NERC themes**
- Bio Biodiversity
  - CS Climate System
  - EPHH Environment, Pollution & Human Health
  - ESS Earth System Science
  - NH Natural Hazards
  - SUNR Sustainable Use of Natural Resources
  - Tech Technologies

**15.05 – 15.25**      Tea/coffee

15.25 – 17.30

**Session 2: Plenary** 5 x 20 min highlight achievements/overviews

*Chair: Ed Hill* (Liverpool suite)

	Centre/ HEI	O2025 theme(s)	NERC theme(s)
Information integration and visualisation for Oceans 2025 observatories (S Groom <i>et al</i> )	PML, POL SAMS BODC	T10	SUNR, ESS NH, Bio CS
The Porcupine Abyssal Plain site: a window on full water column biogeochemistry in the North Atlantic (R Lampitt, A Martin <i>et al</i> )	NOCS	T10, T5	ESS, Bio CS
Towards a new understanding of post-glacial sediment distribution on the NW European shelf (J Howe)	SAMS	T3, T1	ESS, NH
Continental margins and deep ocean research: highlights and impacts (I Wright, D Billett)	NOCS	T5, T10	ESS, NH Bio, CS
Progress on enabling technology for ocean telescience (G Griffiths <i>et al</i> )	NOCS, POL SAMS	T8	Tech

**Oceans 2025 themes**

- T1 Climate, ocean circulation & sea level
  - T2 Marine biogeochemical cycles
  - T3 Shelf & coastal processes
  - T4 Biodiversity & ecosystem functioning
  - T5 Continental margins & the deep ocean
  - T6 Sustainable marine resources
  - T8 Technology development
  - T9 Next generation ocean prediction
  - T10 Sustained observations
- SOFI Strategic Ocean Funding Initiative  
PSMSL Permanent Service for Mean Sea Level

18.00 - 20.00

**Social event hosted by the Proudman Oceanographic Laboratory at the Merseyside Maritime Museum, Albert Dock**

**Tuesday 2 June**

09.00 – 10.40

**Session 3: Plenary** 5 x 20 min highlight achievements/overviews

*Chair: Steve de Mora* (Liverpool suite)

Seeing the wood for the trees: untangling the complexity of causal mechanisms in trophic interactions that structure ecosystems (MT Burrows, L Robb, R Harvey)	SAMS	T4	Bio, ESS SUNR
Moving on: modelling marine fish movements in relation to environment (D Sims)	MBA	T6	Bio, SUNR
The role of seal telemetry in Environmental Impact Assessments: Strangford Lough (B McConnell)	SMRU	T10, T6	SUNR, Bio Tech
Identifying the mechanisms of pH homeostasis in marine phytoplankton and their response to ocean acidification (G Wheeler & C Brownlee)	PML MBA	T2	ESS, Bio CS
Overview of AMT 18: early evidence of basin-wide biological response to climate change? (M Zubkov, G Quartley, G Tilstone, A Rees <i>et al</i> )	NOCS PML	T10, T2	ESS, Bio CS

10.40 – 11.00

Coffee/tea

11.00 – 12.40

**Sessions 4A, 4B & 4C:** Parallel (each 5 x 20 min)

**A. Modelling**

Chair: *tba* (Shanghai room)

Next generation ecosystem models (I Allen <i>et al</i> )	PML POL	T9	ESS Bio SUNR
Fine scale ecosystem modelling of the western English Channel (M Butenschon)	PML	T10 T9	ESS Bio SUNR
Near real-time verification of operational ecosystem models using ocean colour data products (J Shutler)	PML	T9	ESS Bio SUNR
Progress at NOCS with high resolution multi-decadal coupled physical and biological simulations ((TR Anderson)	NOCS	T9	CS ESS Bio
New insights into coupled ocean-atmosphere modelling with the CHIME model (A New)	NOCS	T9 T1	CS ESS

**B. Technology development**

Chair: *John Huthnance* (New York room)

Autosub6000 – results and enhancements (S McPhail)	NOCS	T8	Tech ESS
Novel sensor chains for the study of sea ice (K Jackson, D Meldrum)	SAMS	T8	Tech ESS
X-band radar and its applications to coastal morphology (P Bell)	POL	T3 T8	NH ESS Tech
Development of high speed data telemetry systems for remote locations, applicable to coastal, deep-ocean landers and moorings. (P Foden)	POL	T8	Tech
4D biogeochemical sensors (M Mowlem)	NOCS	T8 T2	Tech ESS

**C. Biogeochemistry & biodiversity**

Chair: *Tim Jickells* (Liverpool suite)

Iron limitation in the North Atlantic Ocean (R Sanders, M Nielsdottir E Achterberg, M Moore)	NOCS	T2	ESS Bio
Controlling mechanisms for the productivity of the North Atlantic sub-polar gyre (J Allen <i>et al</i> )	NOCS	T2	ESS Bio
The role of calcite in ballasting organic carbon flux from the upper ocean (R Sanders <i>et al</i> )	NOCS	T2	ESS
Nitrogen fixation in the nitrate replete Western English Channel (J Gilbert)	PML	T2 T10	ESS SUNR Bio
Novel biogeochemical products from space (T Hirata)	PML	T6 T2	ESS Bio

12.40 – 13.30

Buffet lunch

13.30 – 14.00

Poster session

14.00 – 15.40

**Sessions 5A, 5B & 5C:** Parallel (each 5 x 20 min)

**A. Arctic processes**

Chair: *Laurence Mee* (Liverpool suite)

Arctic ocean modelling at POL (MA Morales Maqueda, C Postlethwaite)	POL	T9 T1	CS ESS
Impact of Arctic sea-ice retreat on zooplankton foraging behaviour and vertical carbon flux (A Brierley <i>et al</i> )	St And SAMS	SOFI (T1)	ESS Bio
Physical-biological coupling in the Barents/Kara Sea: a modelling study (V LeFouest)	SAMS	T1	ESS CS Bio

**B. Sediment dynamics & benthic processes**

Chair: *Phil Weaver* (New York room)

Turbulence, tidal straining and sediment transport (A Souza)	POL	T3	ESS NH EPHH
Horizontal dispersion in shelf and coastal seas from dye tracer distributions (M Inall)	SAMS	T3	EPHH ESS NH
Carbon flux off the shelf (J Huthnance)	POL	T3	ESS CS

**C. Biogeochemistry & biodiversity**

Chair: *Colin Brownlee* (Shanghai room)

Unexpected population genetic changes in coccolithophores (D Schroeder <i>et al</i> )	MBA SAHFOS	T2 T10	Bio ESS
Assessing molecular and physiological response of <i>Emiliania huxleyi</i> isolates to high seawater pCO <sub>2</sub> (F Verret <i>et al</i> )	Essex MBA	SOFI (T2)	ESS Bio CS
The unresolved issue of why phytoplankton produce DMSP (S Archer)	PML	T2	ESS Bio CS

Biogeochemical studies in Arctic sea-ice, marginal ice zone and open waters north of Svalbard (R Leakey)	SAMS	T1	ESS CS Bio
Sea-ice modelling and Arctic processes (A New)	NOCS	T9 T1	CS ESS

Natural carbon sequestration in Nazare submarine canyon, west of Portugal (D Masson <i>et al</i> )	NOCS L'pool NIOZ	T5	ESS CS
Carbon mineralisation of shelf & coastal sediments: a holistic approach using state of the art lander technology and eddy-correlation (RN Glud <i>et al</i> )	SAMS	SOFI (T3)	ESS Tech

Quorum sensing in biofouling communities (K Tait)	PML	T4	Bio Tech SUNR
Molecular and ecological studies of the infection of brown algae by <i>Eurychasma dicksonii</i> (C Gachon, P van West)	Aberdeen SAMS	SOFI (T4)	Bio SUNR

**15.40 – 16.00 Tea/coffee**

**16.00 – 17.00 Session 6: Key science questions for future marine research**

**Introductory presentation by Mike Nielson (Marine Scotland)**

**Followed by break-out discussion groups** in Liverpool suite (split into three areas), New York room and Shanghai room.

**17.30 - 18.00** PAB re-convenes (New York room)

**19.30 - 22.00** Conference dinner at Holiday Inn

## Wednesday 3 June

**09.00 - 09.20 Feedback plenary from Session 6** Chair Ed Hill (Liverpool Suite)

**09.20 – 10.20 Sessions 7A, 7B & 7C: Parallel** each 6 x 20 min

### A. Biodiversity, communities and populations

Chair: Ian Boyd (Liverpool Suite)

Developments in statistical approaches to understanding changes in biodiversity and community structure (PJ Somerfield)	PML	T4	Bio SUNR
The uses and limitations of population models in estimating the size of the UK grey seal population based on pup count surveys (L Thomas)	SMRU	T10 T4	Bio SUNR
Responses of marine fish assemblage to climate change and fishing over a century-long scale (M Genner)	MBA Bristol	T6	Bio SUNR

### B. Sea level and circulation

Chair: Phil Woodworth (New York room)

Signature of the Atlantic meridional overturning circulation in sea level along the east coast of North America (C Hughes)	POL	T1	CS NH ESS
20 years of bottom pressure measurements in the Drake Passage (MA Morales Maqueda, P Foden)	POL	T10 T1	CS NH ESS
Developments in the UK South Atlantic sea level network (S Holgate)	POL (PSMSL)	T10 T1	CS NH ESS

### C. Observing ecosystems

Chair: Denise Smythe-Wright (Shanghai room)

Going global – observing our changing seas (P Burkill)	SAHFOS	T10	Bio ESS CS
A carbon and tracer measurement programme in the Atlantic and Southern Ocean (A Watson <i>et al</i> )	UEA NOCS	SOFI (T1)	ESS CS
Maintaining the momentum for monitoring northern latitudes: overview of extended Ellett line, Treen Passage & Arctic time series (T Sherwin)	SAMS	T10	ESS CS

**10.20 – 10.40 Coffee/tea**

**10.40 – 11.40 Sessions 7A, 7B & 7C continued**

Arrival and secondary spread of non-native species in UK fouling communities (J Bishop)	MBA	T6 T4	Bio SUNR	Observational evidence of present day global sea level acceleration started in late 18 <sup>th</sup> century (S Jevrejeva)	POL (PSMSL)	T1 T10	NH CS ESS	Towards a western shelf observatory (J Sharples)	POL	T10	ESS CS
Combining biological traits and distributional data to explain spatial patterns in the North Sea benthos (T Webb, P Somerfield, L Tyler)	Sheffield PML	SOFI (T4)	Bio	Reconciling <i>in situ</i> hydrographic observations with satellite altimetric measurements of sea level change (RJ Bingham, PJ Clarke, P Moore)	Newcastle POL	SOFI	NH CS ESS	Changes in phytoplankton and zooplankton species composition in the western English Channel (C Halsband-Lenk)	PML	T10 T4	Bio ESS
Quantifying the socio-economic cost of closing Lyme Bay to scallop dredging and heavy trawling gear (SC Mangi <i>et al</i> )	PML	T6	SUNR	Argo – Armchair Real-time Global Oceanography (BA King)	NOCS	T10 T1	CS ESS	Seasonal changes of microbial communities in the Western English Channel using 16S-tag pyrosequencing (JA Gilbert <i>et al</i> )	PML CEH	T4 T10	Bio ESS

**11.40 – 12.00 Session 8. Concluding plenary discussions on overall progress and future priorities** Chair Ed Hill (*Liverpool suite*)

**12.00 – 13.00** Buffet lunch

**13.00 – 14.00** Meeting of the Oceans 2025 Programme Advisory Board and Oceans 2025 Executive Board (*New York room*)

**POSTERS**  
to include

<b>Title</b>	<b>Centre/HEI</b>	<b>O2025 theme(s)</b>	<b>NERC theme(s)</b>
The signal based relationship between marine bacteria and the green seaweed <i>Ulva</i> (M Twigg, M Camara, K Tait, P Williams, S Atkinson)	Nottingham PML	SOFI, T4	Bio
Tidal-induced changes in community structure and carbon dynamics in Liverpool Bay (A Bailey, C Mahaffey, D Montagnes, J Sharples)	Liverpool POL	SOFI T3, T10	ESS Bio
Questions over British banks; mixing mechanisms? (M Palmer)	POL	T3	ESS CS
Initial assessment of Persistent Scatterers Interferometry (PSI) around tide gauge sites in the UK (L Adamska, A Sowter)	Nottingham	SOFI, T1	ESS Tech
Consistent multi-technique geodetic estimates of present day contributions to regional sea level change (P Clarke et al)	Newcastle	SOFI, T1	ESS
Shipboard studies of ocean carbonate chemistry and the surface biota of the Drake Passage (J Riley, E Achterberg)	So'ton NOCS	SOFI, T2	ESS Bio
Triple oxygen isotope and oxygen/argon ratio measurements to enhance coastal and open ocean production/respiration comparisons (J Gloel, J Kaiser)	UEA	SOFI, T2	ESS Bio
Decadal climate variability associated with the Meridional Overturning Circulation and the North Atlantic Oscillation in a new coupled climate model (CHIME) (A Persechino <i>et al</i> )	So'ton NOCS	SOFI, T9	CS ESS
Modelling and measurements of the Wyville Thomson overflow ( V Vlasenko, N Staschuk, PA Davies, T Sherwin)	Plymouth Dundee SAMS	SOFI, T1	CS ESS
Automated diagnosis for fault detection, identification and recovery in Autosub6000 (R Dearden)	Birmingham	SOFI, T8	Tech
From MAPs to MPAs – using marine mammal distributions to assess offshore MPA design principles (E Cox, J Matthiopoulos, P Hammond, S Hooker)	St Andrews SMRU	SOFI, T6, T10	Bio SUNR
The NOCS Theme 10 Observations (D Smythe-Wright)	NOCS	T 10	CS
Oceanic calcification and coccolith production (A Poulton)	NOCS	T2	Bio
Vitrification approaches for the long-term conservation of protists (JG Day, UEM Achilles-Day, ME Martinez-Montero, H Müller, K Harding & EE Benson)	CCAP & three other groups	NF3	Bio
75 years of the Permanent Service for Mean Sea Level (L Rickards)	PSMSL	NF2	CS ESS
The role of the National Marine Coordination Office	NMCO		
Marine and Fisheries Directorate (J Myers)	Defra		

